

PREFACE

In the curricular structure introduced by this University for students of Post-Graduate degree programme, the opportunity to pursue Post-Graduate course in any subject introduced by this University is equally available to all learners. Instead of being guided by any presumption about ability level, it would perhaps stand to reason if receptivity of a learner is judged in the course of the learning process. That would be entirely in keeping with the objectives of open education which does not believe in artificial differentiation.

Keeping this in view, the study materials of the Post-Graduate level in different subjects are being prepared on the basis of a well laid-out syllabus. The course structure combines the best elements in the approved syllabi of Central and State Universities in respective subjects. It has been so designed as to be upgradable with the addition of new information as well as results of fresh thinking and analysis.

The accepted methodology of distance education has been followed in the preparation of these study materials. Co-operation in every form of experienced scholars is indispensable for a work of this kind. We, therefore, owe an enormous debt of gratitude to everyone whose tireless efforts went into the writing, editing, and devising of a proper lay-out of the materials. Practically speaking, their role amounts to an involvement in 'invisible teaching'. For, whoever makes use of these study materials would virtually derive the benefit of learning under their collective care without each being seen by the other.

The more a learner would seriously pursue these study materials, the easier it will be for him or her to reach out to larger horizons of a subject. Care has also been taken to make the language lucid and presentation attractive so that they may be rated as quality self-learning materials. If anything remains still obscure or difficult to follow, arrangements are there to come to terms with them through the counselling sessions regularly available at the network of study centres set up by the University.

Needless to add, a great deal of these efforts is still experimental—in fact, pioneering in certain areas. Naturally, there is every possibility of some lapse or deficiency here and there. However, these do admit of rectification and further improvement in due course. On the whole, therefore, these study materials are expected to evoke wider appreciation the more they receive serious attention of all concerned.

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MASTER OF LIBRARY AND INFORMATION SCIENCE
[MLIS]

Paper – VIII E2
Academic Library System

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Notification

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MODULE I ■ ACADEMIC LIBRARY

Unit-1	<input type="checkbox"/> Nature and Characteristics, Definitions and Functions of 'Library', Archive and Library	9-12
Unit-2	<input type="checkbox"/> Role of Library in Academic Support System	13-15
Unit-3	<input type="checkbox"/> Librarian and Teacher, Coordinated Academic Team	16-19
Unit-4	<input type="checkbox"/> Library as Learning Support, Library-College Concept in the Academic Library System	20-25
Unit-5	<input type="checkbox"/> Library and Higher Education	26-28

MODULE II ■ KINDS OF ACADEMIC LIBRARY

Unit-6	<input type="checkbox"/> Academic Institutions and their Libraries, University Libraries of Ancient India, Academic and Royal Libraries in Mediaeval India	29-71
Unit-7	<input type="checkbox"/> Users' Groups and their Needs	72-73
Unit-8	<input type="checkbox"/> Library Services and Users' Support within and Beyond the Library, Electronic Journals and Aggregation in an Academic Library, Copy Cataloguing in Academic Libraries, Use of Metadata in an Academic Library, Bibliophone Transport System	74-100
Unit-9	<input type="checkbox"/> Role of Library in Different Kinds of Academic Institutions	101-103
Unit-10	<input type="checkbox"/> Integration of Classroom Teaching and Library Support	104-113

MODULE III ■ ORGANIZATION AND MANAGEMENT OF LIBRARY SERVICES

Unit-11 □ Departmentalization and Coordination of Library Services	114-116
Unit-12 □ Library Committee and their Functions, Library Authority	117-124
Unit-13 □ Curriculum Development and Collection Development	125-126
Unit-14 □ Reference Services, Information Services and Referral Services	127-130
Unit-15 □ Users' Services, Bibliotherapy and its Administration to Academic Library System with Special Reference to India, Librametrics for Academic Libraries, Bibliometrics for Academic Library Services, Bibliometric Analysis and Computer-Programmes	131-153

MODULE IV ■ COLLECTION DEVELOPMENT

Unit-16 □ Collection Development Policies and Procedures	154-159
Unit-17 □ Problems of Collection Development	160-163
Unit-18 □ Library Collection-Books, Serials, etc. Collection Preservation	164-169
Unit-19 □ Cooperative Collection Management	170-179
Unit-20 □ Infra-structural Facilities, Library Planning, Library Building, Furniture Equipment etc.	180-195

MODULE V ■ LIBRARY PERSONNEL

Unit-21 □ Staff Pattern, S. R. Ranganathan's General Staff Formula	196-203
Unit-22 □ Human Resource Training and Orientation	204-212
Unit-23 □ Job Description and Job Specification	213-215
Unit-24 □ Motivation and Staff Participation	216-218
Unit-25 □ Staff Training for New Services and New Technology	219-222

MODULE VI ■ FINANCIAL MANAGEMENT

Unit-26 □ Library Budget, Budgeting Techniques	223-227
Unit-27 □ Financial Resources	228-231
Unit-28 □ Resource Allocation	232-234
Unit-29 □ Expenditure Heads	235-237
Unit-30 □ Accounting and Audit	238-239
Unit-31 □ Cost-Effectiveness and Cost-Benefit Analysis	240-244

MODULE VII ■ RESOURCE SHARING

Unit-32 □ Organization of Resource Sharing, Portals, Vortals, and Gateways in the Academic Libraries	245-256
Unit-33 □ Networking and Database Services, Networking Systems in UK, USA, Canada	257-280
Unit-34 □ Comparative Librarianship in the Academic Library System	281-288
Select Acromyms	289-293

ACADEMIC LIBRARY SYSTEM

The 'Academic Library System' signifies a set of modules or self-contained units regarded as a connected whole in the library of an academic or educational institution for the promotion of advancement of learning.

Module I ■ ACADEMIC LIBRARY

Academic Library is that library which is located in an academic institution like a school, college, university, or institute for professional or further education.

But it should be noted that in the areas of the collections, users, and services the academic library of each of such institution varies distinctly and widely. As for example, a school or a college library is primarily related to teaching and reading needs of the pupils and teachers, while a university library along with teaching has to meet the research requirements of the scholars and teachers who may sometimes eager to participate in the networking programmes to develop their learning, teaching, or research faculties as the case would be.

Precisely the concept of the 'academic library' as the 'soul' of an educational institution, the sun around which all teaching and research activities revolve has widely been acknowledged.

Unit 1 □ Nature and Characteristics

Structure

1.0 Definitions and Functions of ‘Library’

1.1 Archive and Library

1.2 Sample Questions

1.3 Selec Readings

An academic library like any other type of library is concerned with knowledge and its mission is the knowledge management.

Generally knowledge is of two types, viz. tacit knowledge and explicit knowledge. Tacit knowledge implies the technical knowledge which is usually acquired by individuals, but is largely intuitive. While the explicit knowledge demonstrates the systematically documented records, in any kind of format, which guide the users to gain knowledge as the individuals need to enrich knowledge further. Any type of library whether be it in school, college, university, institute of higher learning, college of further education including medical, technical and research institutes would have to be engaged in the management of these two kinds of knowledge. Through the tacit knowledge the library personnel could have technical knowledge of the information sources and of the management retrieval and dissemination of the same, which, i.e. tacit knowledge, ultimately assists the users to gain explicit knowledge as the guidance for entering the world of learning.

1.0 Definitions and Functions of ‘Library’

The English term ‘library’ signifying a collection of books, periodicals, journals and audio-visual materials preserved for study, research, reference or recreation, is derived from the Latin word **liber**, ‘a book’. It in Latinized Greek form is **bibliotheca**, or in French **bibliothèque**, or in Italian and Spanish **biblioteca**, or in German **bibliothek**, or in Russian **biblioteka**. But in Japanese it is known as **tosho-kan** or **tosho-shitsu** and in Sanskrit **granthagara** or in Pali **ganthagara**. But the term ‘library’ in whatever terms it is called in various languages, it includes a building or a room or some rooms in which books and other materials are arranged according to an order of

classification for the use of readers, i.e. members, scholars, students and teachers, belonging to an institution—academic or public.

The **Oxford English Dictionary** has mentioned that during the latter half of the fourteenth century the library would indicate a place where books were kept for “reading, study or reference”. Being more explicitly during the nineteenth century the term ‘library’ meant “a building, room, or set of rooms containing a collection of books for the use of public or some portion of it, or the members of society” or in other sense it would simply signify “a public institution” entrusted with the care of a collection of books for meaningful use thereof (Gates, Jean Key. **Introduction to librarianship**, 1968, p.XI). S.R. Raiiganathau defining the word ‘library’ clarifies : “A library is a public institution or establishment charged with the care of a collection of books and the duty of making them accessible to those who require use of them” (Ranganathan S.R. **Reference Service**, 1961, p.61)

But the ‘library’ at present has to execute some other functions apart from the above two functions, viz. “Care of collection of books” and “duty of making them (i.e. books) accessible to those who require the use of them.” For centuries together the physical care of books was the primary function of libraries. Also dominant was the conservation function that the early writers on the organization and management of libraries devoted much attention to the custody of books as physical entities, as artefacts. The library as museum fulfilled a social need. Library accumulated and preserved the records of its scholarsliip against ravages of time and the depredations of men because graphic records were both useful and rare, as well as highly prized. But the intellectual content of the culture, its scholarsliip, had to be actively transmitted from generation to generation as well as preserved. Because of this historical necessity the two functions : preservation of books and making them accessible to people who want to read them merely for the pleasure of reading or to satisfy intellectual curiosity had to grow together.

In view of the extended functions a ‘library’ may be defined as a collection of graphic, acoustic and holistic materials such as books, periodicals, manuscripts, newspapers, maps, charts, slides, still pictures, filmstrips, magnetic tapes, art reproductions, language aids, phonographs, records, music scores and microforms including microfilmed materials. Now-a-days a library is much more than books alone. It is also a meeting venue for discussions, busy place of ideas where the fields of interest is not narrowed to the educational and the cultural, but limitless as the span of person’s own consciousness as a ‘veritable treasure’ chest of facts and information,

1.1 Archive and Library

- (i) An archive is a collection of historic documents and records meant for restrictive use, while a library being a collection of books and other materials ensures accessibility and use of that collection by its members,
- (ii) An archive is primarily a place of storage and preservation of records which are made available only to a limited class of people like government officials and scholars, while the library having stored and preserved the books etc. in scientific manner opens its doors to die public irrespective of sex, creed, colour, and status.
- (iii) An archive is primarily concerned with the history of the country, while a library holds books and other materials on all subjects from agriculture to zoology.

1.2 Sample Questions

I. Long Answer Type

1. Enumerate the functions of 'Library'.

II. Short Answer Type

1. Distinguish between an 'Archive' and a 'Library'.

III. Objective Type (Mark the *one* right answer out of the following four alternatives with the tick-sign ✓).

1. 'Library' signifies
 - A. A Collection of books and other materials.
 - B. A Collection of Ait Objects like Painting and Sculpture
 - C. A Collection of historic documents.
 - D. A Collection of inscriptions.

Answer is 'A'

1.3 Select Readings

1. Gates, Jean Key. **Introduction to Hbrarianship**, 1968.
2. Ranganathan, S.R. **Reference Service**, 1961.

Unit 2 □ Role of Library in Academic Support System

The role of the Library in the academic support system is immense. In fact, a library provides positive support to an academic institution for

- (i) enhancing the image of the academic institution as a good seat of learning and useful information centre;
- (ii) developing the quality of teaching at every level through imparting education and encouraging research;
- (iii) multiplying the research output of the faculty members and research students/scholars through the effective supply of information resources and the support activities;
- (iv) justifying its role of information resources with cost effectiveness to get fund from the parent institution;
- (v) highlighting the importance of information and assisting in its optimum utilisation use of the support system;
- (vi) growing the quantum of information resources for the benefit of students and other users;
- (vii) specifying the academic statistics in terms of information resources available through educational, professional and technological exercises;
- (viii) unrolling the means to assert that faculty members and scholars/students have access to the technological information support required to utilise the information effectively the information resources;
- (ix) extending the level of cooperation and resources sharing concerning with information resources with other organisations, industrial establishments and the like;
- (x) developing the effective use of expenditure relating to acquiring, producing and utilising information resources in the academic institutions;
- (xi) encouraging the cooperation and resources sharing in the use of information resources through the development of the networking programmes;
- (xii) introducing single point access to all information resources in the parent institution and other organisations ;

- (xiii) projecting required information directly to work stations and resources utilisation centres;
- (xiv) preparing beforehand for future use of the faculty members and students/scholars the personalized database systems;
- (xv) formulating equitable personnel policies for the information scientists to develop the research activities in the library;
- (xvi) advancing and preserving the interest of the concerned academic institution with regard to external policies through the development of its efficiency in the use of information resources in support of its academe commitments; and lastly
- (xv) endeavouring to supply the user or groups of users with the resource materials which would encourage cultivation of curiosity/intellectuality, lifelong learning, and intuitive thought.

These are the some facets which distinctly display the role of an academic library in education. In such ways the library itself can build up an academic support system.

Sample Questions

I. Long Answer Type

1. Write an essay on the role of library in accademic support system.

I. Short Answer Type

1. Discuss, in brief, how an academic library helps to multiply research output of the faculty members and research scholars.

III. Objective Type. (Mark the *one* right answer out of the following four alternatives with the tick-sign ✓).

1. The role of an academic library is
 - A. Negative
 - B. Positive
 - C. Neutral
 - D. None of the three.

Answer is 'B'

Select Readings

1. Kirk, Thomas *ed. Academic-Libraries : Achieving Excellence in Higher Education : proceedings of the Sixth National Conference of Association of College and Research Libraries*, 1992.

2. Line, Maurice B. *ed. Academic Library Management*. London, The Library Association, 1990.

3. Me Donald, Joseph & Mickikon, Basney *Academic Libraries : The Dimensions of their Effectiveness*. Greenwood, Greenwood Press. 1994.

Unit 3 □ Librarian and Teacher, Coordinated Academic Team

Due to unexpected explosion of human knowledge and unprecedented development of information technology the librarian in an academic institution has to perform varied activities. With his/her professional knowledge accompanied by good academic qualification he/she becomes ultimately the last person to detect needed resources and supply the appropriate information.

It is found that the academic librarian has to perform the teaching and research activities in as much as he/she instructs the students formally as well as informally, and advises as well as assists the faculty members in their scholarly endeavours. Thus it is revealed that the function of the academic librarian as participant in the process of teaching and research is the most important criterion of the faculty status.

Hence an academic librarian with a subject knowledge along with library and information science training acquires a much higher competence becoming a source of sound assistance than his/her colleagues in academic departments. Thomas Kirk suggests that "... a plan of course assignments and library instruction must be developed that will achieve both the subject matter objectives and intellectual skill objectives (reading, writing, critical thinking, information gathering) set by the professor, the librarian and the institution." This suggestion would indicate to set up a coordinated academic team with the librarian and teacher in a college /university environment.

The librarian of an academic institution has, therefore, to

- (i) classify the various types of users, e.g. students, scholars, teachers, staff of that institution and, if fund allows, users outside the institutional community;
- (ii) appreciate the requirements of the clientele depending on type, nature, depth and environment of activity involved, personal attributes and characteristics of an individual;
- (iii) evaluate and improve the effectiveness of the library services rendered to the users;
- (iv) set up an internal current awareness system in the library;
- (v) examine the utilisation of services, i.e. whether the library is fully utilised or is under utilised;

- (vi) draw up various academic programmes for the benefit of the users ;
- (vii) procure books, serials and other materials for building up the library collections ;
- (viii) utilise the specified library funds in the best possible manner ;
- (ix) uphold the teaching activities of the library in such a way so that the library itself would be turned into a class room, i.e. to materialise the new concept of 'self organised' teaching and learning or the concept of 'library-college' with a strong development of audio visual aids to teaching in the forms of teaching machines, film loops, slides,tapes, films, television recordings and the associated hardware of closed circuit television;
- (x) provide orientation/training in the library use supplying the users with a handbook describing the nature of the library collections in the library, and information upon the methods of using the library and its associated services;
- (xi) render the reference services to the heterogeneous type of clientele
- (xii) know the context of use of information and understand the problems relating to the questions asked for;
- (xiii) play vital roles as the information intermediary and knowledge consultant;
- (xiv) work constructively on learning skills curriculum that includes the capabilities to locate as well as select resources, to interrogate as well as interpret the contents in resources, and to communicate the acquired knowledge as well as understanding;
- (xv) develop, during teaching and learning processes, among the students/ scholars and even the teachers the academic skills to explore the thoughts, examine the issues, debate on them, identify the significant points, and to enjoy them; and
- (xvi) provide the inherent support to Research and Development (R & D) programmes by supplying relevant information with the users of that particular academic institution for higher education.

Thus it is evident that in an academic institution of higher studies the librarian

and teacher should work as a coordinated team for furtherance of learning and research.

As already hinted, the academic library provides an opportunity for student-centered learning and the librarian in an academic institution is primarily responsible to collect, organise, as well as exploit materials, and retrieve information in response to the requirements of the users. He/she has also sometimes to advise on information storage and retrieval systems for improving efficiency and saving time as well as money of the users. But the teacher, on the other hand, instructs the students how to listen, view, ponder, analyse and assimilate the acquired information. He / she is expected to develop life-long learning inquisitiveness and ability of his/her students. Apart from the resources of different kinds supplied by the management of an academic institution for assisting the students in sundry ways, the librarian should, in the academic context, take further following steps by

- (i) supplying appropriate and basic reading materials at all levels of students for their respective courses with the existing collections including materials for entertainments;
- (ii) having the collections in proportionate with the number of students, researchers and teachers;
- (iii) making the library collections meaningful and useful to the students as per their curriculum; and
- (iv) reviewing periodically the library collections in terms of the importance laid on any aspect of the educational programmes undertaken by the particular academic institution.

Hence the academic librarian having worked with the students/scholars/teachers at the individual level in group/groups contribute much to academic activities for the progress of education in general.

Sample Questions

I. Long Answer Type

1. Enumerate the functions of the librarian in an academic institution.

II. Short Answer Type

1. Trace out the relationships between the teacher and the librarian.

III. Objective Type (Mark the *one* right answer out of the following four alternatives with the tick-sign ✓).

1. The librarian and teacher should
 - A. work together as a coordinated team.
 - B. separately perform their own duties.
 - C. work in a disorganised manner.
 - D. not be treated as equals.

Answer is 'A'*

Select Readings

1. India, University Grants Commission 1964 (1967), (Dr. S. Radhakrishnan). *Report*.
2. Srivastava, A. P. *Teaching and Learning in XXI Century*. New Delhi, The Learning Laboratory, 1987.

Unit 4 □ Library as Learning Support

As a learning support the library has an important role to play since the library services include storage, retrieval and dissemination of documented as well as recorded knowledge. So the concerned academic library has to ensure collection and organisation of recorded knowledge following the aims and objectives of that particular academic institution. Such a library should, therefore, utilise the resource materials for learning as per the demands of its users by

- (i) supplying the users with a handbook titled 'How to use the Library' containing the information about the library a whole, collection, charging system, reference section and similar other relevant details helpful to the users;
- (ii) visualizing the present and future needs of the users continuously in changed circumstances;
- (iii) supplying information sources and offering services to support the learning processes;
- (iv) simplifying the library services, as far as practicable, to save the time of the users;
- (v) encouraging the use of the library offering to the users better facilities and services;
- (vi) creating awareness and developing understanding of information resources available in that particular library;
- (vii) arranging comfortable accommodation for study and for the use of the reference tools;
- (viii) coordinating activities of different departments/ sections/units of the same library and with those of other institutions and developing formal links through resource sharing for the advancement of learning;
- (ix) sanctioning the use of the materials of the library by the industrial establishments with some restrictions;
- (x) allowing access to the library materials to the students and research scholars not attached to the parent institution and designing resource sharing programmes to assist them in learning and research activities;
- (xi) encouraging innovations and introducing new technology for the promotion of learning through information transfer;

- (xii) managing the library collection, personnel, finance and others most professionally without wastage of time and money;
- (xiii) encouraging the users through debates, competitive orations and organising exhibitions relating to learning; and
- (xiv) offering incentives to the library personnel for better services to the users.

In the above space have been mentioned some of the ways by which an academic library supports learning. Precisely, such a library can act as learning support through the

- (a) preservation of information resources,
- (b) conservation multi-cultural legacy through information technology,
- (c) dissemination of knowledge in a broader perspective,
- (d) participation in resource sharing and services programmes,
- (e) encouragement of self-education and self-learning through the library resources, and
- (f) interaction for academic and socio-intellectual services.

During this period of information explosion, life-long self-learning, and development of information technology both the teachers and librarians/information scientists are equally becoming responsible for the dissemination of knowledge. It has been experienced that merely formal learning/teaching would not be successful without positive cooperation between the teachers and librarians. Hence traditional differences between these two groups of individuals in an academic institution now-a-days does not exist at all and for sake of the advancement of learning the academic teaming between the two is gradually becoming a reality. It is found in some instances that the librarian is assisting a teacher both qualitatively and quantitatively or supplying new information about specific subject/topic and preparing subject abstract like Chemical Abstracts, Legal Abstracts for the young but bright research scholars. The librarian renders also the current awareness to all including teachers and researchers. Thus in an academic team neither a teacher nor a librarian is superior to other. In the present age learning and research are simply impossible without cooperation between these two sets of individuals. As already mentioned, because of several networking programmes with the assistance of new technology the academic librarian can help the students, scholars and teachers alike in their respective areas as now teaching has been converted to 'resource' based 'learning'.

Library-College Concept in the Academic Library System

The 'self organised' teaching and learning have focussed attention upon the library as a central organ. With rapid development of audio-visual materials like film strips, slides, tape recorders, radio channels, tapes, films, television recordings as well as associated hardware of closed circuit televisions and personal computers even in this 'self organized' form, teaching and learning have become less dependent alone on the printed words as the supports and alternatives to classroom teaching since the audio visuals are gradually becoming more and more essential adjuncts of the self-learning process.

Concept

The concept of the 'library-college' reveals one of the changes in educational processes. This is a concept of teaching being built not around the classroom or the laboratory, but around the library — though the library in this concept contains not only books and periodicals, but also the kinds of aids mentioned above, and as a consequence, is beginning to be called a 'learning resource centre' .

The library-college concept requires the students to be trained to work mainly within the 'resource centre', bringing the teaching programmes, books, periodicals, serials and other audio-visual tools needed for their learning and using them in their own private study comers.

Tutorials and group tuition may be carried out in small rooms near the library or resource centre. In his/her own study comer, a student should have the equipment to go through the teaching programmes. But in the more advanced schemes a student has a direct dialling access to a collection preserved in videotapes of lectures and demonstrations, which he/she can show on his/her own personal viewer. As a student has access to any skilled assistance he/she needs, the basic fact is that, within the limits of a broad study programme laid down, he/she is on his/her own, with the library or 'learning resource centre' as his/her most accessible teacher or guide.

Concern for Librarian

The library-college concept is evidently very provoking for the librarian to ponder, since it is largely a justification of all the librarians who have been for a long period highlighting the unique role of libraries as teaching tools. Although this concept is primarily an outcome of an educationist's labour, still the librarian would keep himself/herself abreast of the latest educational researches along with his/ her professional skill for making inevitable adjustments to lead the library in the

participatory programmes for the advancement of learning. Norman W. Beswick while explaining 'library-college' concept proposes "a new kind of library for an age when audiovisual aids may soon be as necessary as books" (*Times Educational Supplement*, March 3, 1967). His article titled *The library-college—the true University* (*Library Association Record*, 69, VI, June 1967, pp. 198-202) strongly advances this concept.

Participation of the Students

The 'library-college' concept needs that the "students should have a high level of sophistication in the use of libraries and the associated bibliographical aids". To implement this concept it is generally thought that the university and college librarians should provide training for the best use of the libraries by their users.

For such a training orientation programme the most basic factor is the preparation of a handbook narrating the nature of the collections in the libraries and information about the methods of utilising the libraries and their related services to be rendered.

Also the guided tours to the national and important libraries should become a regular feature and in fact are still the only form of assistance to students studying in some academic institutions. At present the emphasis is being laid on the provision of courses of instruction to undergraduate as well as post-graduate students and even to staff members in many colleges and universities. Through the introduction of an one-year compulsory training programmes known as 'approaches and methods' relating to the use of libraries sometimes provisions should be made for examining such programmes along with the academic subjects at the end of each academic session. To maintain the 'state of the art' of library instruction an information booklet may be circulated among the participants for promoting instruction in the use of books and automation in libraries. Besides, the 'pre-arrival library instruction' for the undergraduates and researchers may regularly be issued.

True University is a Collection of Books

Finally, it may be remarked that the library-college concept is not an innovation, but it has been accepted and translated into action for a long period throughout the world. That is why Thomas Carlyle has rightly said: "A true University is a collection of books." This statement reveals the self-organised learning in a well-equipped library outside the formal classroom assignments.

This changing concept of education now-a-days displays that greatest emphasis

should be laid on the pupils and their self-study by reducing the number of formal lectures in the classrooms. In order to ensure this two-way participation in instruction, there should be individual and group discussions, seminars as well as tutorial assignments, since open discussions require detailed knowledge of subject-matter to be acquired by the students themselves. For such a process the students should be allowed to use libraries which may be better stocked with books, even other than text-books, and journals and other visual as well as reading materials like micro-films, tepe-records, music records, maps and manuscripts and the like. Thus with the changing educational scenario, the library is rapidly occupying a very significant place in the academic library system and promoting as its necessary adjunct the philosophy of self-study among the students.

Sample Questions

I. Long Answer Type

1. ‘The library-college concept has introduced a complete change in traditional method of learning’—Elucidate.
2. Discuss the role of library as a learning support.

II. Short Answer Type

1. Write, in brief, the basic needs for the implementation of ‘library-college’ concept.
2. How can an academic library support learning ? Relate the points.

III. Objective Type (Mark the *one* right answer out of the following four alternatives with the tick-sign ✓).

1. ‘Library-college’ concept emphasizes on the
 - A. Classroom teaching.
 - B. Experiments in the college laboratory.
 - C. Student-teacher relationship.
 - D. Self-organised teaching and learning.

Answer is ‘D’

2. The librarian is responsible for
- A. Dissemination of human knowledge.
 - B. Non-Participation in Resource Sharing Programmes.
 - C. Non-Introduction of new technology in the library.
 - D. Non-Transfer of information.

Answer is 'A'

SELECT READINGS

1. *The Library-college : Contributions for American Higher Education at the Jamestown Collee Workshop 1965*. Philadelphia, Drexel Press, 1966.
2. *American Library Association*. Student use of libraries : An Inquiry into the needs of students, libraries and the educational process: Papers of a Conference within a Conference July 16-18,1963. American Library Association, 1963 (1964).
3. *Times Educational Supplement*, March, 3, 1967.
4. Davinson,. Donald. *Academic and Legal Deposit Libraries : An Examination Guidebook*. London, Clive Bingley, 1969.
5. Randall, W. M. & Francis, I. *Principles of College Library Administration*. Chicago, American Library Association and University of Chicago Press, 1936.
6. Sharma, J. S. *Library Organisation New Delhi*, Vikas Publishing House, 1978.

Unit 5 □ Library and Higher Education

To be specific, higher education is broadly of two types, i.e. general education leading towards the award of the B.A., B.Sc. degrees and professional as well as technological courses offering the M.B.B.S., BE., M.E., M.D., M.S., LL.B. degrees of any university, deemed to be university or recognised institutes. Hence the library of each of those establishments to a great extent helps the higher education which actually commences from post-higher secondary stage. Thus in order to promote higher education the library should provide the students, research scholars, teachers and other users concerned with higher education with learning as well as teaching aids, borrowable/returnable documents, reference books, information retrieval services, and document reproduction resources for preparing class notes, developing research proposals/papers, helping to finalise the current research projects, writing a book/mograph/thesis/dissertation. But the use of library is determined by the user's requirements. Because of multidimensional growth of knowledge, it has now extremely become difficult to have direct access to scholarly materials and to the world of knowledge. Hence a person pursuing higher education in any branch of knowledge will have to depend on a professional librarian for guidance. The relationship between the users, i.e. learners and teachers, and the information sources, i.e. library and librarian, is gradually establishing and growing.

Thus in higher education the library with its collection, storage, retrieval, and dissemination of knowledge contributes much to the advancement of higher learning. Any academic library drawing attention to the educational purposes helps learning and intellectual fulfilment of the clientele.

In an academic institution for higher education the library is both a service agency and a type of academic department of unique kind being an integral part of teaching and learning processes.

The primary purpose of such a library is to help a student to learn selectively and train him/her in application of knowledge. The academic library cultivates competence for acquiring multi-and inter-disciplinary knowledge in various branches. But the user has to learn how to control and utilise the information, because utilisation of existing knowledge is as important as the discovery of new knowledge. The library service should, therefore, assist the users to identify the topic of research and the procedure for understanding.

Thus the academic library may promote higher education in the following ways :

- (i) by assisting the students in their learning process through the supply resources, i.e. books and non-book materials;
- (ii) by guiding and counselling the users;
- (iii) by locating needed library materials for the preparation of class lessons;
- (iv) by discussing with the students about the research projects;
- (v) by procuring library materials from other sources for the clientele;
- (vi) by taking help of computer based technology and using internet for information retrieval for the teachers and research scholars/students;
- (vii) by preparing abstracts of learned papers published in different languages;
- (viii) by participating in resources sharing programmes for the furtherance of human knowledge;
- (ix) by teaching how to explore, how to move around an issue, how to debate, how to detect the 'important' in a topic, how to study think and write;
- (x) by performing documentation activities like content analysis, citation analysis, SDI services, access to global information databases.

Thus die academic library has primarily to promote both teaching and researches undertaken by that parent institution under which it exists. Such a library can become ultimately the place where the human mind is at its best.

Sample Questions

I. Long Answer Type

1. How does the academic library promote higher education ? Enumerate the issues.

II. Short Answer Type

1. Describe, in brief, the relationship between Higher Education and Academic Library.

III. Objective Type (Mark the *one* right answer out of the following four alternatives with the tick-sign ✓)

1. An academic library is a
 - A. Research Library.
 - B. Special Library.

C. College Library.

D. Public Library.

Answer is 'C'

Select Readings

1. Corbett, E.B. *Fundamentals of Library Organisation and Administration : A Practical Guide*. London, The Library Association, 1978.
2. Ranganathan, S.R. *Library Administration*. Bombay, Asia Publishing House, 1959.
3. University Grants Commission. *University and College Libraries: Report of the Library Committee of the University Grants Commission and the Proceedings of the Seminar from Publisher to Reader held on March 4-7,1959*. New Delhi,U.G.C 1965.
4. Parry, Thomas (Chairman). *Report of the Committee on Libraries*. London, Her Majesty's Stationary Office, University Grants Committee, 1967.
5. Withers, F.N. *Standards For Library Service* (Mimeographed) Paris, UNESCO, 1971.
6. Gelfand, M.A. *University Libraries For Developing Countries* (UNESCO Manual For Libraries 14). Paris, UNESCO, 1962.
7. Sharma, Chandra Kant. *University Library: Its Management and Organization*. New Delhi, Metropolitan Book Co., 1977.

Module II ■ KINDS OF ACADEMIC LIBRARY

Various kinds or types of academic library are found. According to their nature, characteristics and services, and clientele these libraries may broadly be grouped under the following categories, namely,

(A) School Library, (b) Collage Library, (c) University Library and (D) Institute Library, following the aims and objectives of their parent academic institutions.

Unit 6 □ Academic Institutions and Their Libraries

The schools, colleges, universities, institutes for professional/further education including medical, technical, maintain in their respective institutions wherein teaching and researches are being earned on to prepare the students and pupils for undergoing different courses of studies and to assist the scholars and teachers for writing their dissertations, theses, monographs. To fulfill such sundry needs the libraries situated in those academic institutions play a significant role. But it should be kept in mind that the nature, aims, objectives and functions of such libraries are quite different. Hence no uniform pattern can be evolved for all such libraries. As for example, the collection, nature of service, and needs of the users of a school library cannot be identical with those of a college library. Likewise the nature of a college library is not the same as that of a university or professional institutes imparting medical, technological or legal education. Therefore, the nature and services to be rendered by the library differ from one institution to another.

Before any discussion is presented in general about the academic libraries, it is prudent to classify and define the different types of academic institutions at the very outset.

As already mentioned, academic institutions are generally the schools, colleges, universities, and institutes of professional/further studies. An academic library being a store house of books and other materials and a dynamic instrument for the progress of knowledge occupies a significant role in the framework of the academic system. It is, especially in a college, or university or professional institute, a central place for study and research. Hence the primary aim of an academic library is not only to fulfil the mission of any particular academic institution, but also to uphold its aims and objectives. With a view to materialising such issues relating to the functioning of the academic library beginning from accessession through classification, cataloguing and bibliographies are accordingly designed.

It is needless to mention that prime duty of every nation to make provision for proper education for every citizen from his/her childhood to youth. In fact, every individual in any country should be properly educated to discharge his/her duties as a responsible citizen of the country.

6.1 School Library

Before discussing about the school library it is better to identify different types of

school, which are as follows :

(i) Primary school from pre-primary to standard IV.

(ii) Secondary School from standard V to standard X.

(iii) Higher Secondary School from standard XI to XII. Hence the libraries of these three groups of school would differ in respect of (a) collection and processing of library materials, and (b) services to be rendered to the school children who being the future citizens are supposed to meet effectively the needs and challenges of the nation.

The Aims and Objectives of the school library are very much alike those of the school itself as also those of primary to higher secondary education policies of the country. But in general, it is needless to mention that prime purpose of the school is to build up the honest personality with artistic, cultural and literary faculties, i.e. the personality with a balanced combination of heart and head or with humane and intellectual qualities.

With regard to the *Functions* of a school library one has to admit that it can never be a substitute for formal education; it is a compliment to and an integral part of the school. The school library stack is expected to hold, apart from multiple copies of text-books, authoritative compositions on various disciplines, biographies of eminent personalities, and reference books like atlas, charts, clippings, dictionaries, encyclopaedias, journals, magazines, maps, pamphlets, pictures, serials obviously with profuse illustrations to create curiosities and stimulate reading habit among the school children who are not physically matured enough and fully grown up and intellectually well-equipped. Considering all these factors the five following Functions of the school library may be enumerated :

- (i) acquisition and display of books and other materials as mentioned above,
- (ii) encouragement of reading habit among the school children,
- (iii) provision of reading and audio-visual materials for supplementing the classroom learning,
- (iv) preparation for a life-long functional education of the school children, and
- (v) guidance for the school-going girls and boys for selecting necessary books and information revealing meaningful use of the library stock.

Having rendered all such functions a school library is the only social institution which directs the human population of age-group between three and eighteen years to be the worthy citizens with humane and rational instinct.

Under the school library system the following three types of school library have been contemplated :

- (A) Central Library.
- (B) Class Libraries.
- (C) Subject Libraries.

(A) In a school a 'Central Library' having met the daily general requirements during the normal school working hours would function under a whole-time properly trained librarian who is expected to guide the students, teachers and other staff-members in their learning process in a practical manner. A centralised school library is almost compulsory during this age of multi-disciplinary studies. Books and other materials kept in a central library would yield the benefit of study of the overlapping disciplines and thereby would be able to widen the horizon of education. Indeed such a school central library with comprehensiveness displays the range and extent of human experiences and endeavour in a way impossible where the collection is dispersed. In fact, dispersal of books and other materials in different classes in the school would result in intellectual segregation rather than cooperative development. But in absence of a 'Central Library' in a school due to acute shortage of space the role of either 'Class Libraries' or 'Subject Libraries' may be thought of.

(B) The 'Class Libraries' are those small libraries each of which possesses 150 to 300 volumes at a time, and are maintained by the Individual Classes in a school exclusively meant for the use of the students of any particular class. The Collections of these classes may be located in the individual class-rooms under the charge of particular class-teachers. The 'Class Libraries' are generally meant for the junior students and are mainly concerned with the text-books and supplementary reading materials. But in such libraries there is little scope for wide coverage of individual disciplines and for crossing subject-barriers. In case of absence of renewed additions the 'Class Libraries' after a considerable period the library collections would, appear ultimately outdated and consequently later on the students would loose interest in the library use and reading habit.

(E) On the other hand, the 'Subject Libraries' grow up suspending on the individual subjects like English, Sanskrit, Pali, History, Geography, Physics, Chemistry, and Mathematics. Hence these libraries are located in individual subject classrooms under the charge of the individual subject-teachers. Such libraries are to meet the demands of die users of particular subjects wliich are periodically revised with new information and most recent researches. Hence the 'Subject Libraries' should constantly be replaced and supplemented with newly published titles. But for such updating of the collection strong financial resources are necessary. Because of such additional financial burden sometimes it is not possible to maintain individual 'Subject

Libraries' in a school.

The origin of the concept of 'Subject Libraries' may, for the first time in India, be traced back in the Report of the Secondary Education Commission (1952-1953) instituted by the Government of India under the Chairmanship of Dr. A. Lakshmanaswami Mudaliar, which under 'Effective Service' has recommended the creation of subject libraries under the charge of subject teachers for enriching the teaching of subjects with a small collection of books. But such libraries could not necessarily be confined only to text-books, on individual subjects. The library collections should include also some advanced works, reference books, titles on allied and related subjects so that the pupils could handle and browse over them for their intellectual improvement. The recommendations of the aforesaid Secondary Education Commission (1952-1953) may be summed up as follows :

. "(i) Every secondary school should have a well equipped school library backed by class and subject libraries. This was essential for the efficient working of every educational institution and for encouraging literary and cultural interests in students;

(ii) trained librarians possessing love for books and understanding of students' interests should be appointed in all secondary schools and all the teachers (of secondary schools) be given some training in the basic principles of library maintenance in the training colleges as well as through refresher courses;

(iii) where there were no separate Public Libraries, the school libraries should, possibly, make their facilities available to the local public and all Public Libraries should have a special section for children and adolescents; and

(iv) to improve general standards of work in school, necessary steps should be taken to produce text-books as well as books of general reading in distinctly superior quality than those at present available,"

6.2 College Library

As a necessary adjunct of higher studies the college generally makes provision for teaching Bachelors Degree Courses in Arts, Commerce, Science and the like after the Higher Secondary Course of the XI and XII Standards. Some Colleges, however, impart post-graduate courses in selected subjects. In some countries there is a system of instituting affiliated colleges apart from the university colleges. It is noted that a bulk of student population, especially at the first degree level, is actually enrolled in the colleges which thus meet the needs of students at the undergraduate level and in restricted cases at the post-graduate level. Hence in order to improve the standard and quality of higher education the college library plays an important role.

The Aims and Objectives of the college library are to

- (i) generate curiosity and eagerness among the students,
- (ii) assist them for using the available reading materials in the college library,
- (iii) supplement the teaching imparted in the classes, and
- (iv) serve the undergraduate students by functioning as an independent teaching agency for encouraging as well as promoting the use of books and other materials apart from those required or suggested by the teachers.

In order to fulfil, those aims and objectives the *Functions* of a college library would be to (i) support the study and teaching communicated to the students, (ii) meet the reading needs and requirements of the students and teaching staff of the college for the advancement of learning, and (iii) assist the users, especially the teachers, in their research activities.

According to W.M. Randall and F.L. Goodrich (Principles of College Library Administration, 1936, p. 19) the Functions are as follows as a college library

- (a) makes available to the students books and allied reading materials relevant to the courses offered in the college;
- (b) makes available the books and documents required by faculty members in preparation of their instructional courses ;
- (c) provides supplementary books and reading materials to help study and teaching at the college ;
- (d) provides comprehensive selection of authoritative books and documents needed by the faculty members to pursue their research programmes;
- (e) promotes the proper use of the reading materials available in the stock; and
- (f) trains the students in making use of the library properly and derive full advantage out of it, integrating the library with the educational courses.”

Likewise almost in the same strain D.L.Smith and E.O. Baxter have enumerated the following Functions of a college library :

- (i) to acquire and provide texts and standard reference books to the students, necessary for preparation of their examinations;
- (ii) to train college students in the use of the library materials and to encourage them to enrich their knowledge and outlook in a wider perspective through general and wider readings;
- (iii) to help and assist the faculty members of the college in preparation of their

instructional courses and in keeping them abreast of the current knowledge and concepts in different areas of study; and

- (iv) to assist the teaching staff in the pursuit of higher studies and research and support them with relevant literature and information on the subject.”

Under the broad heading ‘Organisation’ of a college library the following issues should be considered:

- (i) As to the *Building and Furniture* it is thought that the building of a college library should be functionally equipped with the provisions for proper lighting, ventilation and other accessories including comfortable and pleasant furniture suitable for a college library, of which the best services could be available if the library building is constructed according to the latest planning and design. A college library building should provide additional accommodation for students and teachers for exchanging ideas, a small lecture hall-cum-auditorium, studios as well as theatres for display of exhibits, and for housing audio-visual materials including television sets and personal computers.
- (ii) Regarding the *Book-Stock* of a college library it is to be noted that the books and other materials collected therein should be adequate and up-to-date. A good Reference Section is a must for a college library which, however, should collect the undemoted books and other materials primarily for the students and teachers :
 - (a) copies of recommended text-books, (b) books for reference studies and for further learning, (c) appropriate titles for recreational purposes, (d) publications relating to local culture, history and society, and (e) required periodicals and serials for learning and research.

For an undergraduate college there is little scope of collection of rare and expensive titles which are needed exclusively for researches. It appears that a college library in general tends to be less various and more learned.

But in any case the collection of books and other materials in a college library should be systematically accessioned, classified, catalogued, and put accordingly on the shelves in order to save the time under the guidance of a trained librarian.

- (iii) Indeed efficient functioning of a college library depends largely upon the adequate number of professionally *Qualified Staff-Members* with one librarian having teaching aptitude, three assistant librarians, five semi-professionals and nine attendants.
- (iv) Adequate *Financial Allocation* is essential for a college library. The college

authorities should make sufficient provisions in the budget for purchase of books and other materials, for processing them, for emoluments of the staff, cost of erecting the library building-, if it does not exist, purchase of new furniture and fixtures and the like.

- (v) Last but not the least are the following *Services* expected to be rendered by a college library to its students, teachers and staff, which should
- (a) conduct orientation course for the fresh undergraduate students in the use of library;
 - (b) discharge advisory services to its users through reference tools ;
 - (c) monitor the circulation of books and other materials through issue and return registers;
 - (d) provide the list of new additions in the library to its users;
 - (e) bring out bibliographies occasionally on different subjects or topics;
 - (f) participate in the inter-library loan programmes for the benefit of the students and teachers;
 - (g) use audio-visual materials for classroom teaching and individual study; and
 - (h) encourage the students in self-study or self-instruction by individual and group discussions, seminars, tutorials, for which intensive utilisation of library materials is urged.

Because of such factors the college library has now been an essential part of the college life. It is due to its effective and useful activities it is being gradually a necessary adjunct of the college to supplement the formal classroom teaching.

6.3 University Library

The essential condition of the university is to be a temple of learning to promote knowledge. Hence a well-organised library plays a significant role in this regard. But the exact organization of the university library would differ from place to place with a view to establishing a large central library which should maintain a complete catalogue of all books and other materials indicating clearly availability of them in the central library and in the campus as well as departmental seminar libraries.

Alan Gilbert, Vice-Chancellor of Melbourne University, Australia, said in 1995 : “Such complex and holistic institutions (i.e. universities) operate best as genuine communities in which personal interactions, informal as well as formal, shape the learning environment.”

The University Grants Committee of U.K. had noted in its first annual report in 1921: “The character and efficiency of a university may be gauged by its treatment of its central organ, the library. We regard the fullest provision for library maintenance as the primary and most vital need in the equipment of the university”.

Although such a need was felt in the first quarter of the 20th Century no authorities whether the governmental or non-governmental statutory bodies had taken any satisfactory step all over the world for the allround development and proper functioning of the university libraries.

To be more specific, the university library consists of (i) a Central or Main Library; (ii) Campus Libraries, if there is more than one campus; and (iii) Departmental Libraries, as well as (iv) Seminar Libraries attached to each Department.

The University Central Library is that library which contains books, journals, serials, and other materials pertaining mainly to the disciplines taught in that University as also standard reference books and is centrally situated in the University area. The Campus Libraries with the library collections are concerned with the subject/subjects taught in a particular University Campus. The Departmental Libraries are located in the concerned teaching departments under the supervision of the library staff deputed by the University librarian. In some universities the existence of Seminar Libraries of which cost of collections and maintenance are borne by the students and teachers of the respective teaching departments of the university. The “Seminar collections (or libraries) are only to be distinguished from small departmental libraries by fine distinctions of definition. They may be described as workshop collections in laboratories, classrooms and staff rooms, with no full time librarian in charge of them. In some academic institutions, these collections (or rather small libraries) are regarded as departmental equipment, and are paid for out of departmental funds. In others, the university library building itself is designed to house them, in small rooms adjacent to the main reading room so that they can be used by specific groups of students under the general supervision of the library staff. Indeed seminars and tutorials can be earned out in these rooms quite conveniently” (Davinson, Donald. Academic and Legal Deposit Libraries: An Examination Guidebook. London, Clive Bingley, 1965, p.80)

Regarding *Collections* it is desired that the university central library should possess books and materials on all possible subjects including reference books in a separate Reference Section, while the Departmental Libraries should contain only those books and materials which would frequently be used by the students and teachers. The Departmental Libraries should also be provided with computers with internet

connections and with other Departmental Libraries to supply the bibliographical and other information to the library users.

With regard to the *Staff* of the university library it should be noted that the university librarian should be a person who is professionally qualified and academically sound with a doctoral degree in any branch of learning or research aptitude. He should also be assisted by his almost equally qualified colleagues or deputies entrusted with the different sectional activities like classification, cataloguing, reading-room as well as reference section management, and overall supervision of Campus as well as Departmental Libraries. There should also be a proportionate number of assistant librarians who should supervise the acquisition, accession, issue and receipt of books and other materials. They should also have master's degrees in any discipline apart from professional degree in library and information science. Below them there should be appointed some semi-professional persons and library attendants to perform sundry other functions in the university library. It is the duty of one of the deputy librarians with the approval of the university librarian to depute efficient and qualified library staff to the Departmental Libraries of the university. In case of posting a properly qualified person in the Reference Section special care should be taken since he/she should not only be well conversant of the library collections, but also be efficient enough to satisfy students and teachers with bibliographical tools and documentation services.

The Aims and Objectives of a University are to produce good citizens and to impart knowledge to the students irrespective of caste, creed, or sex in the disciplines like Agriculture, Arts, Sciences, Engineering, Hotel and Hospitality Management, Medicine, Nursing and the like.

According to L.R. Wilson and M.F. Tauber (*The University Library : The Organization, Administration, and Functions of Academic Libraries*, 2nd ed., 1958, p. 16) the main *Functions* of a University are as follows :

- (a) conservation of knowledge and ideas;
- (b) teaching;
- (c) research;
- (d) publication;
- (e) extension and services, and interpretation.

With all the *Ideals and Aims* of the University its library has a great role to play. It is reported that "for the student, attendance at lectures and private study, are to

some extent, alternatives, and it would be unfortunate if an insufficient supply of books made it necessary to offer lectures which would not otherwise be required. If one of the main purposes of university education is to teach students to work on their own, reading by student must be preferable to attendance at a lecture unless the lecture is superior in presentation or content to the available literature” (Report of the Coinmittee on Libraries under the Chairmanship of Thomas Parry. London, H.Majesty’s Stationery Office, 1968, p. 11). But in training the students should work on their own and read the literature of the subject with alert and critical mind. The introduction of mere teaching by discussion is beneficial only when it can be matched by a coiresponding increase in the amount of private study done by the students.

Besides, for doctoral researches maintenance of a well-stocked library with in organized collection of books and other materials is almost obligatory on the part of the university librarian. Thus such a institutional library has to cater both the teaching and research needs of the users.

The Functions of the University library may be grouped under the following five categories :

- (a) control — covering acquisition, accession, processing and shelving;
- (b) archive — building up collection ;
- (c) service — including professional guidance to the readers;
- (d) cooperation — linking the local and national network of library resources; and
- (e) research and development to enhance the library techniques (Thomson, James. *An Introduction to University Library Administration*, 1970, p. 10).

The *Functions* of a University library may be spelled out also as follows :

- (a) Collection of resources; (b) retrieval of information; (c) coordination as well as staff efficiency ; and ultimately (d) responses to the university needs.

Some other *Functions* of the University library are to ensure

- (a) open access system — in order to educate the undergraduate and postgraduate students as also the teachers in the use of library except for rare and precious collections and with strict vigilance in the entry and exist gates the carefully planned open access system allowing the users to wander freely in the stack is desirable;

- (b) longer hours of work — in order to avail of the library facilities by the students, scholars and teachers the university library should arrange for a longer period beyond

class/office hours for optimum utilisation of library materials and, if possible, stack, lending section; reading room may be kept open for twenty-four hours with the provision for shifting duties of the concerned staff. The above three units of the University library may further be open on all days irrespective of holidays for twenty-four hours ;

(c) creation of book-consciousness among the users — the prime function of the University library is to make the students and scholars book-conscious by encouraging them for personally purchasing some selected books for their private study and by allowing them continuous consultation familiarity with reference tools in the library.

The traditional role of a University library goes beyond the provision of specific books, journal articles, and other materials to students enrolled in courses currently being taught.

University libraries collect the materials in subject areas in which their institutions may be expected to teach in the future. Thus they collect materials to support the development and redevelopment of new and existing courses. An important role is seen for the collection of materials to research by academic staff and higher degree students and the provision of access to these materials nationally and internationally as a contribution to scholarship worldwide. Finally, library collections are developed systematically, by reference to collection development policies, through selection by library staff on the basis of reviews and citations in reputable journals and monographs, and by academic staff drawing upon their extensive knowledge of their field of expertise.

Thomas Parry in his *Reference Services in the University Library* has supplied a fully definitive treatment of the functions of the University library. He has pointed out the functions in relation to the undergraduate, graduate, scholar, the special collection and outside bodies are examined separately.

This makes the following points about each of this category of readers :

For the undergraduate teaching function, the call is for duplicate copies of some key texts sufficient to enable the tutorial based upon independent study to flourish. Such a provision is expensive.

For the graduate, the need is for a wide range of the materials, especially of the periodical and bibliographical type. It is also an expensive provision.

For the scholar by whom the reference means post-doctoral research students and staff, demands are even heavier in respect of specialised material in a wide range.

The Parry Report mentions as an important point in respect of this type of provision, that the University library able to make really able men to the University. As a repository for special collections the function of the library is to underline the need for the preservation of knowledge in all its forms.

But the *Report* of Thomas Parry does not look favourably upon the idea of the University library serving users outside the University or public in general.

As already stated, N.W. Beswick has mentioned one of the *Functions* of the University library is “The library-college—the true university” (Library Association Record. 69, VI, June 1967, pp. 198-202). It is an account of an American concept in. a building of a college around and with a library, with the book-stock utilised to the full by teachers who are also sound bibliographers.

Arthur T. Hamlin examining the *Functions* of the University libraries remarks that conservation of knowledge is an important function of the university as a whole, and that the University library carries this function through to its conclusion (The libraries of the Universities of Italy in Libri. 15, II, pp. 138-158).

Hence (i) conservation of knowledge is the primary function of the University library like other types of library. But there are two other subsidiary functions of the University library. They are (ii) extension of knowledge carried out mainly through library cooperation; and (iii) transmission of knowledge which can be achieved by the encouragement of programmes of independent study by students who are thus obliged to use the library.

Hence the Prime Function of the University library is to provide facilities for study and research for the members of its own institution. “At the same time, there is considerable support for the view that it should serve a wider circle of users and not adopt too restrictive an attitude which would be contrary to academic traditions” (The University library. Aut, 1964. London, The Association of University Teachers). But in order to open the University library to the non-members, special care should be taken of the actual and urgent needs of such users and larger amount of money becoming available to the library.

6.4 Off-Campus University and Distance Education System

Apart from the purely traditional type of universities with on-campus teaching and research facilities there are some universities which along with those facilities provide separately teaching and even research in some selected disciplines through distance education system with off-campus obligations. In India too in some Universities both these facilities, i.e. traditional as well as distance education system with distance education centres are available, e.g. the University of Burdwan in West Bengal and

Annamalai University in Tamil Nadu. Likewise the foreign Universities with both on- and off-campus teaching facilities mention may be made of the University of New England in Australia and the University of California at Berkeley in the U.S.A.

There are also some universities which imparts off-campus teaching with a few distance education centres, e.g. Indira Gandhi National Open University (IGNOU), New Delhi, and Netaji Subhas Open University (NSOU), Kolkata, in India.

6.4.1 Correspondence Schools and Open University Systems

The correspondence schools or institutes are actually forerunners of distance teaching and Open University systems, In 1982 the Distance Education Special Interest Group of the Library Association of Australia (DESIG) issued a set of guidelines for minimum level of library service for the off-campus students. These guidelines begin with the resolution: "It is the responsibility of all institutions offering external studies to provide at least a base level of library service to their students commensurate with the library-related needs of their courses."

- A. Winter and M. Cameron regarding the library services surveying the needs of the off-campus students for the first time in Australia set down a model for library provision in a study, of which major recommendations are :
1. a reciprocal borrowing arrangement should be developed to allow off-campus students of any institution to borrow from the libraries of any university in Australia;
 2. a national network of integrated study centres for off-campus students should be developed from which a range of services, including information services, could be provided to off-campus students of any university;
 3. telephone access, free return postage of book loans and literature searches should be provided for off-campus students by the library of the university with which students are enrolled;
 4. all staff, particularly those working in the evenings and weekends when off-campus students are most likely to visit their libraries, should be well-trained and knowledgeable about the library's off-campus services;
 5. library staff should be involved in course development from the earliest stages to ensure references in course material are accurate and annotated, correct information about information services is included, and library material has been purchased to support the course". (External students and their Libraries. Geelong, Victoria, Deakin University, 1983).

In order to improve the efficiency and cost-effectiveness of off-campus teaching the Australian Government established an open university and after a tendering process, 3-year funding was granted to an incorporated company named the Open Learning Agency of Australia Pvt. Ltd. to provide open learning courses at undergraduate and postgraduate levels at a reasonable cost within Australia and overseas (Open Learning Agency of Australia, 1996). This Agency trades as Open Learning Australia (OLA) and acts essentially as a broker of courses which are offered by the universities and technical colleges from across Australia.

6.5 Virtual University

The latest development in education is the establishment of Virtual University which may be defined as follows :

The term 'virtual' has been coined from computer technology, e.g. the expression 'virtual reality' indicates an environment or object simulated by computer hard-and soft-ware in such a way that the user experiences the environment or object as though it were real. Thus virtual reality technology could be used to simulate the experience of attending lectures, using a library, and spending time in a student common room. Apart from the use of virtual reality in this sense, J.Tiffin and L.Rajasingham have pointed out that computing, radio, television and teleconferencing are gradually being merged in virtual learning institutions (*In Search of the Virtual Class*. London, Routledge, 1995). The application of these technologies will facilitate the students with each other and with course coordinators to put together courses tailored for their specific needs and build on their existing skills and knowledge from a place and at a time of their choosing. The students will effect the centre of a web of learning and the supports of networks. They could access such networks through multimedia workstations in their residences, in communities, and within existing universities. Such universities could in the future move away from direct teaching and become course coordinators and providers for virtual universities while maintaining and developing a focus on research activities.

The growing availability of the Internet in the general community and an increasing enthusiasm for its use have fostered an explosion of interest in imparting teaching electronically, especially since the development of the world wide web (www.). Thus through the exploitation of this latest new technology the real attraction of virtual learning institutions lies in the economics of not having to maintain physical facilities coupled with the prospect of being able to offers academic opportunities in ways which more closely match the needs of students in the last quarter of the twentieth century. Thus the universities are appearing to accent that it may be possible to impart teaching successfully without the infrastructure which is such a characteristic

feature of the mainstream universities, e.g. laboratories, libraries, student halls, care centres, sport complex, lecture theatres, conference hall, canteen, cheap store and the like. In case of virtual universities tenured academic staff may not be needed if courses are brought in from elsewhere or developed by a project team and taught by a contracted staff. Such a system is indeed a great challenge to the traditional organizational pattern of the teachers, schools or colleges and departments for the development of teaching and research.. The National Technological University in the United States and its Australian counterpart, Engineering Education Australia (EEA), two non-traditional organizations, which draw courses from different institutions to prepare the programmes of study display that the traditional organizational pattern of traditional universities is not necessary. Initially The Open Learning Australia (OLA, 1996) does not provide a library service directly. In the early periods of developing the OLAs programmes, a library service became unnecessary as it was expected that course providers would issue students with all the materials they would require. But the insistence of the librarians resulted in the government granting three million Australian Dollars to OLA for library support and reserving a portion of unit registration fees for this purpose. To begin with, the library of the Gippsland Campus of Monash University was awarded the contract to coordinate this support which was provided by the libraries of the courses offered by the sponsors, some of whom already had an off-campus student's library service.

Also the Engineering Education Australia (EEA, 1996) which is a wholly owned subsidiary of the Institution of Engineers, Australia, provides continuing education with award programmes and training with nonaward programmes to meet the needs of engineers wherever they live and work. Over three hundred courses offered from Australian universities, technical colleges, and industry are available including formal distance education courses, guided learning packages and workshops. The formal distance education courses lead to the awards of the bachelor, diploma, master levels granted by Deakin University, a multicampus University with its Headquarters at Geelong in Victoria, to EEA's own Graduate Diploma of Engineering or to a Technical -and Further Education (TAPE) Diploma of Engineering. Like the OLA, the students who enroll through EEA but are thereafter taught and examined by the provider University are presumably entitled to library service from that University, if it provides the same to off-campus students.

Melbourne University in Australia in late 1996 had announced its intended participation in a Virtual University to be called Universitas 21, which would include Universities in Britain, New Zealand, Australia, Canada, and the United States. Undoubtedly other mainstream Universities in Australia would follow this path, although Australia as such does not have full-fledged Virtual University.

Turning to U.S.A. it is seen that the University of California at Berkeley through

its Extension Unit called UC Extension as a part of the virtual development within a mainstream University has been running continuing education courses for more than 100 years, beginning with face-to-face courses around San Francisco Bay region and currently with interactive videoconferencing to sites in Berkeley, San Francisco, San Ramon, and Melno Park since 1992.

Of the two U.S. Television Universities, the National Technological University (NTU) established in 1984 and funded by Sloan Foundation and industry as a consortium of educational and industrial organisations serving the advanced educational needs of engineers, scientists and technical managers, offers a range of instructional television courses taught by faculty in 47 engineering schools broadcasting via satellite either live or from tapes to 975 earth stations throughout the United States and in twelve Pacific Rim countries.

So also the Mind Extension University (MEU) located in Denver, Colorado, U.S.A., being a non-profit institution within Jones International Ltd., a corporate parent to seventeen subsidiaries within the telecommunications industry, basically concerned with television programming, cable television, videotape, multimedia, voicemail, computer, and entirely online, delivering accredited programmes at master, bachelor, associate and certificate levels is a clearing house for academic courses for which programmes can be broadcast, selecting courses from the offerings of twelve accredited Universities and colleges, publicizing them through the cable TV network and arranging initial enrollment.

Further, International University College (IUC), U.S.A., established in 1995 by Glenn Jones, Founder and President of Jones International Ltd., had become impatient with the slow progress being made in persuading participating Universities to accept his model of learning. The IUC has State approval to enroll students and to award Master's and Bachelor's Degrees and is in the process of gaining accreditation.

A conventional distance education operates from the University of Phoenix (UP) established in 1976 as a private university in southwestern United States aiming specifically at adult students, while the University of Phoenix Online Campus (UPO) located in San Francisco offers bachelor's and master's programmes in business and management. The Online courses begin whenever a viable sized group of students of the online Campus has usually monthly enrolled. Each group meets weekly and works cooperatively. The students log in using either a modem or the Internet. After log in the software downloads all new materials for a particular student and uploads anything the student has prepared for submission, so that online time becomes short. Students have access to discussion groups, e-mail to the faculty members or other students and bulletin boards. Under this online teaching all assignments are electronically transmitted. Thus the UPO represents an Electronic University.

The University of Phoenix Online Campus in San Francisco, U.S.A., is a good model for a Virtual University.

The Learning Resource Center (LRC) of the University of Phoenix at Phoenix has appointed nine staff-members and provides a virtual library of Internet based links to information resources including a number of electronic databases. The various campuses of this University have public terminals which students may use to consult the LRC and the University of Phoenix Online Campus (UPO) students may access it directly. The LRC undertakes subject searches and delivers photocopies of journal articles by fax or mail. It also provides links to some commercial document services.

The Governors of the Western States of the United States signed in June 1996 an agreement to establish a Virtual University to be called the Western Governors University (WGU). Though its subordinate body called the Western Cooperative For Educational Telecommunications (WCET) of the Western Interstate Commission For Higher Education (WICHE) based at Boulder, Colorado, U.S.A., is involved in the planning and development of the Western Governors University.

An example of Canadian Virtual University may be traced in the Open Learning Agency (OLA) located in Burnaby, British Columbia, which is a non-profit fully accredited educational institution that provides learning and training opportunities to the British Columbians anywhere. A unit within the OLA is the Open University (OU) which offers programmes of study leading to university and associate degrees. The OLA provides about 250 courses itself and is the broker of another 250 courses offered by Simon Fraser University, University of British Columbia, and Victoria University through television broadcasts, videoconferencing, electronic media including CD-ROM and the Internet, video as well as audio cassetts, and traditional print materials.

No library service is provided to the University of California (UC) Extension, U.S.A., although there is close liaison between Center For Media and Independent Learning (CMIL) staff and the Library's Media Resources Center, as CMIL has an extension video rental and sales business. It is expected that the students may find information resources within their communities. Besides, America Online provides some information resources and links to others on the Internet that could be useful for the students. Hence in this case the library service rendered to the students is very negligible, while in Australia at the University of New England, its commercial arm, University of New England (UNE) Partnerships, has entered into a contract with the University Library under which their students get the same library facilities at no additional cost as the mainstream off-campus students.

It should be noted that the Mind Extension University (MEU) does not provide

library services to the students enrolled in its programmes. But since the students of the MEU have to study for lengthy periods with one institution under the MEU banner, there is enough scope for the development of a relationship with the library of that institution.

Also the International University College (IUC) does not provide directly any library service to its students, although it informs : “Library resources are available for courses. Bibliographies supplied with the course materials identify appropriate publications, some or all of which may be available at your community college. In addition, International University College provides information on accessing reference resources through the Internet. The Dean’s Office maintains a library liaison who assists students in obtaining library materials” (International University College, 1995, P. 13). But even in July 1996 the IUC did neither employ a librarian nor had it any facilities for supplying library materials to its students, although it does have an arrangement with the University of Denver under which library services are provided to the students of the IUC.

The characteristic feature of the Western Governors University (WGU), U.S., is its online catalogue that relates course content to skills assessment and stores a profile of each student to allow matching of course content, examination locations, and other useful information. The pilot catalogue has been developed by IBM in conjunction with the Western Cooperative For Educational Telecommunications (WCET). A Consultant had been appointed in late 1996 to advise on planning library support services.

The Open Learning Agency (OLA) located in Burnaby, British Columbia, Canada, organizes the Electronic Library Network (ELN) that provides access to the collections of 64 post-secondary and public libraries throughout British Columbia. The ELN also provides access to a range of electronic databases and online documents requesting and quick delivery services. Thus it allows resource sharing in a way which particularly facilitates the off-campus students who have an OLA computer account direct access to the ELN. The OLA students receive a service based on the Simon Fraser University Library with the assistance of the OLA staff posted there. The OLA also has its own library which serves the professional needs of its staff under the leadership of a librarian with a high profile and responsibility for a number of areas beyond the library profession like the copyright issue, within the institution. In fact, the interrelationship between the University of British Columbia, Simon Fraser University, Victoria University, and the Open Learning Agency and the high degree of cooperation in information provision ensures greater access to scarce resources for the community. This model of providing library service through a contract with another library is an excellent one for Virtual Universities to consider, especially for those who are brokering

courses from other institutions. Under this system students are not required to make choices between libraries the Virtual University is spared the expense of developing a collection and associated services, while the host library is recompensed for the use of its facilities.

The universities mentioned above present some models for teaching at a distance at the tertiary level, which also pose new problems for library support.

Often it is said that the Virtual Universities do not need libraries since the resource materials meeting the needs of the students are freely available through Internet. But such an attitude cannot be encouraged because of the fact that the Internet is a huge and unstructured mass of information and searching in Internet successfully needs skill, practice, considerable time, online service, many electronic resources, and electronic bibliographic databases on payment by the students. Hence if the Virtual Universities subscribe to such services or make some other arrangements, they will be available to their students at the minimum cost. Often students have to obtain the required texts as well as full texts of journal articles published by the commercial agency at a higher cost. But in case of electronic journals the students sometimes face problems in assessing the quality of materials retrieved.

It is needless to mention that off-campus correspondence schools, distance teaching universities, open universities and virtual universities share commonly lack of the traditional on-campus university library services.

It is again a fact that the Virtual Universities do not develop large physical library collections and that they may be reluctant to even to meet their basic obligation to provide for the immediate needs of currently enrolled students. As the wide range of electronic databases is now available, virtual universities may provide bibliographic information reasonably easily.

The Virtual Universities should consider carefully their student's information needs and make arrangements for these necessities to be met in a way which students will find easy and economical to use. Students of the Virtual Universities must have barrier-free access to an information service which has accented responsibility for meeting their needs. The situation where students are forced to deal with a number of different libraries must be avoided.

As to the role of the librarians in Virtual Universities it is expected that as information specialists, librarians are in the best position to advise instructional designers and teachers on issues such as access to information, the quality of information sources and patterns of student behaviour in seeking and using information. The librarians are also skilled in teaching information searches, both through training courses and incorporating information sources into course materials.

If a Virtual University even chooses not to develop its own library service, the contribution that the librarians are able to make in many ways is invaluable; it is in the best interests of Virtual Universities to employ the library staff directly or to at least obtain this expertise through periodic consultancies.

It is to be noted that librarians take a proactive view on the issues of information provision and information literacy for students of virtual Universities.

The need for access to information and the role which the librarians of the Virtual Universities may play in providing this information is unavoidable. Hence these librarians should be setting up excellent electronic services which will provide structured access to relevant information for the students. They should also search after the provision of suitable resources on the Internet and need to lobby commercial publishers to ensure that good access to scholarly materials is possible at a price which the Virtual Universities and students can afford.

But the librarians should be vigilant in countering the argument the Virtual Universities of the future will not need libraries. When many students, both on-and off-campus, pass through the universities without ever making use of library resources, it would be a failure of those Universities.

Indeed the challenge of the librarians of the Virtual Universities are to ensure the key role to be played in university life, as professionals with expertise that is essential if excellent teaching and research are to occur, as advocates on behalf of the students and academic staff in information matters and as custodians and disseminators of knowledge.

Undoubtedly the Virtual Universities will gradually continue to develop challenging the traditional universities and influencing the methods of teaching and research and so their holdings should be designed accordingly.

6.6 Institutes For Professional/Further Studies

Apart from the academic institutions mentioned above there are some institutes which impart professional education in environmental sciences, fine and performing arts, law, medical sciences teachers' training programmes, technologies and the like. So far India is concerned it is found that the institutions like the Indian Institute of Technology (IITs) founded in Delhi, Kanpur, Kharagpur, Chennai, Mumbai and Guwahati and also like the Indian Institute of Management (IIMs) established in Ahmedabad, Kolkata and other places may be included under this category of academic institutions where both teaching and research are being carried on in some specialised branches respectively technology and management. Besides, there are numerous

polytechnical institutions spread throughout the country.

Colleges of Further Education are those colleges which offer courses in technology, commerce, polytechnic and further education providing courses at the first degree level with a strong vocational flavour, closely integrated with local industry and commerce for full time, part time, or 'sandwich' course students.

Such institutes being specialised in a few branches of knowledge will have to collect Books and Other Materials on those professional specialised subject/subjects. Special care should be taken thinking of limited budget-provisions for purchasing new books which are generally costlier than books on traditional subjects taught in the colleges. But in such an institutional library newly published book or its new revised edition must be acquired since the pupils and teachers have to be acquainted with new discoveries and inventions. Also the current issues of periodicals and serials must be kept in the library to enable its users to be well informed of the latest developments in those professional disciplines.

In rendering Services also to the users of the library of such an institute the library staff must note that

- (i) there should not be unnecessary wastage of time of the borrowers/users;
- (ii) in order to assist the readers as well as to save money the inter-library loan system should effectively operated;
- (iii) indexing and abstracting of papers published in the professional journals should be done and the users must be informed of such services ;
- (iv) audio-visual materials including personal computers, recorded CDs, multimedia communication facilities should be available to the readers; and
- (v) networking facilities for informal retrieval should be provided to the users of such a library.

Since these institutes generally conducts the Bachelor's, Master's and sometimes Ph.D. Degree Courses the libraries should be properly equipped with modern techniques under a,professionally qualified as well as well-trained librarians who must know the handling method of computers and the process of documentation.

The *Function* of a further education college library may be witnessed during the lunchtime recess when in such a college library as one of intense activities is centred strongly around the librarian on duty. This function of such a library as the provision of a highly personal service to both students and staff alike. Here the librarian is the friend, philosopher and guide to the students along with their teachers working hi a variety of disciplines end at different intellectual levels.

The *Primary Function* of the polytechnic library should be that it should play a central role in educational programme as a major teaching instrument with a basic stock of 1,50,000 volumes and 3,000 periodical titles to serve the minimum of 2,000 students for each polytechnic.

But unfortunately all over the world no polytechnic library reaches anywhere near the projected level of service yet. One of the major problems facing the polytechnics is that their standards of library service now fall far short of the ideal, even in basic bibliography, let alone the range and depth of their subject coverage. The academic development of the polytechnics will certainly stand still over the next ten years to allow their libraries to catch up with the minimum standards. Unless infusions of money at a much higher rate than hitherto are put into the polytechnic libraries, they will be as inadequate in ten years time as they are now in most of the countries.

It is reported that as the college library is an essential part of technical teaching and it is suggested that suitable instructions should be given to the students in the use of the library. Hence in this context emphasis has been laid on the teaching the use of the library of a technical college, especially in so far as it leads to the designation of the librarians as the 'tutor-librarians'.

The *Functions* of technical college libraries may be to

- (i) acquire the books and reading materials for assisting the students in qualifying their examinations ;
- (ii) select general reading materials for encouraging the students and widening their outlook in current affairs, literature, biography and the like;
- (iii) supply reference and factual materials without unnecessary wastage of time;
- (iv) develop the staff-interest involving the provision of much materials of a higher standard than that strictly required for the needs of the college teaching activities;
- (v) provide facilities for private study, and
- (vi) establish a technical information centre in some technical college libraries in certain areas for the use of local industry, with the possibility of being able to call upon the specialist lecturing staff for assistance in amplifying the resources of the library itself.

At the instance of the Government of U.K. Lord Robbins had prepared the Report titled Higher Education: Report of the Committee appointed by the Prime Minister under the Chairmanship of Lord Robbins 1961-1963 (HMSO cmdnd 2154, 1963) popularly called Robbins Report. The degree to which it has been found necessary

to increase the financial resources of the former colleges of advanced technology following their upgrading to university status has been one indication of the shortcomings of the library provision in all libraries in the non-University sector.

The Robbins Report had created the conditions for the emergence of another sector of leadership within the further education field. However, by its reference to the need for the larger colleges in the local authority sphere of control to conduct degree and higher degree works on an increasing scale.

The Robbins Report recommended the establishment of a body which would enable colleges to devise and operate courses for degrees of their own choosing. As a result the Council For National Academic Awards (CNAA) was established in 1964 with a Royal Charter to inspect proposals for degree courses devised by colleges at the first and higher degree levels, and, following a rigorous inspection of the physical as well as academic environments of the colleges. The proposals for granting permission must meet the high standards of CNAA to be operated as degree studies and to maintain a high standard of library provisions.

Sample Questions

I. Long Answer Type

1. What do you mean by 'Academic Library'? Write, in details, about the Academic Libraries.

II. Short Answer Type

1. Illustrating your answer write, in short, about the main functions of the University Library.

III. Objective Type (Mark the *one* right answer out of the following four alternatives with the tick-sign ✓).

1. An academic library is housed in the
 - A. Government Office.
 - B. Private Business centre.
 - C. Individual Residence.
 - D. Academic Institution.

Answer is 'D'.

IV. Long Answer Type

1. Write an essay on the academic institutions and their libraries.

V. Short Answer Type

1. Enumerate the functions of a School Library.

VI. Objective Type (Mark the *one* right answer out of the following four alternatives with the tick-sign ✓).

1. A college library is situated in a
 - A. College.
 - B. Workshop.
 - C. Laboratory.
 - D. Clinic.

Answer is 'A'

Select Readings

1. Parry, Thomas (Chairman). Report of the Committee on Libraries. London, Her Majesty's Stationery Office 1968.
2. Sahai, Shri Nath. *Academic Library System*. New Delhi, Allied Publishers Limited, 1990.
3. Wilson, L.R. and Tauber, M.F. The University Library : The Organization, Administration, and Functions of Academic Libraries. New York, Columbia University Press, 1958.
4. Davinson, Donald. Academic and Legal Deposit Libraries: An Examination Guidebook. London, Clive Bingley, 1965.
5. Tiffm, J. & Rajasingham. In Search of the Virtual Class. London, Routledge, 1995.
6. Godden, Irene ed. *Advances in Librarianship*, Vol.21, San Diego, Academic Press, 1997.
7. Library Association of Australia. Distance Education Special Interest Group. *Guidelines For Library Services to External Students*, LAA, Ultimo, NSW, 1982.
8. *University Gazette*, Autumn, 1995, p. 5 (Gilbert, A. The Virtual University).
9. *Australian Academic and Research Libraries*, 26, 1995, pp. 129-136 (George, R. and Love, A. *The Culture of the library in open and distance education contexts*).

UNIVERSITY LIBRARIES OF ANCIENT INDIA

Introduction

India, the great seat of learning, has been endeavouring from the Vedic times for the proper organisation of knowledge. In the earliest period the problem of preserving the valuable sayings of the celebrated Indian sages did not arise on account of the absence of writing. The history of Libraries begins from the later period of Buddhist Civilization, as a remnant of which some of the back shelves are still existing in the ruins of the old Nalanda Mahavihara. The primitive collections of books in India, as in other ancient seats of learning, were stored in the monasteries, temples, courts of princes, drawing rooms of the elites of the society, educational institutions and the like. These collections consisted mainly of the records, primarily of religious matters, and annals of the kings.

Prior to the introduction of writing, sacred texts were memorised and handed down from teachers to students. The entire instruction during the Rgvedic Age was orally imparted. An echo of this system may be found in the famous *Frog-Hymn* of the *Rgveda*. The Rgvedic education comprised the “transmission of the sacred texts by the teacher to his pupil by means of regulated recitation and prescribed pronunciation which the pupil has to listen to as *sruti* and commit to memory”. Some scholars think that the art of writing was very probably known to the Vedic Indians. But due to nonavailability of sufficient data no assertion may be made in this regard. It may be presumed that though the art of writing was known to the Indians of the Vedic Age, it played then very little part in the educational system. As there was no practice of writing manuscripts, the entire Vedic literature was known as *Sruti* on which was stored in the memories of scholars and not on the shelves of libraries. The teachers and learned men were then ‘oral’ and living repositories of books offering specialised knowledge, bibliographical information and liberal reference services to the students as well as to the enquirers. So many sacred works, like the Vedas, the Tripitakas and the Angas which are the veritable mines of human knowledge and experience, were not committed to writing for a long time,

Origin of Indian University libraries

The origin of Indian libraries may be traced in the Pali word *Pitaka*. ‘Basket’, containing collections of manuscripts. The entire Pali Canonical literature consists of manuscripts which contain the *Vinaya*, ‘Discipline’ Sutta, ‘Discourse’, and Abhidhamma. Religio-philosophical Discourse’. M. Winternitz takes *Pitaka* (Basket) as the container of tradition. Haraprasad Shastri describes it as an oval shaped cane basket with a pyramidal lid, the whole covered with leather. B. M. Barua also thinks

that the term Pitaka wherefrom Petaki was derived is suggestive of a double metaphor of a basket for carrying earth from head to head, that is, from teacher to teacher, and of a pit or box, where the whole thing is deposited or closed. Thus Pitaka containing manuscripts of diverse works may represent the crude form of library which was nothing but a repository of books and other materials. So Pitaka originally denoting the repository perhaps gave birth to the idea of modern library, in this connection it may be remembered that the Greek Word *theka* means 'a case'. So when theka is used with Greek biblos or byblos it would indicate a 'book-case' or a 'container of books'. If Greek bibliotheka or Latin bibliotheca presupposes a library, there may not probably be any difficulty in assuming that Pali Pitaka too, being a sort of book-case inspired ancient Indians to establish and manage university libraries in a systematic and organised manner.

Art of writing in India

The art of writing was introduced in India in about the first century B.C. and later the physical form of 'book' came into existence. So in course of time the monasteries and temples began to maintain rich collections of manuscripts on diverse subjects. The same happened in Egypt, Crete, Mesopotamia, Assyria, Greece, Rome and other seats of ancient civilization and culture. It may be said that the Buddhists for the first time began to establish and organise libraries in a scientific manner in India. It was due to the munificence and liberal grants of the Buddhists that the libraries in the world-famous Universities came into existence. From the travelogues of Fa-hien (399-414 A.D.), Sung-Yung (600 A.D.), Xuan Zang or Hiuen-tsang (629-645 A.D.), I-tsing (673 A.D.), O-Kung (800 A.D.) and many other foreign travellers, from numerous archaeological remains scattered throughout the country and from some portions of ancient texts it may be concluded that the Buddhist libraries in ancient India reached a stage of perfection. Many of them even could surpass the famous ancient libraries of Alexandria and Nineveh in collections and administrative set-up. It is a fact that the public libraries in the modern sense of the term were not developed nor, probably, were in existence in ancient India. The reasons for the absence of such public libraries are quite obvious. The most potent cause is that education was concentrated in the hands of few aristocrats of the society. Only the people of high caste had access to learning. It may be said that during the first century of the Christian era Indian libraries for the first time came into existence and such a wave, of library movement went on till the 14th century. The Buddhist libraries open the doors to all irrespective of caste, creed, or sex.

Taksasila/Taxila

Chronologically it is evident that ancient TAKSASILA which has been identified by A.Cumingham with the ruins Shah-dheri (Royal Residence), twelve miles north-

west of Rawalpindi, was the earliest centre of learning, so far known, in India. The famous university which was known after this ancient city, which was specialised in medical studies. A manuscript which was written at Taxila has recently been discovered near Gosing in Khotaii. Some other manuscripts dated in the Kusana period, which might have been copied at the University of Taxila, have been found in Central Asia. When the teachers used to deliver lectures to the students or hold conversations, they always earned fine manuscripts. Hiuen-tsang, die Chinese Pilgrim, in the seventh century recalled the glorious memory of a *Sangharama* (Monastery) by the side of the Asokan *Stupa*. It is said that in the old days Ku-mo-lo-to (Kumalabdha), a teacher of the Sautrantika School, composed at this place various Sastras. But most of the text-books which were used there were in Sanskrit. Later, under Arab patrons, many Sanskrit medical works of this University were translated into Arabic. All the possible literary and other sources show that Taksasila was a centre of learning for advanced students. Naturally the students when they attained the age of sixteen or came of age were admitted to this renowned University. The Bauddhist Jatakas relate that young men from all over the country congregated in this city and took up secular studies. The occasional use of the expression *sippam yacesi*, i.e. 'causing to read the *sippas*,' 'arts' indicates clearly that the pupils used to read books. The reference to drowsiness which prevented the students from understanding the subject learnt, also indicates the use of books. There are direct references, too, to the existence of books (potthakarri) "preserved with brilliant, coloured wrappings, and read by placing them on a beautiful stand". This information helps us to conclude that the renowned university of Takhasila (modern Taxila) possessed, perhaps, a very good collection of manuscripts, especially on Medicine and Medicinal herbs. It was not possible, however, to impart specialised training into medical profession and to translate sundry texts into foreign tongues without a good collection of books. It may be that 'library' in its modern technical sense was not in existence in Taxila in those hoary days. But the rich collection of manuscripts which were there, cannot be altogether ignored. This collection in absence of scientifically arranged libraries catered to the needs of students and performed the functions which are expected from a University Library. In this sense this collection of books and manuscripts of ancient Taksasila may be termed as a 'library' or storehouse of human knowledge and experience.

Kashmir

Another rich Collection of some sacred texts of the Northern Buddliists may be traced under a sepulchral monument or Buddhist *Stupa* which was built by Kanisika, the Kushana Emperor, in the first century A.D. In this *Stupa* which was erected somewhere in Kashmir or in some adjoining areas in North-Western India were deposited textual writings engraved on copper-plates which were enclosed in stone

boxes. Thus this *Stupa* with its precious stone boxes of written documents became the storehouse of knowledge. It is, of course, a fact that such a collection of manuscripts whatever might be their value and authenticity, could never be called a library which was meant primarily for public use and frequent handling. But considering the time and circumstances it might be said that such a collection entailing, as it did, both hard labour and perseverance indeed became a veritable storehouse of knowledge. In those early centuries of the Christian era when no library in its scientific sense could be found, these numerous stone boxes and *Stupas* represented the crude forms of libraries for scriptural collections. Thus the *Stupa* which was constructed by the greatest Kusana Emperor did actually give birth to an idea, at least in its primitive stage, of a library.

Valabhi

Turning to the west a brighter picture of library activities in ancient India was available. The University as well as monastic libraries, here, indeed, offered a very fair idea about the literary and educational uplift in this part of the country. The famous western university of Valabhi, situated near modern Wala in Kathiawar, had a great library at its disposal, Epigraphic records show that the University Library of Valabhi was patronized by the royal personalities and was founded by Gunarmati and Sthiramati. The Maitraka 'Kings, who were ruling there during circa 480 to 775 A.D., were also great patrons of learning, they used to offer direct grants for the purpose of meeting the general expenditure of the University as also for strengthening its library through acquisition of 'books on Buddhism' as is evident from *saddharmasya pustakopacayartham* in the grant of Guhasena I, dated 559 A.D. The addition of this item probably indicated that by Guhasena's time the monasteries which were either organised or in the process of organisation as seats of study and learning were building up libraries. The University with its grand library dated from circa 475 A.D. to 12th Century catered to the needs of the innumerable scholars who made the best use of the Valabhi Library and its splendid collections.

Dudda

Two of the most outstanding endowments of royal benevolence in the Gupta period, so far as the Buddhist monasteries were concerned, were the *Sangharamas* of NALANDA and DUDDA. The later may be called the Nalanda of the West. It was established during the reign of Dhruvasena I owing to the religious fervour of his sister's daughter, who appears to have been a Buddhist. His Wala Grant recorded how she granted the village of Pippalamnikhari (Piplod) to the "worshipful Buddhas endowed with perfect intelligence" for the purpose "of repairing the fallen and broken portion of the monastery, and for procuring frankincense, lamps, oil and flowers for worship and for procuring food, medicine for the sick, clothing and so forth".

Therefore, it might be noted that the objects of such gifts were not only religious but also humanitarian. Similar Grants were made by Dharasena III, Dharasena IV, and Siladitya III. If Nalanda had at least six royal patrons, if not more, as Hiuen-tsang had observed, then it might be inferred that the Dudda Vihara, too, had many royal benefactors. From such an observation it was really convenient to surmise that this centre of learning in Western India in course of time became a great habitation of the libraries in their formative periods. With an effective royal patronage the Dudda Mahavihara also was fortunate enough to take proper care of the invaluable sayings of the savants in written form.

Kanheri

Kanheri in Western India as a famous Buddhist centre of learning flourished at a very early date. Several epigraphic records showed that Grants were made for establishing monasteries and monastic libraries at KANHERI. Part of the donation of Bhadravishnu, offered to the Buddhist monastery at Kanheri during the reign of Amoghavarsha I, was for purchasing books. The Buddhist Vihara at Kanheri like the one at Valabhi was maintaining a library which was, perhaps, attached to the educational institution. Again from a Grant to the Kanheri Monastery by a Bengalee merchant Avighakara it was noticed that provisions were made for the purchase of books.

Southern Kosala

Southern Kosala which was located by A. Cumu'ngam in modern Berar in Madhya Pradesh, was a stronghold of Buddhism. There were about one hundred Mahayanist Brethren, and the place was renowned as the home of Nagarjuna, the celebrated Buddhist philosopher for whom the King of the country had quarried on the mountain a wonderful five-storeyed monastery which was probably known to Fa-hien as the PIGEON MONASTERY "which had cloisters and lofty halls, these halls were in five tiers... In the topmost hall was the library and the lowest was meant for the laymen attached to the monastery and stores, and the three intermediate halls were the lodgings of the Brethren". This Monastery was built, probably, between the second century B.C. and the third century A.D. and may be identified with that on which stands the well-known Brahmanical temple of Sri-Sailam. Though an elaborate account of the monastic library Southern Kosala is still wanting, yet its mention in the Chinese travelogue proves beyond doubt its existence.

Kausambi

The Chinese Pilgrim also hinted on a well-equipped library at KAUSAMBI, the capital of the Vamsas or Vatsas, which might be identified with modern Kosam on the Jumna, about thirty miles south-west from Allahabad. Here to the south-east of Ghositarama, as Xuan Zang (or Hiuen-tsang) described, was a two-storeyed building

with an old brick upper-chamber, where Vasubandhu lodged and composed the Vijopatiintrasiddhisstra for refuting the doctrines of the Theravada and confounding the Non-Buddhist, In a mango wood which was towards the east of the Ghositarama, the commendable collections of religious texts faced hard days. The evidences of the Huna conquest were furnished by two seals, discovered in the Monastery of Ghositarama. It is regrettable to note that Kausambi could never fully recover from the Huna devastations.

Sravasti

Fa-hien, another hardworking scholar from China, had left valuable information about the Jetavana Monastic Library which flourished during his visit to India in the fifth century A.D. According to his itinerary it became evident that the chief centre for higher Buddhist education was the JETAVANA MONASTERY which was situated at a distance of one mile to the south of Sravasti (Modern Saheth-Maheth) in Uttar Pradesh. The Jetavana Monastery was originally seven-storeyed. It was said that the kings and people of the countries around vied with one another in their offerings, hanging up all round it silken streamers and canopies, scattering flowers, burning incense, and lighting lamps, so as to make the night as bright as day. "There were chapels for preaching and halls for meditation, mess-rooms, and chambers for monks, bath-houses, a hospital, libraries and reading-rooms, with pleasant shady tanks and great wall encompassing all. The libraries were richly furnished not only with orthodox Buddhist literature, but also with Vedic or other non-Buddhistic works and with treatises on the arts and sciences taught in India at the time. In the above description positive evidence could be found about the existence of libraries in the Jetavana Monastery during the Pilgrim's travels. The libraries which were situated there in serene and peaceful atmosphere, were enriched by all sorts of books and manuscripts irrespective of religion or creed. It might thus be said that the Jetavana libraries were the first scientifically arranged libraries with diverse collections in ancient India. It is sad to note that the Monastery with its libraries and other buildings before the beginning of the Seventh Century A.D. as seen by Hiuen-tsang, was in desolate min.

Gopalpur

An ancient Buddhist collection of texts may also be traced in the ruins at GOPALPUR in the Gorakhpur District in Uttar Pradesh, where some Buddhist Sutras in Sanskrit written on bricks have been found. The tract of country south of Gorakhpur lying between the Ami, Kuana, and Ghagra rivers was singularly rich in ancient sites, which had received very slight examination. One of the ancient sites is marked by the village Gopalpur, which is situated about two miles west of the bazaar known as Gola, a short distance from the northern bank of the Ghagra, and about twenty eight

miles almost due south of Gorakhpur. Dr. Hoey found there inscribed bricks which had been taken out of a small chamber about a feet square and about eight feet below the surface, which was built of huge bricks, about a foot and half long, and some three inches thick. The inscribed bricks are said to have rested on a sort of pedestal, or *vedi*, made of brick, which was destroyed for the sake of the material. The discovery of these brick-records seemed to be of much interest and importance. It was startling to find that the Indian Buddhists used bricks, as the Assyrians did, to preserve long documents. These brick-books dealt with Buddhist ontology, and specially with the doctrine of the twelve nidanas, or 'causes', which would connect Avidya, 'Ignorance', with Jara-marana, 'Decay and Death', and thus would form the *Bhava-cakra*, Cycle of Existence. The inscribed bricks, therefore, containing Buddhist scriptural texts proved that there was once a grand storehouse of books in that Buddhist monastery at Gorakhpur during the period belonging to the early centuries of the Christian era.

Nalanda

But the most fully developed and the most widely used and well organised was the Library of the University of Nalanda, the ancient seat of learning. The Nalanda authorities had realised that a monastery without a library was futile. So an elaborate scheme was adopted for a wellplanned and splendid library within the University to meet the varied demands of numerous teachers and students who were engaged in the study of different branches of learning. Curiously enough, the Library Campus was known as the Dhannaganja, 'Mart of Religion'. Here were located three monumental buildings called Ratnasagara, Ratnadadhi, and Ratnaranjaka. Of these, *Ratnadadhi* was a nine-storeyed building which contained the largest library in India in those periods, a speciality being the collection of rare and sacred works like Prajnaparamitasutra and Tantric books. The scholars of the University remained busy day and night in writing sacred texts and Buddhistic treatises which were then stored in the University Library. It-tung, another hardworking Chinese Scholar, stayed at Nalanda for about ten years (A.D. 675-685) and collected there about four hundred Sanskrit texts amounting to five lakh verses. This fact pointed out that Nalanda was well-equipped with rich collection. According to his observation, when a Buddhist monk would expire at Nalanda, his collection of books was added to the Library and other properties including non-Buddhistic works either sold away or distributed. Evidence of financial aid for the Library was found in an inscription known as the Nalanda Copper Plate of Devapala discovered at Nalanda. It recorded that Balaputradeva, King of Java, requested Devapala, a contemporary King of India, to make a grant of five villages for the maintenance of a new monastery at Nalanda. A portion of this endowment was kept aside for the purpose of copying books for the

University Library as became evident from the expression '*Dharanaratnasya lekhanartham*' in the epigraph. In short, it was the Library that made Nalanda University "the embodiment of the highest ideal of education and a visible monument of the role which India played as the Teacher of Asia". A Tibetan history (Pag-Sam-Jon-Zang) relates the destruction of the Library thus : "After the Turuslika raiders had made incursions in Nalanda, the Temples and *Chaityas* were repaired by a sage named Mudita Bhadra. Soon after this, Kukutasiddha, Minister of the King of Magadha, erected a temple at Nalanda, and while a religious sermon was being delivered there, two very indignant Tirthika mendicants appeared on the scene. Some naughty young novice-monks in disdain threw washing-water on them. This made them angry. After propitiating the Sun for twelve years, they performed a sacrifice and threw living embers and ashes from the sacrificial pit into the Buddhist temples. This produced a great conflagration which consumed Ratnadadhi". The proof of the destruction of the buildings by fire could also be corroborated by an inscription.

Vikramasila

Another most illustrious Library might be traced in the famous Vikramasila Monastery which, in origin was a later contemporary of Nalanda, being established by Dhar-mapala, a distinguished Pala monarch of Bengal, and became prominent during the period of decadence of Nalanda. It flourished in the days of Tantric Buddhism when occult sciences and magic had become favourite subjects of study. Consequently Tantra was given prominence in the production of books in Vikramasila under the patronage of many learned monks. With its own publications the Vikramasila, in course of time, became a "true University with a collection of books". The Academic Council of the Vikramasila University was in charge of the libraries which, in addition to storing books, undertook also the work of publication. It was the Library which took steps to renew the worn out and damaged manuscripts and made liberal provision for meeting the constant demand of the outside public, particularly of Tibet, for copies of books, in its possession. The copying work was to some extent done by the monk - teachers and students, but clerks also had to be engaged to cope with the increased demand. The Tabkat-I-Nisari presents a vivid and sorrowful description of the Vikramasila University and its Library which was situated at modern Bhagalpur in Bihar. It could be presumed that the invaders headed by Bukhtiyar Khilji destroyed the Library thinking it to be a fortress by mistake. Only a few books were carried away by the monks when they fled to Tibet and other places outside India during the period of invasion.

Odantapura

Other important centre of learning in Magadha was the Odantapura Monastery located in Bihar Sharif in the District of Nalanda, Bihar, which was endowed with

a magnificent Library of Buddhist and Brahminical works. Abhayakaragupta, the Head of the Mahayana School in Odantapura, was a great writer and rendered many books into the Tibetan language. This splendid Library of Odantapura was destroyed during the sack of the Monastery and the massacre of its monks by the Muslims in A.D. 1197.

Conclusion

Besides the well known and developed libraries mentioned above there were sundry other academic libraries—big or small—in ancient India. Buddhist monks were habituated to dwelling together in the monasteries which became in course of time seats of spiritual uplift and of learning. Naturally for the purpose of instruction, libraries became almost inevitable to them. In almost all the monasteries, therefore, were libraries. In the above an attempt has been made to deal with some well-organised University Libraries of ancient India. But it should be noted that apart from the libraries discussed above there were so many other academic libraries at Kashmir, Cinabhukti, Jalandhara, Malava, Matipura, Ujjayini, Varanasi, Pataliputra, Vaisali, Ratnagiri, Tamralipta, Vikramapuri, Paharpur, Salavana, Jagaddala, Kancipura and the like. These monastic libraries of those hoary days laid the foundation-stone of modern academic and public libraries. It was really in the hands of the Buddhists that the libraries for the first time came into existence in ancient India. They might be called the inaugurators of the library movement in this country. They, for the advancement of learning, came forward to establish the libraries here. There is no denying the fact that during the medieval and modern periods many well developed academic libraries were founded. But considering their age and scope of development it is found that in the primitive stage the Buddhist libraries worked very efficiently for the propagation of knowledge. Buddhist monks were not satisfied merely in collecting books, but also adopted a constructive plan to preserve the ancient texts in a systematic and scientific manner.

Sample Questions

I. Long Answer Type

1. Write an essay on the origin, development and destruction of the Nalanda Mahavihara (University) Library of Ancient India.

II. Short Answer Type

1. Write a short note on the origin of the Vikramasila Mahavihara (University) Library.

III. Objective Type (Mark the *one* right answer out of the following four alternatives with the tick-sign ✓).

1. Ratnadadhi, the largest library building, Ancient India was situated at
 - (a) Nalanda.
 - (b) Vikramasila.
 - (c) Kausambi.
 - (d) Kosala.

Answer is 'A'

Select Readings

1. Altekar, A.S. Education in Ancient India. Banaras, Nand Kishore & Sons, 1957.
2. Barua, Dipak Kumar. Viharas in Ancient India : A Survey of Buddhist Monasteries. Calcutta, Indian Publication, 69
3. Mookerji, Radha Kumud. Ancient Indian Education : Brahmanical and Buddhist. Delhi, Motilal Banarsidass, 1960.

ACADEMIC AND ROYAL LIBRARIES IN MEDIAEVAL INDIA

The library as a store-house and as an organ for the dissemination of human knowledge and experiences had its flourishing development even in the remote past in India. The only difference in the organisation of knowledge between the past and the present lies in the technique, arrangement and order, while the same ideal, i.e., proper acquisition and organisation of books and manuscripts which are the veritable mines of human knowledge prevails throughout the centuries with equal significance. As the library is solely connected with man's learning, so its annals depict the same tendencies and peculiarities as those of learning. In India, too, the same episode repeats with its usual prologue, climax, anti-climax and catastrophe.

Introduction

The mediaeval period of Indian history is remarkable for more than one reason. The foreign rulers, mostly Muslims, were catholic enough as to the promotion and advancement of learning. It was in the hands of these Muslim authorities that the Indian libraries became more developed and attracted eminent scholars from home and abroad. Though the Sultans themselves were not scholars of very high grade, yet they were great patrons and lovers of learning and forerunners of the modern library movement in India.

Sultanate Period

During the Sultanate period the Turks did not maintain any separate building for a library. Books were generally stocked in the buildings meant for educational institutions. The library of Shaikh Nizamuddin Auliya which was located in his Khanuah in Delhi, was the only public library, being heavily subsidised by the public and open to all inquisitive people during the Sultanate administration.

Mughal Period

But it was during the Mughal period that libraries obtained the most liberal patronage of the mighty emperors. The libraries of these times may, however, be conveniently classified into : (i) Academic libraries located in various educational institutions patronised by the Mughal rulers, (ii) Royal libraries containing selected books which were either located within the precincts of palaces or in public buildings, (iii) Provincial libraries which were generally situated in provincial kingdoms of independent rulers. All these libraries—whether academic or public or private, open or exclusive— were highly organised and efficiently maintained as would be evident from the elaborate

and effective scheme that was adopted for establishing, organising, administering and preserving libraries during the middle ages in India and the treatment they received at the hands of the Muslim sovereigns who finally settled down here and introduced various plans for an all-round prosperity of Indian life and culture.

As already noted, 'Library' did not attract the same attention under the sultans as it did under the Mughal Emperors. During the later Mughal sovereignty a special department like modern education or library directorate, was maintained to look after the libraries in the State. The highest official of the library was called the Nazim or Mutamad who was the chief authority in the library. He had full authority as regards the income and expenditure, appointment and dismissal of the personnel of the library etc. He was responsible only to the emperor for his activities relating to the library. He was also regarded as a high dignity or nobleman at the Court. All these responsibilities and privileges would prove conclusively that the Nazim or the Chief Librarian or Director of the library enjoyed a very high position in the State. He was a distinguished fellow on the royal list. Thus are found distinctive names like Mulla Pir Muhamaad, Shaikh Faizi or Muktub Khan as the distinguished Nazims or Chief Librarians, under the Mughal Emperors. The next official of the library was the Darogha who may be equated with the Deputy Librarian of the modern library system. The Darogha-i-Kutubkhana being a highly accomplished man who had intimate knowledge of the arts and sciences had to look after the internal management of the library under the Nazim, He was assisted by quite a number of assistants who used to help him in the matters of purchase, arrangement, classification and cataloguing of books. Each assistant was in charge of his own section and subject.

The Mughal rulers unlike the Turks caused to build numerous spacious and magnificent buildings for the maintenance of their invaluable library collections. The floor of the library building was kept wonderfully clean and bright. Careful attention was given while planning the library building and every effort was adopted to free it from dust, damp, moisture and extreme atmospheric variations. Like modern planners of library buildings the mediaeval architects, too, had to make provision for sufficient light and free circulation of air.

As regards the method of book classification also the mediaeval librarians were expert enough. Classification was thought to be an inevitable method for the proper and helpful arrangement of books and manuscripts. The smaller libraries used to classify broadly the library holdings into the arts and the sciences. But the bigger libraries classified books more closely into sub-classes, sections, divisions, etc. as per their subjects and arranged them accordingly on the shelves. An interesting account of the book-classification method was adopted in the libraries of Akhar and Shaikh Faizi

would reveal a glorious development in library technique. In these libraries books and manuscripts were classified into the following sections, viz. Astrology, Astronomy, Commentaries, Geometry, Law, Medicine, Music, Philosophy, Poetry, Sufism, Theology, and Traditions. Rare and sacred books were kept apart in a separate sequence for convenience and easy reference.

But unlike the modern steel or wooden shelves, books in the middle age were kept in trunks and almirahs according to their serial numbers. Every effort was made to keep the books safe from dirt, worms and atmospheric evils by employing expert assistants who took up periodical inspection of each book individually lest it was damaged in any way.

Besides the Chief Librarian, Deputy Librarian and Section-Assistants, there were also book-binders, guilders, painters, calligraphers, copyists and Muquabila Navis who compared the copied texts with the original ones in the Mughal libraries. During this period libraries reached a very advanced stage of development under direct governmental control and supervision. It is curious that libraries were kept separate from the public Records Office which might be compared with modern National Archives.

It was under the active support of the Emperors that royal and academic libraries flourished most. Babur, the first Mughal Emperor, being himself accomplished in literary attainments encouraged the establishment and expansion of a number of libraries. He had a personal library of which good use was made by him. Whenever he became exhausted he took rest in his library. But it was through the patronage of Humayun, the worthy scion of Babur, that the library movement during the Mughal rule received its further impetus. He converted the pleasure-house of Sher Shah in the Purana Quilla into a library. It is sad to note that Humayun fell from the stairs of the library at Sher Mandal getting dangerous injuries which shortened his life. He had also a personal library with the choicest books. It is said that during his Gujarat expedition when Humayun was encamped at Cambay, some forest and hill tribes attacked his camp and in confusion plundered "many rare books, which were his real companions and were always kept in His Majesty's personal possession." Akbar, the great apostle of learning, also maintained a magnificent library containing books on various subjects. Although he had not taken the trouble to learn and to read, yet by a peculiar acquisitiveness and talent for a selection, by no means common, he had made his own all that can be seen and read in books. "For his studies through the medium of the ear, Akbar collected an enormous library of extraordinary pecuniary value, to which probably no parallel then existed or ever has existed in the world." as Akbar did not care for private volumes, so the books there collected were in

manuscript-forms. When the stock-taking of his treasuries preserved in the Agra Fort was taken after his death in October 1605, the books, “written by great men, mostly by very ancient and serious authors”, adorned with extremely valuable bindings, and in many cases enriched with costly illustrations by the best artists, numbered 24,000 valued at nearly six and a half millions of rupees. This figure of inventory was taken from official registers copied independently by two European authors, Manrique and De Laet. Akbar also maintained a translation bureau for translating Sanskrit, Turki and Arabic books into Persian. The Royal Library was located in the big hall on the side of Shah Jahan’s octagonal tower in the fort of Agra. The huge mass of collections of this Library was helpfully classified under sections and subsections and efficiently organised by expert librarians. Salim Sultana, one of the Queens of the Emperor, was also a great lover of books and had a library of her own. Jahangir, another great Moghul Ruler, in addition possessed a personal library of his own. The imperial library which was mobile in character was moved wherever the Emperor happened to go out. The personal library of Nur Jahan, the Queen-consort of Jahangir, was no less important. It was enriched by occasional purchases by the Queen. Shah Jahan, too, was a great patron of the library and learning. He spent the early hours of the night in his study room and read and listened to his selected works. Aurangzeb, another illustrious Mughal Emperor, took active care of the Imperial Library and enriched it by new and valuable additions. He had also a personal library consisting of books mostly on theology and religion. He transferred the library of Mahmud Gawan from Bidar and amalgamated it with the Imperial Library. Zebun-Nisa, the worthy daughter of Aurangzeb, collected a big library which offered her companionship and solace during her imprisonment for her complicity in the rebellion of Prince Akbar. Later Mughuls like Bahadur Shah, Muhammed Shah, Shah Alam II and others took active steps for establishing new academic and personal libraries and preserving and enriching the Imperial Library and other sundry libraries.

From the above observation it is evident that the early Muslim Rulers as well as the Mughal Emperors were great patrons of learning and consequently during their academic sovereignty libraries—royal and public—received further impetus. The royal libraries which were established in the mediaeval period could easily compete with any first-grade academic library of the western countries of that age.

But along with these royal libraries there developed in mediaeval India the reading rooms and academic libraries set up by the noblemen and distinguished personalities. Abdur Rahim, son of Akbar’s early protector Bahrain Khan, maintained a library of a very high standard. In this library were employed highly trained scribes, calligraphers, painters, book-binders, guilders, cutters, translators and moderators who were

responsible for the physical getup and publication of books. Maasir-i-Rahimi spoke highly of Abdur Rahim's librarian, Maulana Ibrahim Naash. The distinguishing feature of Abdur Raliim Khan Klianani's library was that most of the books were manuscripts from the hands of the authors themselves. Some of the authors presented their books to him and received rewards in return. The modern libraries of the Nawab of Rampur and the Raj Pramukh of Hyderabad and the Khudabux Oriental Library at Patna possessed some of the precious items of Abdur Rahim's collection.

Next to Abdur Raliim's mention might be made of the personal library of Muuim Khan, the Governor of Jaunpur. In this library many rare and invaluable manuscripts were collected and preserved.

Shaikh Faizi who was the brother of Abul Fazl became noted for his enthusiasm for the library. He collected a large number of costly books in authors' own handwritings. Faizi took personal care of books which were neatly and finely bound. The total number of books in his library exceeded 4,300 and after Faizi's death these were added to the Imperial Library. Faizi's collections included numerous subjects like literature, medicine, astronomy, music, philosophy, mathematics, jurisprudence, etc. The library which was maintained by Shaikh Farid Bukhari, a favourite courtier of Jahangir, might also be mentioned here. Later the important and valuable books of Farid's library were distributed into other Indian libraries.

All the above libraries were academic and personal libraries which were rich in contents. Huge quantities of gold in *mohars* were spent for their maintenance and upkeep. But all these were essentially academic private personal libraries accessible only to the owners, their nearest relatives and highly qualified persons. These libraries may be compared with the grand academic private libraries mainlined by wealthy and educated persons of the modern society.

But this delineation would be incomplete if the mention is not made of the independent rulers of several states that were in existence during the Mughal supremacy in India. These rulers or chiefs also spent money lavishly for the promotion of learning and better organisation of libraries—academic, private or public.

Ahmed Shah Period

Gujarat possessed a very good library before the invasion of Akbar under Sultan Ahmed Shah I who established a Royal Library and aided many madrasas of his Kingdom by supplying books and other necessary equipments. It was said that when Gujarat was conquered by Akbar, he gave away some books of the Royal Library to his Gawan. Muhammad Shah Bahamani had a grand library consisting of over 3,000

books on diverse topics. During Aurangzeb's reign this library was transferred to Delhi and amalgamated with the Imperial Library.

Sharui Period

The Sharui Rulers were themselves scholars and made liberal provisions for scholars at their Courts. The library of Maulvi Maashu Ali was well-known in the Kingdom and contained over 5,000 books. The library of the Mufti was also a big one. During this period the City of Jaunpur retained its title and its libraries attracted many scholars from far and near.

Sultans of Khandesh

The Sultans of Khandesh possessed a fine library. Farishta related that he came into contact with the library and from one of the books here he got the history of the Faruki rulers. The library had a precious and rare copy of the *Tiighluq Nama*.

Vijayanagar Period

The Rulers of the Vijayanagar Kingdom were also aware of the libraries as the disseminators of knowledge. A grant of land by King Bukka in Saka 1329, Vyaya to Pauranika Kavi Krislina Bhatta, was made for renovation and proper management of a library belonging to a *Matha* at Sringeri. This record from Vantyalu, a village of Peruru in South Kanara District, mentioned the gift of the hamlet Bramhara in Barakurudu and certain incomes from other villages including Kanyaya, Pentanna and Belmaji to Pauranika Kavi Krishna Bhatt of Sringeri for the maintenance and renovation of a *pmtaka-bhandara* belonging to the Sringeri *Matha*.

Bijapur Period

The Sultans of Bijapur had also a big personal library which passed on from ruler to ruler. There were about sixty employees who were engaged in calligraphy, copying, painting, binding and gilding the books prepared in this Library.

Chhatrapatis and Peshwas of Maharashtra

The Chhatrapatis and the Peshwas in Maharashtra maintained their personal libraries and many of them who were interested in learning, endeavoured to procure old manuscripts or their copies for their personal libraries and also for the public ones.

Murshid Quli Khan of Bengal

The Nawab Murshid Quli Khan of Bengal possessed a very extensive library and paid great respect to men who were eminent for their piety or erudition. He wrote with great elegance and was a remarkably fine penman.

Mohammad of Ghazni and Firoz-Bin-Rajab

Besides the above, further references to the existence of numerous other libraries were found. Thus Mohamrad of Ghazni was said to have maintained a large library consisting of more than 30,000 volumes at his capital. From another source it was learnt that after the conquest of Kangara, a great library containing Sanskrit works fell into the hands of Firoz-Bin-Rajab. As the propagation of learning was attended to by the schools and seminaries and as the religions organisations also co-operated in the dissemination of knowledge, well-eguided libraries containing manuscripts must have been maintained by these institutions,

Conclusion

Hence a close and microscopic study of the history of library development would unveil the fact that during the mediaeval period, the Indian libraries reached a very covetable height of development and ornamentation. Indeed it was during this age of Indian history that libraries in their outer and inner forms developed most and every effort then was made for proper arrangement and maintenance of the books and other valuable materials in the mediaeval libraries with the help of prevailing classification and cataloguing methods.

Sample Questions

I. Long Answer Type

1. Describe the libraries flourished during the Mughal Period.

II. Short Answer Type

1. Write a note on the academic-cum-personal library of Shaikh Faizi.

III. Objective Type (Mark the *one* right answer out of the following four alternatives with the-tick-sign ✓).

1. Humayun fell from the stairs of the library at
 - A. Slier Mandal.
 - B. Agra Fort.
 - C. Perduru.
 - D. Jaunpur.

Answer is 'A'

Select Readings

1. Law, N..N. Promotion of Learning. Calcutta, pp. 132-151.
2. Srivastava, Ashirbadilal. The Sultanate of Delhi pp. 236-302.
3. Sarkar, J.N. ed. Cambridge History of India. Vol. IV, pp. 252-302.
4. The Modern Review. Vol. CXIV, No.1, July 1963, pp.53-57 (Barua, Dipak Kumar, Libraries In Mediaeval India).
5. Marshall, D.N. *History of libraries : Ancient and Mediaeval*. New Delhi, Oxford & IBH Publishing Co. 1983,
6. Trehan, Girdhari Lal *Learning and Libraries in Ancient India : A study*. Chandigarh, Library Literature House, 1975.
7. Datta, Bimal Kumar. *Libraries and Librarianship of Ancient and Medieval India*. Delhi, Atma Ram & Sons, 1970.
8. *The Modern Review*, Calcutta, Vol. CXIII, No. 4, April, 1963, pp. 281-284 (Barua, Dipak Kumar. Ancient Indian Libraries).

Unit 7 □ Users' Groups and Their Needs

Users' Groups

The Users' Groups in an academic library consist of the following classes :

- i) Pupils/students/of the schools/colleges/universities/ institutes of higher learning,
- ii) research scholars/students in the universities/ institutes of higher learning,
- iii) teachers of various grades belonging to the schools/ colleges/universities/ institutes of higher learning, and
- iv) the staff of the libraries and their parent institutions, i.e. schools/colleges/ universities/institutes of learning.

Their Needs

With such varied users of the academic libraries it is very difficult for the librarians to satisfy the users since latter' s needs vary from one institution to another. Every academic institution is established according to its own aims and objectives. Hence the library acquisition policy would also differ according to the institutional objectives. In spite of differences among various academic institutions in their activities the prime objective of the libraries grown up therein is to facilitate the academic community to exploit and harness the library resources, as far as practicable, for their maximum utilisation. Hence the libraries would invite the users, guide them, and provide them with necessary materials. It is said that the abilities of the academic libraries are revealed in their satisfactory services to the users and so the libraries should provide well planned and efficient services to make their collections easily accessible and conveniently usable to different groups of readers from a primary school to a university dedicated to higher learning and research.

As already mentioned, needs of the users vary from institution to institution. Thus a school going child at a primary level should be supplied with the illustrated publications to meet his/her need which, at this stage, is basically of curious nature. A pupil at the Secondary or Higher secondary level requires mainly text-books to prepare his/ her class assignments, while a college student apart from his class room assignments needs some reference books for examination purposes as well as general knowledge development. But a university student at the higher level apart from these, purposes needs standard books for his/her study and research. A person who is carrying on researches on any topic would have to be supplied with some basic library materials which are mainly helpful to his/her research purposes.

Likewise, the needs of the teachers vary from institution to institution. Generally

the teachers of the Universities or institutes of higher learning require the library materials which would help them in their research activities/projects. They also need the computerised information retrieval and may ask the librarian to assist them for getting information—bibliographical or otherwise—even through resource sharing.

Thus the needs and techniques of meeting them differ from one group of users with various types of needs of any academic institution to those of other. The needs are for text-books, for reference books, or for research type of books which may be procured even from other libraries through interlibrary cooperation and resource sharing programmes.

Sample Questions

I. Long Answer Type

1. Clarify the needs of different classes of Users' Groups of the academic library.

II. Short Answer Type

1. Classify the Users' Groups in an academic library.

III. Objective Type (Mark the *one* right answer out of the following four alternatives with the tick-sign ✓).

1. The needs of the Users' Groups of the Academic Libraries are
 - A. Same.
 - B. Different.
 - C. Partial.
 - D. Non-Information.

Answer 'B'

Select Readings

1. College and Research Libraries, 24(5), September 1963, pp. 359-364 (Harlow, Neal. Levels of need for library service in academic institutions).
2. American Library Association. Student use of libraries : An Inquiry into the needs of students libraries and the educational process : Papers of a Conference within a Conference July 16-18.1963. American Library Association 1964.
3. Davis, R.A. & Bailey, C.A. Bibliography of use studies. Philadelphia, Graduate School of Library Science, Drexel Institute of Technology, 1964.

Unit 8 □ Library Services and User's Support Within and Beyond The Library

Any large academic library renders the services to its users through the

I. Acquisition and Organisation of Human Knowledge

The primary services of the library are to acquire and organise the human knowledge recorded in all available reading materials including journals, periodicals, serials which are technically classified, catalogued and placed on the shelves for their convenient handling by the users,

II. Circulation Services

These Services are rendered by lending books and other materials to students and teachers for their best uses. They are the major services of the library. The circulation services facilitate the physical access to the library resources and encourage their optimum utilisation for study and researches. The main purposes of the Circulation Services are to

- (a) preserve the files of registered users;
- (b) issue and take back the library materials following a specific method;
- (c) maintain all records of loans of library resources;
- (d) keep records of over due loans of the library resources for their recall, reservation of some library materials on demand; and
- (e) supervise the arrangements and shelving of the library materials on the stacks of the library.

But in any academic library there are some materials like the (i) Reference Books, (ii) Rare and costly illustrated Books on Art etc., and (iii) Reserved Books and Text-Books, which are not generally issued for the home-use. But these may be lent out in the library building for study and research. Reference Books, such as, Abstracts, Almanacs, Indexes, Bibliographies, Biographies, Catalogues. Dictionaries, Directories, Encyclopaedias, Year-books and the like, which are constantly required by the users for consultation. So also rare and costly books on art, incunabula, manus'cripts of all types, historical letters, old newspapers, back volumes of journals, atlases and maps, out-of-print publications are not prescribed for home-lending because of their rare and costly nature. Some frequently used standards books with single copies available in the library and the text-books often needed by the students for their class lessons are not Issued out of the library.

For lending out and taking back the books and other materials in the libraries various charging and discharging systems, such as, ledger system, dummy system, indicator system, temporary call-slip system, and permanent call-slip/card system, have been introduced. According to the system introduced by Nina E. Browne in as early as 1895, each borrower is issued a number of pockets/envelops equal to the number of volumes he/she could have on loan at one time, while issuing a book, the library assistant inserts the book-card into the envelop of the borrower, projecting the card above the top of the envelop without mentioning the borrower's number on the book-card as well as on the borrower's card; the call number of each title is filled in behind a date guide. But under the Newark System introduced in 1900 the cards of the books, lying on the shelves, are kept in the book-pocket and the cards for books on loan are kept in the files by call number on each due date, each borrower also carries a card of the same size; the library assistant records every issue by writing the borrower's registration number on the next line of the book card and by stamping on the date due on the same line of the book card; he/she also stamps on the date due, on the next blank line of a date due slip in the book and on the next blank line of the borrower's card; the discharge of book is done by stamping the date of return opposite the date due on the borrower's card in the book pocket and next the book card is replaced from the file to the book.

It is found that the call-slip system is the simplest method of issuing a book to the borrower. But this system can work well only in a small or college library and for the large academic library, especially university library, where issues are many, it is unsuitable inasmuch as the borrower has to wait for a long time at the issue counter.

Now-a-days automation has been introduced in the charging system. In Holland an automatic charging system has been evolved by the technologists in cooperation with the librarians. It is called the 'Bibliophone' System, of which detailed discussion has been made in the subsequent pages.

If the borrower returns the home-issued book after the due date, a fine is charged by the library for each day the book remains overdue.

III. Documentation Services

Such services are rendered both manually and by machines to supply the needed document/library material/information and data to the users. Such services are required in the large academic libraries, e.g. University libraries.

IV. The Users' Guidance Services

These are mainly reference/ information/referral services which are performed by the Reference Department of an academic library at the personal level for (a) assisting

the students/scholars, faculty members and others in getting acquainted with the nature, content and scope of the library and its collections, and (b) guiding the users through the supply of instructions in the most effective utilisation of the library materials and reference tools by providing bibliographies, reading lists, documentation services and the like.

In an academic institution is located a separate Reference Department which may be organised in one of the following three ways, viz. (i) Division by the Forms of reading materials i.e. government publications, manuscripts, maps etc., (ii) Division by subjects, i.e. agriculture, Buddhist Studies, Sanskrit, Pali, Zoology etc. regardless of their forms, (iii) Computerised Services irrespective of forms and subjects.

The person in charge of the Reference Section should be an exceptionally qualified and enthusiastic one with an inquiring mind. He/She should help the users and should not sit to work for him/her by doing the reader's job. Such 'service' is called 'disservice'. On the other hand, he/she may help the users by (i) publishing a list of recent additions to the library, (ii) circulating fresh issues or completely new copies of periodicals, and Official Documents, (iii) preparing as well as publishing Abstracts of Articles of Papers.

The early goals of the library profession are based on a humanistic tradition of "improvement", that includes literacy advocacy and knowledge classification. But in the era of the Internet, as Bill Gates puts it, content is king, it appears that everyone is competing with librarians to manage information. It is presumed that in the future, library-based selection and organization of information would become a cottage industry, since every one will be able to do this locally.

The rapid growth of the world wide web (www.) and the availability of many unique resources have resulted in a changing role for the information user, because on the Internet an individual may create, present, remove, search or change files and the same individual also encounters files created, presented, changed or removed by another group of individuals. These changes become profound and this emerging internet 'library' more closely approaches to the concept of the famous Alexandrian Library. Although there are many advantages in searching on the web, with its ease of use and the easy integration of information through hyper links, browsing sometimes does not become an effective means for locating specific information.

V. Wide Display of Library Collections

The library collections should extensively displayed for their maximum utilisation by the users. Such displays may be made by fixing the book-jackets on the boards and showing the new books on the tables.

Supplementary Services

Apart from the above-mentioned basic services an academic library has to perform some other supplementary services for the convenience of its users as follows :

A. Storage and Preservation Services

Although the storage and preservation services are of supplementary in nature, they are vital in the sense that they are the very initial services which are expected from a library. Indeed after the acquisition of reading materials every library should handle, prepare, process and maintain them properly for future use in a storage-place that should be adequately ventilated and protected against sunlight, excessive heat, dust, dampness and insects. The required measures should also be under taken for the preservation of these materials.

B. Binding and Repairing Services

Some academic libraries maintain provisions for simple mending and repairing services. But many libraries do not possess their own bindery and so they have to depend on the commercial binders. Whatever may be the situation, each library has to serve the readers by repairing the mutilated or torn publications readily needed by them.

C. Reproduction Services

The modern photographic and other reproduction services have revolutionized the library services. Through microphotography of costly and rare books and journals, and manuscripts may reproduced and preserved in the library. Besides, with the microfilm printing it has now become possible to reproduce the pages of books and the complete articles published in the out-of print periodicals within a very short period. Even the photography combined with xerography can reproduce the original materials at a lower cost. In the inter-library system reproduction services play a very important role.

D. Audio-Visual Services

During this period of technological development an academic library has no other alternative but to serve its inquisitive users through documentary type of films/ filmstrips, soundtapes, picture files, gramophone records, lantern-slides, computers cassettes, computers, video-cassettes and the like, with these and other audio-visual aids a large or a small academic library can render better services to its readers than merely with the reading materials.

E. Services to the Non-Members

Occasionally the academic has to allow the non-member, i.e. who are not students/

scholars /staff, of that particular institution, but who are pursuing researches on some specific topics, of which materials are available only in that library. Such types of readers need special attention and care to obtain their desired library materials from that library. However, before offering services to these special category of library users, the library authorities must verify their identities and evaluate their actual needs. In many universities, such readers are allowed to use the library, as for example, in the University of Calcutta persons who are not academically connected with the University in any way, but who have registered their names with the University as 'Registered Graduates', are allowed, in a restricted way, to use the University Library.

F. Extension Services

Although these services are primarily concerned with the public libraries, they may of great help to the readers of an academic library by arranging additional lectures, exhibitions of reading materials and cultural activities to make its users aware of a subject/topic/issue—economic, political, and social.

G. Special Services to Advanced Users

To the advanced users like postgraduate students, research scholars, and teachers of the university/ institute for higher learning the academic library should be offered some special services through the arrangement of sound-proof reading corners with enough light and fresh air near the book-stacks and resource documents like bibliographies, encyclopaedias which would constantly be needed by the users.

H. Inter-Library Cooperation Services and Resource Sharing

During this period of information explosion, it is not possible for a single academic library to collect all the materials for its users mainly due to financial constraints. So it has to depend on other libraries for information resources to serve the users. But such services cannot be rendered without the cooperation from those other libraries. James Thomson has also remarked: "... in view of the highly specialized nature of some of the research work done, the age and scarcity of some of the material required in the humanities and ever increasing amount of information demanded in the sciences, no university library can contemplate attaining self-sufficiency" (All Introduction to University Library Administration. London, Clive Bingley, 1970, p. 117). Hence the remedy is library cooperation. So the Regional Seminar *on Bibliography, Documentation and Exchange of Publication in Latin America* held in 1960 under the auspices of the UNESCO had noted : "...in view of current developments in science and technology, which make adequate and efficient bibliographical and documentation services a necessity... there should be a coordination of and broader cooperation among the university libraries, documentation centres and specialized

libraries of each country” (Gelfand, M. A. *University Library for Developing Countries. UNESCO Manual For Libraries-14*. Paris, UNESCO, 1962) .It is, therefore, evident that in the areas of library services, cooperation services are all the more necessary since an academic library deals with the dynamic continuity of the universe of knowledge.

The scope and function of library cooperation are vast. Apart from the inter-library loan and exchange of information, the library cooperation covers also the underacted areas;

- (a) *Cooperative Acquisition* to avoid duplication of materials and to save money.
- (b) *Cooperation and Centralized Cataloguing* also in order to avoid duplication of processing work and minimize the staff strength.
- (c) *Bibliographies and Union Lists* to bring out a catalogue of special materials like manuscripts, rare collections and newspapers as well as old periodicals.
- (d) *Union Catalogues and Bibliographic Centres* to facilitate the location of the required library materials available in a particular academic library.
- (e) Documentation Centre/Participation in Documentation Programme to render indexing, abstracting and translation services.
- (f) Cooperative Reference Service to set up inter-academic institution and nationwide reference service programmes that should create conditions for free flow of information as a whole in the country.
- (g) Cooperative Photographic Service to set up a kind of cooperative relationship linked with well-equipped documentation centres and to economise the expense.
- (h) Subject Specialization to avoid duplication of library materials and wasteful expenditure.
- (i) Cooperative Publication also to avoid duplication in the printing of reference documents like the union catalogues, bibliographies and current awareness lists and the like.
- (j) Cooperative Storage Centre to store, preserve, and protect the rare library materials.
- (k) Exchange of Annual Reports to have an idea of the developments and progress made by different large academic libraries.
- (l) Exchange of Library Professionals to refresh the professional knowledge and skill for more effective and meaningful services to the users.

(ni) Exchange of Surplus Reading Materials to dispose of and collect desired materials at the less expenses and endeavour.

(n) Inter-library Facility of Reading to help the users for exploiting and utilising the resources of other libraries

Thus the Inter-Library Cooperation and Resource Sharing cannot be overlooked. In fact, the Inter-library loan system and resource sharing among the libraries may be the solutions for serving the users more efficiently. Indeed advancement in computer technology during the last thirty years underlies the metadata developments in other ways. Since storage as well as access of data have been moved from magnetic tape to disk storage with direct rather than linear access, a database management is required for inter-library cooperation and resource sharing. As users have more direct access to and control of the data, more information on the data is needed. This wide storage of data and varied access lead to demands among the libraries for a summary data about these databases. The word 'Metadata' has been in use since the last decade of the 20th century first in relation to these database management systems. "Metadata has been a part of the information processing million for as long as there have been programs and data" (Inmon, W. H. *Building the Data warehouse*. Boston. QED Technical Publishing Group, 1992, p. 88).

Users' Support within the Library

Through such services, except the inter-library co-operation services any academic library would be able to serve and support its users and other members in a meaningful way,

Users* Support beyond the Library

Further, any academic library can support the users outside the library in their needs through the supply of library materials through Inter Library Cooperation and Resource Sharing Programmes, of which detailed discussions have been made in the Units 19, 32 and 33.

Sample Questions

I. Long Answer Type

1. Narrate the library services to be rendered to the users within an academic library.

II. Short Answer Type

1. Briefly describe the users' guidance services in an academic library.

III. Objective Type (Mark the *one* right answer out of the following four alternatives with the tick-sign ✓).

1. The circulation services are related to
 - A. Lending books and other library materials.
 - B. Organisation of human knowledge.
 - C. Wide Display of library collections.
 - D. Resource sharing.

Answer is 'A'.

Select Readings

1. Mookerjee, Subodh Kumar & Sengupta, Benoyendra. *Library Organisation and Library Administration*, 2nd ed, Calcutta, The World Press Pvt. Ltd., 1977.
2. Viswanathan, C. G. *University Libraries of India : Principle and Policy*. New Delhi, The Author, 1972
3. University Grants Committee. *Report of tht Committee on Libraries of the United kingdom*. London, H.M.S.O., 1967.

ELECTRONIC JOURNALS AND AGGREGATION IN THE ACADEMIC LIBRARIES

Introduction

It has now become almost a compulsion for the academic libraries throughout the world to subscribe to the electronic journals (e journals) to cater the needs of the readers. Having been introduced in the 1970s the electronic journals became much popular by 1996 among the scholars. They are periodicals which become available as individual titles through electronic media. Precisely the electronic journals, thus, are those journals which are obtained-in electronic media only, e.g. world wide web (www.) or available on CD-ROM or only on online. Now-a-days electronic journals appear as parallel versions of their print counterparts. Such journals may be accessed through gopher, htp, telnet, e-mail or discussion lists and are mainly accessed through the web. Due to the multidimensional features the electronic journals compared with their print versions have, within a very short period, become the format of choice for academic library users.

Study of needs to subscribe to e-journals

Electronic journals represent a significant and growing segment of the holdings of an academic library. Since a sizeable amount is spent on accessing the e-journals. the concerned academic librarian should first of all study the attitudes of the users towards such journals. This study is needed for

- (i) identifying the age group of respondents using electronic journals;
- (ii) finding out the frequency of usage of these journals;
- (iii) tracing out the access point of the electronic journals;
- (iv) knowing the quantum of the electronic journals accessed in one month;
- (v) identifying the initiator who has introduced accessing the electronic journals to the respondents;
- (vi) ranking various advantages of the e-journals;
- (vii) revealing the problems to be faced by respondents during accessing the e-journals
- (viii) finding out major e-journals accessed to the maximum; and
- (ix) identifying issues and recommending solutions thereof for better library services.

Methodology for study

For such a study the following methodology may be adopted :

- (a) Use of simple random sampling technique ;
- (b) Preparation of questionnaire for collecting the data; and
- (c) Application of statistical tools, e.g. percentage, Chi-square, V Test, and One Way ANOVA to analyze the data using SPSS software package.

Acceptance and Usage of e-journals

The importance of the service of the electronic journals to the users depends upon the accountability since these are quite expensive and leased rather than purchased. Their acceptance and usage rest on the following points:

- (i) standards of the users of the electronic journals,
- (ii) nature of the use of such journals,
- (iii) method of accession of the electronic journals ,
- (iv) utility of electronic journals to the users,
- (v) justification of cancelling the purchase of the print version in favour of their electronic versions.

Advantages of accessing e-journals

The primary advantages of accessing electronic journals may be mentioned according to the following rank sequence:

- (i) access from different location,
- (ii) timeless availability,
- (iii) available before print version,
- (iv) simultaneous usage,
- (v) full text,
- (vi) easy accessibility as compared to print version,
- (vii) access from desktop,
- (viii) downloading facilities,
- (ix) easy interaction,
- (x) contact with the authors through e-mail, and
- (xi) archival facilities.

Factors for success of e-journals

But the success of e-journals depends on the following factors :

- (i) increased availability of the computer systems and direct link to e-journals from library OPAC/WEBOPAC;
- (ii) assessment of the monthly usage reports for e-journals through log on file system by any academic library wherein such journals are available apart from requesting the publishers or agents concerned to support a separate electronic resources building in future;
- (iii) scope of comparison of findings of studies in the usage of e-journals between two academic libraries;
- (iv) creation of more awareness among the library and information professionals for marketing their new electronic journals services;
- (v) utilisation of the information centre's web site, Internet, newsletters, strategic pages of the academic institutions for highlighting the user-friendly e-journal facilities available;
- (vi) networking with the scholars and teachers in other departments and spread of awareness about electronic journals services to be rendered.

Subscription of e-journals and formation of consortium

Because of extreme financial constraints it is not possible now-a-days for the libraries to meet the increasing sundry academic needs of the users within a limited budget for arranging the electronic journals. Under these circumstances, a consortium agreement may help the librarians by offering to them an alternative to the purchasing models, budget stability, extended readership facilities and drastic reduction on the cost of paper subscriptions.

Thus an established consortium would be a group of organizations which may regularly purchase electronic full-text databases as a unit usually situated at one geographical region with a coordinator acting as a spokesperson for that particular group. However, the following three different models of consortium have been thought of :

- (A) **Print Plus electronic access** — A negotiated payment may provide electronic access to the full-text databases if the total holdings of a consortium remain acceptable. The print copies of journals possessed at the time of agreement may be maintained by the individual purchasing academic institution and on the other hand, the new print may be purchased with a big discount negotiable.

- (B) **Electronic Only** — Each academic institution may purchase for a fixed term and discounts may be negotiated depending on the number of academic institutions participating. In this model no print is included, but it can be purchased at a discount price affordable.
- (C) **Flip Pricing** — The Price is fixed, in this model, on the predicted usage and value to each academic institution. The print may be available at a high discount and remains outside the agreement offering to an academic library the option of cancelling the titles if the necessity arises.

In this connection three characteristic features of a full-text Database may be noted as follows :

- (a) **Institution wise Licence** — Under this system all the members can access both on and off-site.
- (b) **Alerting Service** — Through it personal e-mail notification of new articles may keep the users conversant with latest researches and teaching methods.
- (c) **Reference Linking** — It facilitates the users to move swiftly and conveniently between related articles already published.

Indian Scenario

In India the Union Ministry of Human Resource Development (MHRD) established in 2002 the Indian National Digital Library in Engineering Science and Technology (INDEST), a Consortium based subscription to electronic resources for the technical education system, to assist the students, scholars and teachers of the Indian Institute of Technology (IITs) at Delhi, Kanpur, Kharagpur, Guwahati, Chennai and Mumbai; Indian Institute of Science (US), Bangalore; NITs; and other institutes of national importance involving multiple publishers and wider content base.

The University Grants Commission, India, has also extended the support to the Information and Library Network (INFLIBNET) by subscribing to the e-journals.

The Council of Scientific and Industrial Research (CSIR) under the Government of India had also started in June 2002 a Consortium after the agreement with the M/S. Elsevier Science. The 'CSIR Electronic Journals Consortium' is one of the CSIR Networked Projects under the Xth Five year Plan of India. This consortium is being taken care by the NISCAIR, one of the scientific laboratories of the CSIR. The CSIR E-journals consortium has envisaged to provide accessibility to 4500 + electronic journals published by leading publishers and learned societies. It is observed that the usage of the e-journals has been steadily increasing in India. In fact, there has

been fivefold increase in usage from 5000 downloads in January 2002 to nearly 30,000 downloads by December 2002. The CSIR and its forty constituent laboratories together subscribe to over 3,356 foreign research journals at a cost of about. Rs. 25 crores every year and of these 2,500 journals are unique and indispensable.

In order to strengthen the information base of the laboratories, the CSIR has decided to set up a consortium for electronic access to world scientific and technological journals. Initially it has, therefore, entered into a contract with M/S Elsevier Science in June 2002 to enable access to all its laboratories and access to 1200 + e-journals. It may be noted that M/S Elsevier is one of the leading publishers of scientific and technological journals from which the CSIR laboratories together subscribe to 552 journal titles annually at the cost of Rs.07 crores.

The DAE Consortium is also following the CSIR model. Narrating the CSMCRI experience it is remarked : “The usage of Science Direct was very low as compared to other labs in the initial months but later-on picked-up remarkably as library extended personalized orientation service on Science Direct. Sr. Scientists appreciated the role of library in popularizing the Science Direct facility. However, the use of Science Direct suffered due to non-availability of steady internet facility; it has been observed that higher usages come from new readers.”

In general the full text e-resources are available in India on online. Here the electronic journals are governed by license agreement, which is restricted to the students and faculty members of the National Institute of Technology, Tiruchirapalli, Tamil Nadu. Breaches of that agreement with the publishers could result in the suspension of access to the resources for the entire Institute.

“The full text e-resources :

1. ACM Digital Library
2. ASCE Journals
3. ASME Journals
4. ASTP(Applied Science and Technology Plus)
5. IEL Online (Covers IEE and IEEE Publications)
6. Springer’s Link” (IASLIC Bulletin, Vol. 50, No. 2, June 2005, p.92)

Aggregation in relation to E-Journals

Thus the e-journals being major resources in advanced researches, an Aggregation may be “defined as a collection of e-content in full-text, packaged and sold as a

single product and accessible to users by means of a single user interface and a comprehensive search system. The publisher mounts electronic content on its own platform and the vendor acquires rights from the owner of the content, sometimes the publisher provides access to all its own journals and then sells the service to libraries in the form of a subscription”.

With the help of an Aggregation an academic librarian has the choice of purchasing models, budget stability, extended readership facilities and massive reduction on the cost of print subscriptions. In practice, an Aggregation appears to be an extension of resource sharing networks, which facilitates common access to electronic resources through the Internet system.

The following are *advantages* of an Aggregation in the context of the electronic journals. An Aggregation

- (a) offers simplicity in the form of a single subscription to maintain, a single license to negotiate, a single access method and a single payment to a single vendor;
- (b) allows seamless access in the form of a single user interface, cross-journal searching and transparent reference linking within the Aggregation ;
- (c) lowers the overall costs and at the same time provides access to larger amounts of information;
- (d) expands the readership of the journals and gives libraries access to otherwise unavailable materials;
- (e) offers the full-text database which is invaluable when libraries can contact the remote users as they too may use the information ;
- (f) ensures the archive of the materials subscribed to during the period of agreement making the same available in perpetuity;
- (g) offers price stability during the period of agreement;
- (h) provides sophisticated usage statistics to libraries by accessing their admin pages ;
- (i) helps to get free e-mail alerts for the users as the Table of Contents, Saved Search and the like.

At the same time may be noted the following six disadvantageous points of an Aggregation as

- (i) through it the library will lose control over collection development decisions ;
- (ii) no single Aggregation can include all the journals for a given discipline or all the disciplines which the library supports ;
- (iii) a publisher may limit the publication of a full-text in only one Aggregation causing extreme financial pressure if different journals are found exclusively in different Aggregations ;
- (iv) there appears difficulty in reference- linking to and from content which remains outside the Aggregation;
- (v) Aggregators frequently change their journal lists or the years of the coverage without notifying the subscribers; and
- (vi) the library does not know exactly which titles are accessible,

Conclusion

The electronic journals are gradually being added to the collections at the expounding rates. The academic libraries perform extensive work to make electronic resources available without the need for individuals to enter the library campus. Thus recent developments in the electronic journals allow flexibility and enhance the visibility of the electronic journals by integrating all journal titles in any format into a single list. Hence the electronic journals are quickly becoming a mainstream form of learned interaction.

The electronic journals are also available through aggregators gateways. The same journal may be available in more than one aggregators' products. Hence the electronic journals are to face sundry challenges. But their greatest benefit is their easy availability on the web site that provides immediate access to the desired e-journals.

Still it is needless to mention that the use of electronic journals requires a considerable training exercise, especially if publishers would keep changing what they are doing, subscription agents and other intermediaries such as BEDS and OCLC are being ready to supply with the common interfaces for several publishers' journals. But there are some unavoidable factors which are not under the control of the publishers of electronic journals, e.g. network, delay, increasing traffic and inadequate bandwidth and the like. All such factors may act on the way to the successful functioning of the electronic journals in the academic libraries.

Sample Questions

I. Long Answer Type

1. What do you mean by 'electronic journals'? Write about the important role played by the electronic journals in the academic libraries.

II. Short Answer Type

1. Define the term 'Aggregation'. Enumerate the advantages of an Aggregation in the context of the e-journals.

III. Objective Type (Mark the *one* right answer out of the following four alternatives with the tick-sign ✓).

1. Electronic journals are available only in
 - A. Print media.
 - B. Electronic media.
 - C. Handwriting.
 - D. Photo copying.

Answer is 'B'

Select Readings

1. Fecko, M.B. Electronic Resources; Access and Issues. Bower Saur, London, 1992.
2. *Journal of Information Science*, Vol. 24, 6, 1998, pp. 419-429 (Tomney, H. & Burton, PR *Electronic Journals; A Study of Usage and Attitudes among Academics*)
3. IASLIC Bulletin. Vol. 50, No. 2, June 2005,' pp. 91-95 (Mounissamy, P., Kalammal, A., Swaroop Rani, B.S. *Users' Attitude Towards Electronic Journals*); *ibid.*, pp 96-99 (Bisen, RaKesh Singh. *E-journals Aggregators; A Consortia Approach For Effective Access to Full-text Journals Database*).

COPY CATALOGUING IN ACADEMIC LIBRARIES

Introduction

The Copy Cataloguing Programme has already been widely accepted in the national and big public libraries of the U.S.A. It may be adopted in the academic, especially big college and university libraries, as well. Both Descriptive Cataloguing and Subject Cataloguing may be worked out through original cataloguing or copy thereof or derivative cataloguing.

The bibliographic record without either following or referring to any other bibliographic record of reading materials like books, journals and documents or any other edition of the same, may be maintained in the original catalogue. In different academic libraries the cataloguers in preparing the catalogues follow the sundry cataloguing rules, classification schemes and subject heading lists and thus produce a variety of catalogue records for any particular reading material.

What is Copy Cataloguing ?

Copy Cataloguing which may be effectively introduced in the academic library system, is the preparation of a bibliographic record following several bibliographic descriptions of the reading materials comprising books, periodicals, serials, or separate editions of the same.

The entries along with the bibliographic description based on the data available in the reference sources like the national bibliographies or national union catalogues or commercial catalogues or stored bibliographic information preserved in card form, microform or other electronic storage media or kept online prepared by the library, come under the purview of Copy Cataloguing, for the creation of which the power of judgement of the cataloguer is needed to (i) identify bibliographic information and matching the same with the entry readily available; (ii) determine whether sufficient bibliographic information has been supplied or not; and (iii) add or delete bibliographic information for making it appropriate for satisfying the regional aspirations.

It may quite be possible that in original cataloguing the same entry, i.e. title, is catalogued by different cataloguers in sundry academic, or more specifically, college and university libraries, due to variation in the subjective interpretations of objective evidences yielding to different types of description with numerous access points of that entry. Thus, apart from unnecessary extra expense on duplication of cataloguing, difficulty may arise in sharing bibliographic resources of the participating academic libraries due to lack of timely information.

Besides, the Copy Cataloguing Programme could provide the participating academic libraries the facilities of downloading needed data from a central database, editing the data to meet the regional particular needs and printing the cards as required.

Orgin and Implementation

As early as in the beginning of the 19th century the concept of Cooperative Cataloguing was floated by Charles C. Jewett, the Librarian of the Smithsonian Institution. In 1901 the Library of Congress, U.S.A., began the card distribution service initiating the centralised cataloguing system which has subsequently influenced the catalogues and cataloguing standard throughout U.S.A. laying the foundation of copy or derivative cataloguing programme that has evolved first from printed card service to machine-readable form on magnetic tape and presently through file transfer protocol. Later on, the Library of Congress in collaboration with other research libraries, Online Computer Library Center (OCLC), Research Libraries Group (RLG), has been able to launch the programme For cooperative Cataloguing and has also joined OCLC's Co-Operative Online Resource Cataloguing Project.

In Canada the National Library of Canada is also extending cataloguing services to assist the other public libraries with processing the documents relating to that country.

The Bodleian Library of U.K. has joined the Copyright Libraries Shared Cataloguing (CLSC) Programme through which the British Library holds responsibility to catalogue 70 per cent of the total national publications and the five copyright libraries, viz. Cambridge University Library, Trinity College of Dublin, Bodleian Library, National Libraries of Wales and Scotland of U.K., for sharing the cataloguing work of the remaining 30 per cent publications of U.K.

Copy Cataloguing in Academic Libraries

Through the Copy Cataloguing programme the academic libraries of any country in the world can share the bibliographic information preserved in a standard format created by the experienced cataloguers achieving fruit fully cost effectiveness.

Indian Scenario

So far India is concerned, if Copy Cataloguing is adopted by the participating academic libraries the following steps may be taken :

- (1) Preparation of a list of participating libraries which would include the libraries of some selected big colleges, academic institutes of higher professional learning, and universities including the first three, i.e. of Calcutta, Bombay

and Madras, under the leadership of one University which would act as the nodal institution to create a collaborative environment for producing Copy Cataloguing for those academic libraries.

- (2) Availability of the facilities of automation, computer use, machine-readable database, online data, other necessary media and the transfer of bibliographical information to all participating libraries should be the primary need for the successful implementation of Copy Cataloguing Programme,
- (3) Lastly but not the least cooperation among the participating academic libraries as also technical assistance from the INFLIBNET programme and National Library, Kolkata, are pre-requisites for the success of the Copy Cataloguing in India.

The nodal or leading library whether in India or in other countries can play the key role in organizing the Copy Cataloguing Program, by preparing a machine-readable database and supplying such data online and print media to other participating libraries in any country. Thus all the participating academic libraries can use its bibliographical information preparing their catalogues without unnecessarily wasting manpower and money.

Stages to be followed in Online Copy Cataloguing

The undemoted four stages are to be followed in Online Copy Cataloguing :

Stage 1 : The work of searching the database for the existing bibliographic record of the particular entry can be done depending on the requirements of the system available. The search keys which are commonly used derive from the author's name, title, topical subjects, control number, ISBN, and ISSN. In a particular academic library computers would display a list containing brief information about the entries according to the search criteria. The library users in an academic institution will have to depend on the prudence of the cataloguer because at this stage he/she will select the particular information to be displayed in details.

Stage 2 : At the next stage, the catalogues would compare the selected record with the entry to be catalogued. On scrutiny if it is found that the entry is exactly the same, then the record can be processed for that particular academic library—be it of a college or of a university or of an institution of higher professional studies. In case the record displays differences in some data elements or differs from local practices, it can be edited to suit the demands of that particular academic library.

Stage 3 : The work of editing, at the third stage, may be done by substitution, addition or omission, Where substitution is adopted the catalogues can replace the existing data by other data. Substitution in OCLCs PRISM System can be done utilising copied data, e.g. pasting of a name heading from the authority file to a bibliographic record. Likewise, any extra character can be added or deleted as needed.

Stage 4 : At the fourth stage in a few cases if no match is found in the database the catalogues will have to do original cataloguing by supplying data and tags needed for the workform available online.

Advantages

Advantages of the Copy Cataloguing in the academic libraries may be enumerated as follows :

- (1) Because of Copy Cataloguing consistency in the cataloguing work and closer adherence to the standard codes could be maintained through the continuous monitoring by the trained and experienced cataloguers in the preparation of the source record for maintaining the high quality standard in cataloguing.
- (2) The Copy Cataloguing will ensure the availability of the uniform authority file to all member academic libraries in any country.
- (3) Both the readers and librarians of the member academic libraries will gain advantage through the uniformity in cataloguing, although in some instances alterations and modifications become almost necessary to meet the regional features.
- (4) Again through the reduction of errors in the central master database the academic library users will get more accurate data.
- (5) Also the Copy Cataloguing Programme would help to overcome financial stringency avoiding uncoordinated duplication of work since the sharing the cost of cataloguing and distributing data would be more economical.
- (6) Delay in cataloguing work could be avoided.
- (7) Even the shared database could also be used for resource sharing or inter-library loans.
- (8) Through the Copy Cataloguing support all member academic libraries can set up an interactive bibliographic network.
- (9) The Copy Cataloguing in an academic library system provides a means of

accessing records in usable form quickly from other academic libraries where these have been created and utilised.

- (10) Further, the database thus created by the shared effort can work as the union catalogue.
- (11) The nodal academic, preferable university library can appoint qualified technical staff for maintaining authoritative standards with regional variations.

Conclusion

The growing sophistication in the application of computers hints on the reduction in cataloguer's contribution. Still automation cannot replace the role of the human intellectual contribution of the cataloguer. Through the application of information technology the budget of an academic library should take care of (i) technical and service costs, (ii) capital and operating costs, (iii) permanent staff and equipment costs, (iv) purchase of equivalent commercial services, and (v) services from freelance professionals.

In order to balance the abovementioned aspects cataloguing support service is desired. Hence a model bibliographic record for each entry is to be created only once and copied in all participating academic libraries needing the same. Thus the primary objective of any bibliographic network service is the creation of an automated union catalogue to support the inter-library loan and to provide a source of Copy of Derived Cataloguing for the academic library system.

In fine, it is to be noted that because of the present complex socio-political situation as well as unprecedented advancement of information technology combined with world wide economic depression it has almost become obligatory to take resort to Copy Cataloguing in the academic library system. Also due to growing development of electronic resources bibliographic information is needed to be integrated with the electronic document for ready access to CD-ROMs, online databases, electronic journals, internet resources, electronic current content services along with printed materials.

Sample Questions

I. Long Answer Type

1. What is 'Copy Cataloguing'? Write in details about the prospects of the 'Copy Cataloguing' in the academic libraries.

II. Short Answer Type

1. Briefly discuss the advantages of the 'Copy Cataloguing' in academic libraries.

III Objective Type (Mark the *one* right answer out of the following four alternatives with the tick-sign ✓).

1. 'Cooperative Cataloguing' is the
 - A. Forerunner of copy Cataloguing'.
 - B. University Library Cataloguing.
 - C. Subject Cataloguing.
 - D. National Library Cataloguing.

Answer is 'A'.

Select Readings

1. Carter, Ruth C. ed. *Managing Cataloguing and the Organization of Information : Philosophies, Practices and Challenges at the onset of the 21st Century*. Binghamton, Ny., Haworth Information Press, 2000.
2. Schultz, Lois Massengale. *A Beginner' a Guide to Copy Cataloguing on OCLC/ PRISM*. Englewood, Libraries Unlimited, 1995.

USE OF METADATA IN AN ACADEMIC LIBRARY

Because of huge mass of information on the Internet, the librarians of the academic institutions in the developed countries are cataloguing some of its resources in traditional methods. Incorporating those cataloguing records in their online catalogues, simultaneously they are trying to find out with the help of computer experts some solutions which assist to search, discover, and retrieve files on the Internet through the use of Metadata.

Definition of Metadata

Metadata are sets of descriptors used or proposed for use to describe electronic resources. If generally implemented, these standardised data elements, probably presented as part of the electronic file itself, may then be the focus of various current and future search tools and probably the basis for more detailed and traditional cataloguing records.

M.L. Larsgaard remarks : “It is ironic that information derived by cataloguing had to be called something else—metadata—before noncatalogers dealt with it.” This remark has further been elaborated : “Most basically metadata are ‘data about data’, or data elements used to describe or represent electronic resources. The primary function of metadata is to aid a user in locating desired and relevant data, ‘to identify data which may satisfy the requirements of the user, and to store information about its location, content, and quality relative to the interests and situation of the user’. It can provide information about an entire resource or only parts of it, but it ‘promotes sharing, reuse, and interoperability of data including information to help locate, access, browse, clean, and aggregate databases.’ The data may accompany or be separate from the resource, but it enhances search precision, retrieval, management, and control of the resource. Metadata may take the form of an index or template, and may describe format, multimedia content, location, or note any access. Technical information appearing as metadata may include the capture process, information on the current and other versions, and use restrictions and means to gain permission for use or reuse, Metadata may also contain information on data accuracy as needed to establish the ‘pedigree’ of the resource. Metadata should be simple, but expansive, and should assist searches in locating and assessing a resource. Metadata is almost a hybrid of title page and catalog card, but one that also includes the technical information necessary to describe and use an electronic resource” (Godden, Irene *ed. Advances in Librarianship*, Vol. pp. 21, San Diego, Academic Press, 1997; Lange, Holley R, & Winkler, B. Jean. *Taming the Internet : Metadata, A work in progress*.

Thus the traditional catalogue card containing the essential information of a book or journal in a few lines, could be considered as Metadata. Presently the library cata-

loguing records include the same information prepared and standardized based on the Anglo American Cataloging Rules (AACR 2) and placed in a Machine Readable Cataloging (MARC) framework which is a set of standards for identifying storing, and communicating cataloguing information. The online catalogue, based on the catalogue card, but manipulated through the manysided workability of the MARC format, supplies the same information on the computer. Resources accessed through the world wide web (vwww.) are numerous by many millions.

The container for catalogue information has changed from clay through parchment and card made of paper to digital file, although the basic approach to library collection information still regains almost same.

The term 'Metadata' first appeared in the 1980s in relation to the enormous database management systems. W.H. Imnon explains the term : "Metadata has been a part of the information processing milieu for as long as there have been programs and data" (*Building the Data Warehouse*. Boston.QED Technical Publishing Group. 1992. p.88. But according to the Library of Congress Authority Record (No. ARN 4035768); "the term was coined in the early 1960s."

In practice it is neither possible nor wise to catalogue all library collections on the Internet. A cataloguing approach in the form of metadata may be suggested as a way to assist users to identify their desired information. The rapid appearance of computer files in their various forms leads to involvement of library personnel,first in cataloguing of machine-readable and microcomputer files, then in cataloguing Internet files, and most recently in discussions about the development and use of Metadata to describe digital resources. In the U.S.A. even some projects demonstrate the functionality of the USMARC format and AACR2 for electronic resources particularly in providing access to specific resources necessary to individual libraries, they cannot solve the problems faced by the librarians in cataloguing the growing number of materials on the Intemet.Thus Metadata becomes a foqus in the library field as a possible solution to such problems. But the general practice is that each discipline to define a specific, tailored set of data elements to serve as its Metadata.

During this world of overwhelming electronic resources traditional cataloguing may appear to be unnecessary for the larger mass of materials on the Web, a description to implement readily in the form of Metadata may be possible. Because Metadata accompanied by technological advances have the potential to more easily react and control the massive number of resources on the Internet.

For the successful implementation of Metadata if the librarians, especially of the universites, are involved in electronic resources, "only then will the distribution of those materials to local to remote users be guaranteed to be comprehensive, enduring,

integrated, and of consistently high quality” (Sha. V.T. et al. *The traditional library and the national information infrastructure*, 1996, Available at <http://www.oclc.org/oclc/man/collo/sha.htm>).

BIBLIOPHONE TRANSPORT SYSTEM

Introduction

Through the rapid technological developments and new scientific inventions during the twentieth century library and information science has entered into a new era and consequently academic libraries, particularly college and university libraries, have to introduce new library techniques for the benefits of the readers to locate their required books in or to borrow the same from the libraries for their use in the minimum time,

Concept

Because of continuous researches in the use of books and introduction of complete automation in the libraries the invention of ‘Bibliophone Transport’ in Netherlands has ushered a new age in locating and issuing the library books in the academic institutions. With the growing demand for automation the use of ‘Bibliophone Transport’ System in well-organised and scientifically planned big or small libraries can ensure swift and safe delivery of books and other materials from distant shelves or racks of the library stack-room without long wait to get the supply of the same manually.

In the traditional process of delivery of books through library assistant unnecessarily much time of the users is wasted. But the invention of the ‘Bibliophone Transport’ System which has been introduced in the Delft Technological University of Netherlands, through the untiring continuous research of a band of serious academics, engineers, and librarians, has revolutionised the library profession. By this System it has been possible to issue the books to the borrowers very swiftly with the help of automation and newly invented machines. This System has been used for the first time in the well-developed academic libraries of that country.

Generally this System has been termed as ‘Bibliophone Transport’. Dr. J. Verhoeff, Professor of Mathematics, with the help of some sincere technologists and experienced librarians through several years’ of experiments has been able to evolve this System which is highly technological in use and complex. There are three segments in this System, viz. (i) electronic method of the Bibliophone, (ii) spiral narrow sloping pathway, and (iii) a mechanical method of notched transport conveyer-belt attached to the Bibliophone System.

Through the Bibliophone System the user can easily contact with the room wherein

the desired book is stacked. He/she will have only to supply the number assigned to that particular book having gone through the catalogue put in the reading room of that library. Like the modern telephone-receiver the Bibliophone also maintains a receiver with dialling facilities and dial tones. Through dialling of the particular book-number the desired book is requisitioned. If the wrong number is dialled, then a request for dialling the right number in a male voice through that instrument is heard and in case of dialling the light number an assurance from a female voice would be heard. If the library assistant would press the button marked 'aanw', the user would find through illuminated light that the desired book is on the way and if the button marked 'afw' is blazed, it should be understood that the requisitioned book has already been issued out and hence the book would not be available. Under the Bibliophone System each user would receive from the library a special number consisting of the last three digits of the catalogue number, which is mentioned in the computerised catalogue against the daily issued library books. As already told, the Bibliophone works through a mechanical method of notched transport conveyer-belt. By this method necessary information about the required book, if available, is recorded through automation and the book is issued to the reader within a few seconds. Besides, with the help of the computing machine regularly all the facts recorded in notched conveyer-belt are analysed so as to enable the librarian to know the number of books actually issued daily and to determine their usefulness.

All the advantages and disadvantages of the use of this newly invented Bibliophone System in the library have been examined for about four years in the Delft Technical University. During the period of examination of the Bibliophone Transport System three major issues, viz. availability of accommodation or space in the library, different sizes of books, and administrative efficiency, have been seriously considered. As a consequence, classification numbers of books have to be totally changed to eight digits, of which four would indicate in which region of the library stack the particular book is located — of the four one digit indicates the rack on which it is kept and the rest three digits would point out the actual location of the book.

From the point of view of workability the Bibliophone Transport System has ushered a new era, a new concept in the field of library and information science. If this system is introduced in any academic, especially big university, library the borrowers—students, scholars and teachers—would be much benefitted by saving the most precious time. It has been observed that the time required between the demand placed and issue of book through the Bibliophone Transport System is only sixty-five second; answers of three-fourth questions regarding any book would need less than one minute; answers of four per cent of other questions would require two minutes. Hence saving of time in borrowing and issuing books in such a manner would help the advancement of learning through the return of the books by the borrowers within a very short time. Because of automation introduced through this

System the number of library assistants would be very small and the surplus employees may be entrusted with other manual work in the library itself. Also this System assures detailed statistics about the library books used or unused and the librarian would be able to prepare .a list of books of frequent use also to save money. This System would also be able to indicate the age of the books, and within ten minutes for how many times books have been issued etc. All such information would extremely be necessary for an academic library to prepare the library budget and to know how the scholars are using the library books for their researches.

Inded the Bibliophone Transport System invented by the Delft Technical University for many reasons could be regarded as a valuable contribution to academic lihrianship, especially in respect of book issue method.

Sample Questions

I. Long Answer Type

1. What is Bibliophone Transport System ? Write in details about it.

II. Short Answer Type

2. Briefly enumerate the advantages and disadvantages of the Bibliophone Transport System.

III. Objective Type (Mark the *one* right answer out of the following four alternatives with the tick-sign ✓).

1. Bibliophone Transport System functions with the help of the
 - A. Automatic computing machine.
 - B. Manual book-issue system.
 - C. Bibliographical tools.
 - D. Traditional library methods.

Answer is 'A'

Select Readings

1. *The Netherlands*, March 1966.
2. Masik Basumati (Monthly Bengali Periodical), Calcutta, Pous 1373/1978, pp. 391-392 (Barua, Dipak Kumar, Bibliophone).

Unit 9 □ Role of Library in Different Kinds of Academic Institutions

The role of the library in various academic institutions differs due to the

- i) aims and objectives of the parent institutions,
- ii) nature of the institutions,
- iii) types/classes and sizes of the institutions,
- iv) groups of users,
- v) cooperative and resource sharing programmes.

The library of any academic institution has to follow the aims and objectives of the particular academic institution in which it is situated and accordingly its collection should be developed, personnel would be recruited, financial or other assistances for the growth of the library would be provided.

The nature of the library is also a factor for specifying its role in that particular institution which may be a private/semi private/non-government/government/statutory organisation. Hence the library has to play its role according to the nature of its parent institution.

The types and sizes of the academic institutions also determine the role to be played by their libraries which may be located in the

- a) schools—primary, middle, secondary, and higher secondary;
- b) colleges—under graduate and post-graduate
- c) universities—unitary and affiliating with the facilities of under graduate as well as post-graduate teaching and research programmes.
- d) institutes of higher learning offering graduate, postgraduate, research (i.e. D.Phil./Ph.D./D.Litt., D.Sc.) Degrees in some specialised branch/branches of learning including, medicine, engineering, technology, library & information science, law, fashion & design, fine arts, performing arts and the like.

The roles of libraries of the above-mentioned institutions would obviously be different. Some colleges and all the universities have to support both the teaching and research through their libraries. Libraries should aim to cater the needs of the clientele according to their varied needs.

According to Groups of Users also the role of library varies. In the schools the pupils generally belong to the age group between 3 years and 18 years. Hence their

needs are mostly recreational and instructional. At the college levels users being above 18 years require guidance for the use of the libraries and assistance for preparing classroom teachings from the librarians. But in the universities almost all the students require guidance for the library use as well as for the preparation of lessons and material help for preparing research assignments/papers/projects/dissertations/theses. With the computer-based technology they may be assisted to locate the information resources in the libraries. Some universities allows the outsiders to use their libraries in restricted ways.

But the role of the libraries in the present technological environment has become the most significant one because of the installation of computers and their accessories in the libraries and inter-library cooperation as well as resource Sharing programmes through the computer applications and other technical methods to trace out the information on any topic/subject from any library through cooperation.

Under these circumstances, it is observed that the role of libraries varies from one academic institution to another depending on the above five factors.

Sample Questions

I. Long Answer Type

1. Write, in details, about the role of a 'College Library'.

II. Short Answer Type

1. Write, in brief, on the groups of users in a 'University Library'.

III. Objective Type

(Mark the *one* right answer out of the following four alternatives with the tick-sign ✓)

1. The role of an academic library is dependent on
 - A. the intention of the librarian.
 - B. aims and objectives of the parent institution.
 - C. the library staff.
 - D. the user community.

Answer is 'B'

Select Readings

1. Poole, Herbert *ed. Academic Library by the year 2000*. New York, Bowker, 1977.
2. Mckee, Bob. *Planning Library Service*. London, Clive Bingley, 1989.
3. Buckland, Michael K. *Library Services in Theory and Context*, 2nd ed.

Unit 10 □ Integration of Classroom Teaching and Library Support

The issue relating to integration of classroom teaching and library support has now become indeed an intricate one with various facets. The revolutionary developments in teaching procedure have compelled to shift the staff resources from classroom teaching to library support, although the success rate in this respect differs from one institution to another. It is to be noted that such success depends on the personality of the librarian of an academic institution and his/her academic colleagues as well as on good working relations between them, because of the fact that some teachers readily accept to treat the librarian as a teacher, while others are not ready to accept the librarian's role of the teacher.

Integration of Teaching and Library Support

Through the under-noted services the integration of classroom teaching and library support may be possible:

- i) unfolding the complex whole of/essential framework of the universe of knowledge;
- ii) tracing out the connective significance of varied forms of information resources like books, journals periodicals, serials, dissertations, theses, standard specifications and statistics, business reports;
- iii) identifying the methods of utilisation of the information sources and the services available through reference tools;
- iv) searching out the secondary periodicals and abstracts/ indexes both in print -on -paper and in databases through electronic media;
- v) encouraging advances in various repackaged as well as information consolidation products for utilisation and in their consultation activities by the teachers/ researchers; and
- vi) combining the information input into Research and Development (R & D) activities, production and marketing of the products among the users/ customers.

All these endeavours towards user/customer-based services, utilising the information resources of the academic library, 'are important for the library support to an academic

institution and create an integrative intellectual reflection of the librarian as well as academic library services which gradually become embedded in the entire academic system. And such an interaction between the teaching staff and library personnel would be visible in the process of advancement of learning of not only an individual but also of the human community as a whole.

The present important issues relating to teaching and learning processes to improve are :

- (a) students' capability of learning to explore the new ideas,
- (b) their ability to move around an idea,
- (c) their efficiency to debate,
- (d) their competence to detect the most significant ones in a theme, and
- (e) their confidence to enjoy them, .

A student from the initial stage should be taught to acquire such vital skills as to study, to think, and to write, for the development of which an academic library plays the effective role.

Besides, the Research and Development programmes being essential components of an academic institution for the subject development, the academic library which has, for educational purposes, to assimilate, analyse and synthesize, should extend the inherent support to such programmes through the supply of relevant information. So far its bibliographic information, as far as practicable, the subject portion is generally left for the relevant subject specialists and documentation services like content analysis, citation analysis, SDI services, and access to databases are rendered by the Research and Development personnel.

Integration of Technological Innovation in Teaching and Library Support

Modern advancement in technology has provided, for teaching as well as information retrieval, many new computer tools which are quite unlike the traditional information resources through the

- i) supply of information in multimedia systems by means of audio, video, graphic and textual materials;
- ii) link to other information resources/the online databases; and
- iii) creation and synthesis of information through customised information system.

Presently available computer based communications, national as well as international networks, teleconferencing, online full-text databases, and interactive multimedia formats are some of the technological innovations being now utilised by direct or indirect library support in teaching activities. Such technological innovations open up new opportunities for enriching the students through new learning methods and for improving the teachers through additional instructional options. Thus by these technological innovations both the students and teachers alike may

- (a) gather information, store, and retrieve the information;
- (b) inter-transfer the information; and
- (c) process the information.

Thus inspite of severe resource constraints due to economic recession and cost-effectiveness, there are enough possibilities for integrating the teaching programmes with the academic library support. Indeed during this period of unprecedented technological development classroom teaching will have to seek academic library support for judicious management of information materials and resource sharing programmes.

Sample Questions

I. Long Answer Type

1. How is the Classroom Teaching supported by the library services? Write in details.

II. Short Answer Type

1. What is 'Integration' in library perspective? Write a brief note.

III. Objective Type

(Mark the *one* right answer out of the following four alternatives with the tick-sign ✓).

1. Teaching and learning processes help the students to improve their
- A. skills to play.
 - B. efficiency to debate.
 - C. confidence to waste away.
 - D. ability to commit a gross mistake.

Answer is 4B

Select Readings

1. Kink, Thomas ed. Academic Libraries: Achieving Excellence in Higher Education : Proceedings of the Sixth National Conference of Association of College and Research Libraries, 1992.
2. Line, Maurice B.ed. Academic Library Management. London, The Library Association, 1990.
3. Me Donald, Joseph & Micikon, Basney. *Academic Libraries: The Dimensions of their Effectiveness*, Greenwood, Greenwood Press, 1994.

Module III ● ORGANISATION AND MANAGEMENT OF LIBRARY SERVICES

Organisation of Library Services

The organisation of the library services of in academic institution is primarily based on the aims and objectives of that particular institution. The organisation, in fact, reveals the design of the formal structure of authority through which subdivisions of services are arranged, defined, and coordinated for the planned objectives. On the basis of it the staff is chosen. It involves identifying the activities and positions necessary to carry out the plans and purposes of that library and logically grouping and arranging them according to functional relationships.

The services of a large academic library or in fact any academic library are mostly based on prescribed rules as well as regulations and proceedings of the Governing Body of the parent institution. The internal organization of an academic library services generally include

- (i) relationship of the librarian to the administration,
- (ii) clarification of the nature of library resources,
- (iii) duties and responsibilities of the librarian,
- (iv) provision of a library committee /board/council to assist the librarian, and
- (v) relationships of the librarian as well as of the library staff to the academic as well as administrative units.

Due to some phenomenal developments during the last century in the field of librarianship, the organisation of library services has largely been influenced by the (a) growth and size of the collections; (b) increase in student enrolment; (c) changes in the methods of study and research; (d) rising costs of library materials and hike in the staff salaries; (e) technological advancement; (f) improvement of professional knowledge and skill; and (g) increase in coordination, cooperation, and resource sharing among the academic libraries.

Hence the large academic libraries have to organise their services on the departmental basis or divisional basis. Such departmental/divisional method of organisation (i) reduces the work-burden of the librarian relieving him/her from daily routine jobs in the interest of formulation of service policies, (ii) sets up better coordination between the librarian and his/her staff, (iii) speeds up technical processing and users' services, and (iv) ensures the cost-effectiveness.

The *Centralised Organisation Services* are recommended for (a) processing/techni-

cal services, i.e. classification and cataloguing of library materials; and circulation and reference services including the organisation of journals, periodicals and serials.

The *Decentralised Departmental Organisation Services*, though appear to be useful for large academic libraries, demand duplication of resources, coordination among the units, and high costs for staffing and other purposes.

In general *Organisation of Library Services* includes the following items:

A. Administrative Services which are generally rendered by the librarian and which are also known as the *Establishment Services* consist of

- i) preparation and submission of library budget;
- ii) selection, training, and supervision of the library personnel;
- iii) planning library development;
- iv) formulation of and administration of library policies and rules as well as regulations;
- v) maintenance of good working relations with the library personnel and office staff of the parent institution;
- vi) participation in the meetings of the faculty members and of the personnel of other academic institutions;
- vii) development and supervision of book collection policies and procedures;
- viii) planning the new library facilities and modification of existing ones;
- ix) preparation of Reports and Memoranda;
- x) survey and analysis of services of the library staff;
- xi) determination of library positions;
- xii) maintenance of personnel rewards and recommendations for promotions;
- xiii) transfers of the library personnel from one unit to another unit after a certain period and dismissals from the library services;
- xiv) order of supply of library materials including books, furniture and equipments;
- xv) maintenance of financial records;
- xvi) publicity of library resources and services; and
- xvii) participation in the library conferences/seminars and acceptance of membership of the professional associations/organisations.

B. Technical Services comprise the functions of (i) Acquisition, (ii) Classification,

(iii) Cataloguing, (iv) Storage, (v) Safeguarding Collections, (vi) Conservation and Preservation of library materials through Fumigation Processes, (vii) Binding, Mending and Repairing of library materials, (viii) Photographic Reproduction including copying Articles, Statistical Tables, ix) Lending of books for home and reference uses, and (x) Preparation of slides and filastrips for instructional purposes.

C. Readers' Services, also may be called *Public Services*, are offered directly to the users of the library in contrast to Technical Services.

D. Circulation Services usually include provisions for the use of library materials within the library for lending them out to its own clientele and to other libraries, and for the maintenance and control of book-storage and delivery processes.

E. Reference and Information Services which are also offered to the public as specialized services through selected collections.

F. Special Services are rendered by (i) acting as a national library and providing technical and readers' services; (ii) mounting special exhibitions; (iii) arranging lectures and cultural activities; (iv) opting printing and publishing services; and (v) organising lectures, workshops, seminars, conferences on library services.

The organisation of library services may be developed by (i) identifying the particular services which are and should be earned and grouping them by broad function; (ii) arranging the services in homogeneous units, (iii) defining precisely the responsibilities and services of each unit, and (iv) defining the lines of authority and the relationships which should exist within and among the units.

Management of Library Services

The management of library services comprise the following factors :

- (a) The **Planning** being one of the library management services broadly indicates and outlines the aims and objectives to be achieved as well as ways and means to be adopted to reach the specified goal. It is an essential part of the administration of a large academic library, through which the librarian can foresee the future and act accordingly. Indeed planning is the most predominant and vital management of library services.
- (b) So also the **Organisation** in a large academic library, which is another important management service establishes precisely a relationship between administration and execution.
- (c) Further, the **Personnel or Members of the Staff in** relation to their appointment, orientation, training and problems are actually responsible for the discharge of library services and need continuous attention of the authorities.

- (d) The **Direction** signifying decisions taken and incorporated them as formal specific orders would reflect the present as well future library policies.
- (e) The **coordination** interrelates various aspects of the library services.
- (f) The **Reporting Guide** helps the management of library services through the actual records, research and the accumulated data.
- (g) Also the **Budgeting** which is an essential factor of management of library services, displays, if well-designed, the actual needs of the library.

Management Methods

For the better library services the following 'Management Methods' may be considered :

(i) Delegation of Authority

In any large academic library, the librarian has to delegate some of his/her authorities to his/her immediate subordinates for saving own time, for ensuring fuller consideration and for being better informed of the details and actions. A librarian delegates responsibility to unit heads who in turn delegate to their duties to their assistants. It should be noted that the failure to delegate is the key cause of overhead management failure. Thus the delegation of authority involves corresponding responsibility. The delegated authority has the obligation to the person to whom the authority is delegated to report and to make constructive suggestions for the development of the units concerned.

(ii) Span of Control

All activities in the library should conform to predetermined programmes and so 'control' is essential. In fact, the tools for management control are standards, measurements, reports, evaluation and steps to regulate results corresponding closely to the carefully set up and measured objectives.

(iii) Coordination and Integration

For proper coordination authority is delegated and responsibility is shared. Hence through the Staff Meetings, Staff Participation, and Integration scattered management activities are combined under central control.

(iv) Proportioning of Services and Staff

But the most important management method is proportioning of services and staff. The method of proportioning has to commence with the total staff and salary budget available.

Modern Concept of Management applicable to Librarianship

Management at the operating level is aimed at the collection of data through controlled experiment and the analysis of those data with a view to reduction of cost and expansion of library services.

According to modern concept of management primarily is necessary the **work simplification** that includes elimination of some jobs, simplification of some processes and combination of some operations into a single one. Hence work simplification being an important factor involves

- (i) motion and time study or micromotion study applicable to activities in circulation,
- (ii) process analysis,
- (iii) work-place layout,
- (iv) methods study.

Besides, at present in the academic library the use of mechanical devices and automated systems in library activities are gradually being implemented for better management of library services. Automation in an academic library helps mechanization in documentation and information processing, in this respect computers play a significant role. Through digital computers data can be stored, retrieved, changed, rearranged and sorted at a very high speed. The computers can also be used in the acquisition process and other library services.

Unity of Management and Unity of Command

Both these two expressions are applicable to library management for better services. The **Unity of Management** demands that for all the activities having the same objectives in view, there should be one manager and one plan and aims at the arrangement for providing proper management facilities. But the **Unity of Command** would suggest that one person should be responsible to and receive orders from only one superior. Hence both these two expressions applied to library and information science would ensure better management of library services.

Sample Questions

I. Long Answer Type

1. How would you organise the library services? Narrate.

II. Short Answer Type

1. Mention the factors to be considered while managing the library services.

III. Objective Type

(Mark the *one* right answer out of the following four alternatives with the tick-mark ✓).

1. One of the Management Methods is
 - A. Planning.
 - B. Reporting.
 - C. Orientation.
 - D. Delegation of authority.

Answer is 'D'

Select Readings

1. Mookerjee, Subodh Kuinar & Sengupta, Benoyendra. *Library Organisation and Library Administration*. Calcutta, The World Press Pvt. Ltd., 1977.
2. Geifland, M.A. *University Libraries For Developing Countries* (UNESCO Manual For Libraries 14. Paris, UNESCO, 1962.

Unit 11 □ Departmentalization and Coordination of Library Services

Departmentalization

The issue of departmentalization in a large academic library may be viewed from two perspectives, (i) Departmentalization of Subjects, and (ii) Departmentalization of Library Services

Departmentalization of Subjects

Departmentalization of Subjects would mean the establishment of departmental libraries of respective subjects under the general supervision of the Central Library of any large academic institution.

The management of library is justified when there is a distinct, coherent, specialised and important activity, extensive enough to need the full-time services. It may be regarded as a fundamental basis for departmentalization of subjects. Any large academic institution is distinct by broad functions and related activities. So when the volume of activity becomes large enough to require full time personnel, it is the time to set up a separate departmental library for each subject. Even the needs of the clientele of a library would dictate the creation of separate departmental library in one or a group of allied subjects.

In India the university libraries do not ordinarily serve the undergraduate students, for whose needs colleges under the the respective universities are responsible, since the universities have generally to concentrate on post-graduate studies. That is why Morris A.Gelfand states : “*The physical location* of the university buildings, in relation to that of the main library, may require that separate facilities and services be organized. *Form of material* is also a basis for departmentalization. Many libraries hence have separate departments for periodicals, documents, manuscripts etc.” (*University Libraries for Developing Countries*. UNESCO)

Usually the Departmental Libraries, i.e. library collections possessed by or for academic departments within a faculty, are necessary where the academic and units of a large academic institution are spread over an extensive area for economical management and effective services under the overall supervision of the Chief Librarian who would delegate some administrative functions to his/her subordinate colleagues.

Thus the following factors would affect departmentalization in a large academic library according to the subjects taught in an academic institution :

- i) vast campus of the parent institution,
- ii) physical location of Central Library,
- iii) forms of library materials,
- iv) design of the library building and
- v) economical management and effective services.

Departmentalization of library services

Also the issue of 'Departmentalization' may be considered from the point of view of services offered by an academic library. In general a large academic library requires tentatively at least one Chief Librarian, two Deputy Librarians, four Assistant Librarians, twelve professionals, ten Non-professionals, and twenty maintenance as well as custodial staff-members for the following departments :

- (i) **General Administration** for secretarial services like correspondences, supplies, supervision of routine maintenance.
- (ii) **Technical Services** divided into two, viz. (a) Order Department for book-selection, purchases, gifts and exchanges of books and other library materials, and (b) Processing Department including classification, cataloguing, processing work, binding, mending, repairing, storage services.
- (iii) **Readers' Services** divided into
 - (a) Circulation Department for stack control, issue of and taking back the books and other library materials, and (b) Reference Department to assist and guide the users.
- (iv) **Reprographic Department** through the photographic services rendered by photocopying machines, digital cameras and other sophisticated instruments.
- (v) **Audio-Visual Department** for audio-visual services to be served by documentary films, films trips, digital televisions, tape-recorders, CDs. and the like.
- (vi) **Computer Department** for library services like inter-library loan, cooperation and resource sharing through the computers and their accessories, Internet facilities.

Coordination of Library Services

For improved library services better coordination is necessary

- (i) Among the *Departmental Libraries* scattered in a large campus or situated in distant campuses for information transfer by books and other library

materials, for personnel transfer from one Departmental Library to another, for exchange of ideas among the users and staff, and for resource sharing; as also

- (ii) among the Different Departments or Units of a large academic institution for the sake of creating a sense of unity among the members of the library staff/ for meaningful dialogues among the library personnel to serve the users more efficiently, for imparting training to the library personnel to be acquainted with the different departments.

Sample Questions

I. Long Answer Type

1. What do you mean by the term 'coordination' ? Write about coordination of library services.

II. Short Answer Type

1. Define the term 'Departmentalization'.

III. Objective Type

(Mark die *one* right answer out of the following four alternatives with the tick-sign ✓).

- 1. 'Departmentalization' is essential for a
 - A. University library.
 - B. School library.
 - C. Mobile library.
 - D. Rural library.

Answer is 'A'

Select Readings

- 1. Davinson, Donald. *Academic and Legal Deposit Libraries : An Examination Guidebook*. London, Clive Bingley, 1965.
- 2. Mookerjee, Subodh Kumar and Sengupta, Benoyendra. *Library Organisation and Library Administration*. Calcutta, The World Press Pvt. Ltd., 1977.

Unit 12 □ Library Committee and its Functions

Aims

In order to control, govern, and administer the day-to-day functioning and services of the library in an academic institution, a Library Committee is constituted under the existing regulations or by an executive order of the Head of the institution.

Role

The role of the Library Committee (L.C.) which acts as an administrative authority, for all practical purposes in an academic institution, is almost advisory and recommendatory. Besides, fulfilling some meaningful purposes the Library Committee stands as a liaison between the Librarian and the Faculty Members on the one hand and between the students and the library staff on the other hand.

Constitution

In the School generally the Library Committee as such does not exist in the developing countries. The Principal/Headmaster/ Headmistress of a school, be it of primary/ secondary/higher secondary level, entrusts three to five teachers to cooperate with the school librarian in the selection and purchase of books within the allotted budget for the benefit of the students and staff members, in the *primary/ secondary* school special care should be taken in the selection of informative and illustrated books with moral lessons for the children. The informal Library Committee functions with the administrative order of the Head of the school and is expected to supervise the daily functioning of its library following the aims and objectives of the parent institution.

But in the College a Library Committee consisting of seven to nine members including the principal / his Nominee and the Librarian of the College is generally constituted by the principal under his Chairmanship the College Librarian being the Secretary to that Committee. Other members are nominated from among the faculty members and one from the student community.

In case of the **University**, the Library Committee is constituted by the Senate/ Syndicate/Executive Committee/Governing Body of that University empowered under the University Act and Statutes. In some Universities the Library Committee is called 'Library Board', 'Library Trustees', 'Board of Directors For Libraries', 'Curators of the University Library', and the like. The Library Committee in the University is a statutory body constituted, as already mentioned, under the Statutes and Ordinances resolved by the Senate/Syndicate/ Executive Committee/Academic Council of the University.

According to the Parry Committee Report on the British University Libraries, in the U.K. the Library Committee is most commonly a Senate Committee, although in a few universities there, it is a Joint Committee of the senate and Council. In India, however, almost all the Universities, the Syndicate/Executive Committee/Governing Body would provide provisions for constituting the Library Committee.

Even the **Size** of the Library Committee differs from one country to another country and again from one University to another. In fact, there is no universally accepted rule about the number of members of the Library Committee of any University. The Library Committee in India consists generally of 15 to 25 members according to the number of faculties. Some universities include all the Professors/ Heads of various teaching Departments, while some others include only the Deans of the Faculties. Apart from them there should be proportionate nominations from the teachers and students. Generally in the Library Committee the Vice-Chancellor is the Chairman and Pro-Vice-Chancellor For Academic Affairs or simply the Pro-Vice-Chancellor becomes the Vice-Chairman who chairs the meeting in absence of the Vice-Chancellor. In India some Universities the Library Committee is composed of all the Professors, Deans, Representatives of the teachers, students and university officials like the Vice-Chancellor, Pro-Vice-Chancellor, Registrar, and Finance Officer/ Development Officer while the Librarian as the Member- Secretary of the Committee. But with such a big Library Committee sometimes it becomes difficult to transact the business and take decisions quickly. It appears to be wastage of time and energy to include the university officials like Registrar and Development Officer who are concerned more with administrative than academic programmes.

It should be noted that the first University Library Committee in India had been constituted by the University of Calcutta. At the inception only five resident fellows and later on all the Heads of the Departments were inducted in that Committee. But in later years the composition of the Calcutta University Library Committee has been changed several times to meet the demands of the changing situations Likewise, initially the Library Committee of the Delhi University being a small body constituted in 1922 subsequently grew up with a large body of 42 members consisting of all Heads of Departments and two members nominated by the Vice-Chancellor. ‘

Evidently the Library committee of each University is a specialized body which should be smaller in size in contrast to other Committees of the University. A Library Committee in the University with all the Heads of the Departments would not be able to take academic and administrative including technical decisions for the University Library smoothly, in order to overcome such a situation the University of Delhi appointed in 1959 a ‘Standing Committee of the Library Committee’ to (a) prepare the annual budget, (b) allocate funds for different Departments for books and periodicals,

(c) make recommendations to the Executive Council regarding the library staff, (d) prepare the Annual Report for consideration of the Library Committee, and (e) advise the Librarians in administrative and library issues. The nature and composition the Delhi University Library Committee were changed on the recommendations of Carl M. White who proposed that the said Library Committee would consist of (i) three persons each from the Faculties of Social Sciences, Science and Aits, nominated by the Academic Council; (ii) one person each from the Faculties of Education, Law and Mathematics; (iii) three persons nominated by the Vice-Chancellor, and (iv) the Librarian as the Ex-Officio Member-Secretary of the Library Committee. Members nominated by either the Academic Council or Executive Council in Library Committee should not be necessarily the Members of those Councils.

But in the libraries of the U.K. the Library Committees are generally constituted largely with the representatives of the faculties with Ex-Officio membership for the Vice-Chancellor, Pro-Vice-Chancellor, Treasurer, Bursar, Secretary or Registrar (Invitee only). In practice the Vice-Chancellor presides over the meetings and the Registrar or Librarian acts as the Secretary of the Committee.

Tenure

The tenure of the members of the Library Committee is generally fixed for a specific period varying, from three to five years depending upon Ordinances and Regulations of the Universities.

Regarding the scope of the Library Committee in an academic institution controversy arises as to whether the Library Committee should be an advisory or executive body. i.e. whether the proceedings of the Library Committee should be obligatory and mandatory or rather only advisory and recommendatory in nature.

In the half of first the 20th Century the Library Committee was more of administrative than advisory in nature and scope, because of the fact that during this period the librarians of most of academic libraries were not treated as belonging to the academic staff. But with the changed library scenario and introduction of professional management in librarianship, the status and position of the librarians in academic institutions have been upgraded and equated with the faculty members of those institutions. It has been remarked that depending upon the administrative capability of the Librarian, the scope of the Library Committee (L.C) would be advisory rather than executive. The L.C. would uphold, maintain and support the librarian's point of view for enabling him or her to promote and to detail his or her plans in the light of severe examination and in enlisting on behalf of the library a body of enlightened view within the academic institution.

Apart from being the trustee and sponsor of the decision of librarian the Library Committee may display a meaningful and sympathetic attitude towards the librarian for examining his/her proposal and review his/her ideas. Very rarely a Library Committee should resort to voting procedure and should override the expert and professional recommendations of the librarian.

The American Library Association (A. L. A.) upholds that the duties and authorities of the Library Committee should be limited to the formulation only of the general policy of the library.

The Parry Committee does not specify any particular scope, i.e. advisory or executive, of the Library Committee. Carl M. White in his survey of the Delhi University Library in 1965 proposed the formation of the Library Committee as a liaison agency between the University Community and the Library. In his opinion the appointment of the library staff and formulation of the library rules should not be under the Library Committee.

Hence to be brief, the scope of the Library Committee should be confined only to the issues relating to the formulation of the policy decisions entrusting the librarian with the administrative, financial and organizational matters as in the present days the rank and status of the librarian are being considered as equal to those of the Professors of the academic institutions. Under these circumstances, it is not expected that undue importance should be put on the Library Committee which should only assist in the proper functioning of the library. For that purpose the scope of the L.C. should be only of the advisory type. All the powers and responsibilities should be vested in the librarian who is specialized on librarianship and it is thought that with his/her professional training, administrative experience and wisdom he/she could manage the library quite efficiently. Hence the scope of Library Committee has now become comparatively limited.

Functions of the Library Committee

The Functions of the Library Committee of an academic institution should be to

- (i) enunciate the library policy with a view to the growing and new areas of disciplines, teaching and research in the academic institutions, especially in the colleges, institutes of higher learning, deemed to be universities, and universities;
- (ii) recommend and submit the draft budget—both annual and quinquennial—of the library for approval of the higher authorities of the academic institutions;
- (iii) frame library rules and introduce changes, if necessary, for ensuring efficient and quick services to the clientele;
- (iv) to make necessary provisions for library building, furniture, equipments, reading materials and staff;

- (v) advise the institutional authorities regarding requirement and appointment of the library staff;
- (vi) enjoin necessary rules and regulations for the proper security and preservation of library materials including books, periodicals, manuscripts and rare documents;
- (vii) observe strictly the Acts relating to the reproduction of the copyright reading materials in the library;
- (viii) prepare the Annual Report with an yearly account of services rendered by the library for submission to the authorities like the Senete, Syndicate or Executive Council as provided by the Act in the case of the university and to the Governing Body in the case of the college or institute for higher learning;
- (ix) examine periodically the general development and functioning of the library of the academic institution and
- (x) delegate its powers to a Sub-Committee or Standing Committee constituted for some specific purposes like the construction of the building, appointment of the staff, and finance of the library, which would present its proceedings for deliberation and recommendation to the Library Committee for seeking approval and sanction before the implementation and execution from the appropriate authorities.

Library Authority

By the term 'Library Authority' is meant any person, persons, or a collective body thereof, empowered by law, statute or convention, to serve and on behalf the concerned library. The term 'Library Authority' may be used both in the restricted sense and in the extended sense. In the restricted sense it refers only to such authority who is directly responsible for the library issues in the advisory or administrative capacity, while in the extended sense it signifies the creation, maintenance and development of the library.

The term 'Library Authority' which is generally used in its extended sense may be categorised as follows :

- I. Legislative Authority,
- II Executive Authority,
- III. Public Authority, and
- IV. Organizational Authority.

The **Legislative Authority** may include, in the context of academic libraries, National and State Legislatures, Judiciary, Ministry, Government Department,

University Senate/Syndicate/Court/Council/Board of Directors/Trustees. Generally the role of academic libraries is guided, directly or indirectly, by the Union Parliament and State Legislatures. The Judiciary helps in training acts, laws and statutes relating to academic and library issues. The Government Ministry /Department and their agencies like the University Grants Commission in India and University Grants Committee in the U.K. fund and monitor the role played by the academic library. On the other hand, the University Senate/ Court/Syndicate/Executive Council/Board of Directors/Trustees safeguard the interest of the respective academic institutions in consultation with the planners, policy makers and funding agencies for improved library services.

The Executive Authority of an academic institution, as the case may be, the Headmaster/Headmistress/Principal/ Vice-Chancellor is the Ex-Officio Authority of the respective academic library. The Head of the academic institution may delegate his/her authority to the seniormost teacher/ faculty-member/Pro-Vice-Chancellor/Rector/Registrar/Finance Officer.

But in case of a college/university the Library Committee is constituted to deal with the library issues. As already mentioned, the 'Library Committee' which may be an organ of the Senate /Court/Syndicate/Executive Council/ Governing Body/ Managing Committee is a formal body vested with the governance of the particular academic library. A detailed discussion on the **Functions** of the Library Committee has already been in this Unit. Apart from those mentioned above two more functions of the Library Committee are to (i) ensure coordination between the library and various departments of that academic institution; and (ii) lay down broad policies of a particular academic library. But under no circumstances the Library Committee should interfere the day-to-day activities and management of the library without transgressing its normal functions.

In this connection the following conclusions may be drawing about the University Libraries in India:

“(i) Almost all the general Universities of the country have a library committee in their administrative set up;

(ii) Some of the library committees have executive functions; most of them are either recommendatory or reporting, rather than advisory; very few have purely advisory role;

(iii) At places where Library Committees are said to be advisory, they advise the Academic Council or the Executive Council or the Vice-Chancellor, rather than advise the University Librarian. Such a description of the advisory nature is anachronistic of the term;

(iv) In almost all the library committees, the Vice-Chancellor is invariably the Chairman and the University Librarian the member-secretary;

(v) Members of the library committees are mostly those who are directly affected by library service, i.e. Deans and Heads of the Departments or those who represent University administration, such as Pro-Vice-Chancellor, Registrar, Finance Officer, etc.;

(vi) Students are not associated with the library committee. (However, the trend today is to involve student in various University Committees, including the library committee) (Prashar, R.G, Managing University Libraries. New Delhi, Today & Tomorrow, 1991, p. 189)

The Public Authority of the academic library includes the following :

- (a) Families of the Faculty and administrative staff,
- (b) Alumni,
- (c) Visiting Scholars,
- (d) Friends of the Library,
- (e) Neighbourhood Community,
- (f) Industrialists and Business Persons.

In the developing countries like India, Pakistan and Bangladesh where the well-equipped public libraries either hardly exists or are generally poorly stocked and managed, the academic libraries maintained by the public fund are the ultimate places of the community.

The Organizational Authority with professional and research experiences maintains close contact with academic libraries for further advancement of learning following the objectives of the parent academic institutions. Such an Organisational Authority would operate at the local, regional, national and international levels hi the private as well as public sectors. The academic library may be beneficiary of its professional advice and support.

Sample Questions

I. Long Answer Type

1. Describe the functions of the Library Committee of a large academic library.

II. Short Answer Type

1. Write a short note on the aims of academic Library Committee.

III. Objective Type

(Mark the *one* right answer out of the following four alternatives with the tick-sign ✓).

1. The Library Committee prepares the
 - A. Book-list of the academic library.
 - B. Shelf-list of the academic library.
 - C. Union Catalogue.
 - D. Annual Report of the library.

Answer is 'D'

Select Readings

1. Gelfand, M, A. *University Libraries for Developing Countries* (Unesco Manual for libraries-4). Paris, UNESCO, 1962.
2. Ranganathan, S.R. *Library Administration*. Bombay, Asia Publishing House, 1959.

Unit 13 □ Curriculum Development and Collection Development

Curriculum Development

An academic library deals primarily with the students and teachers of different subjects. The requirements of these two groups of users are, therefore, centered round the courses of study which they follow. The aims and objectives of the parent institution design the courses offered by that institution and research programmes are undertaken accordingly. Thus the collection development in the library of an academic institution is dependent on the curriculum of that institution. Hence the curriculum development and collection development are closely related.

In order to fulfill the curriculum needs the academic library has to build up its collection, if necessary by changing the acquisition policy and to evaluate its collection periodically and weed out the materials which may not be necessary to its students and teachers. After the introduction of new courses of study by an academic institution, the librarian and library staff must without wasting much time identify the expected new information requirements and emphasize on the collection development connected with the same. If no nucleus collections on those newly introduced courses of study are available in the library, the books and other materials including reference sources, basic text-books and periodicals on those particular subjects should be purchased by utilising even the nonrecurring grants of the library budget on an emergency basis,

It is expected that the concerned members of the library staff should be informed of this curriculum changes by the authorities. It is a fact that a large academic institution, e.g. a university, is growing institution which has to continue changing its emphasis. Hence its library is needed to be adapted to such changes which would reflect the curriculum development in that large academic institution because of the introduction of the new areas of teaching and research. The curriculum development, therefore, is necessary for any large academic institution to be acquainted with the needs of the society.

Collection Development

Hence the Collection Development of the academic library is aimed to

- (a) supply the students and teachers with the library materials on the newly introduced courses of study,
- (b) trace out the requirements of the users,
- (c) select and acquire library materials which would be meaningful and useful to the students and teachers,

- (d) meet the judicious and systematic expenditure on library collection development with a view to observing the aims and objectives of the parent institution, and
- (e) evaluate periodically its collection for weeding out unwanted and outdated materials.

Sample Questions

I. Long Answer Type

1. Discuss, in details, the 'Collection Development' in relation to the 'Curriculum Development'.

II. Short Answer Type

1. Write a brief note on 'Curriculum Development'.

III. Objective Type

(Mark the *one* right answer out of the following four alternatives with the tick-sign ✓).

1. 'Collection Development' should depend on the

- A. Curriculum Development.
- B. Teaching Development.
- C. Learning Development
- D. Knowledge Development.

Answer is 'A'

Select Readings

1. Gelfand, (M. A, University Libraries For Developing Countries. Delhi, The University Book to Stationery Co., 1974.
2. Ranganathan, S.R. Library Book Selection. 2nd ed. Bangalore, Sarada Ranganathan Endowment For Library Science, 1989.
3. Trenan, G.L. College Library Management Academic Library System. Services. and use. New Delhi. Sterling Publishers Pvt. Ltd., 1985.

Unit 14 □ **Reference Services, Information Services And Referral Services**

Reference Services

Reference Services are activities of the Reference Department/ Section of an academic library .for helping the students, research scholars, members of the faculties and other users of that particular library.

The objectives of the Reference Services are to

- (i) help the users to be acquainted with the nature, content, and collections of the library;
- (ii) give the users instructions for the most effective use of the library materials and reference tools;
- (iii) render personal services to the members of the library through the supply of bibliographies, reading lists, and documentation;
- (iv) assist the users in getting the desired information and locating the required document /s in the library collection; and
- (v) answer any type of questions from the readers for the promotion of study and research.

Such Reference Services are rendered by the Reference Librarian or any senior staff -member of that library to generally its users with the help of some basic traditional reference tools like abstracts, bibliographliies, biographies, dictionaries, encyclopaedias, gazetteers, union catagues. Usually the Reference Collection of the Central Library of any large academic institution consists of valuable and comprehensive materials and thus it becomes ultimately the sources of reference services for all students, scholars and teachers in their academic pursuits. The Reference Department/section may occasionally seek help from subject specialists of the faculties for information and guidance in their areas of specialization. Such type of cooperation may also sought from other institutions of home and abroad introducing the national and international cooperative Reference Services which would ensure worldwide free flow of information.

Reference Services are also other forms of assistance to readers. By such services the readers of a library are provided with necessary facilities to solve their problems on their own. The development of trained mind of a Reference Librarian /Assistant is the primary function of a large academic library and so the method of search for a piece information assumes more importance than the information itself. Hence it is the job of the Reference Staff of any academic library to guide for necessary

information the users who are themselves experts of their disciplines knowing about the relevant documents and literature on the subjects and help them to find out the Sections /Shelves where these are put.

The Reference Services being of two types, viz. long term and short term which depend upon the (i) materials required, (ii) materials utilised, and (iii) nature of information sought, may broadly be divided into (a) initiation, (b) directional instruction, i.e. general help to the readers, (c) ready reference service, and (d) time consuming reference service. The Reference Services are subjective, since they stress on personalised services. On the other hand, they are objective because they encourage the readers to study independently.

Information services

Theoretically both the Reference Services and Information Services are more or less same. But with the development of information technology and its consequent application to librarianship, the Information Services have become slightly different, although the primary objective of both the services is to supply some kind of information to the users of the library. In a large academic library the Information Services as sophisticated Reference Services are rendered by information scientists who are knowledge brokers being experts in computer science and engineering, computer programming, database generation and inward transfers, database management, information systems operation, interactive media specialisation, system analysis, software engineering, hardware maintenance operations, software development, software support, technical intricacies and networking systems. It may not always be possible for a library employee to act efficiently as an information scientist who is endowed with such high technical qualification. So the existing library personnel may be trained as far as practicable, under the present technological progress actual Reference Services have taken new perspectives, and the growing interest in computer based information retrieval systems the traditional Reference Services have gradually been transformed into Information Services. The information technology has, therefore, been a contributory factor in reviewing the issues concerned with erstwhile Reference Services.

The Information Services are concerned with the interaction between the readers and information scientist/ information officer through the information interview, interpretation of the inquiry, and formulation of the search strategy. There are the following issues to be considered while one is to render Information Services ;

- (i) presence of the users with their problems,
- (ii) requirement for information,
- (iii) initial queries,

- (iv) formulation of enquiries in information interviews,
- (v) searching of the sources and ultimate selection of specific information sources,
- (vi) appraisal and modification of search strategy,
- (vii) preparation of answers,
- (viii) responses of the users, and
- (ix) evaluation of information services.

Referral Services

Referral Services are those services which are rendered by the Reference Section/ Unit of an academic institution guiding the clientele to get the desired information from another institution, as for example, an institutional library does not possess adequate materials to answer the particular questions put by its users who are, therefore, guided by the reference librarian/assistant to visit other libraries wherein materials are available for getting information. Such activities of referring to other library/ libraries/ expert(s) and thereby helping the clientele to procure the wanted information may be called Referral Services. Generally the Reference/Information Services are given to the clientele from the materials available in a particular library. Because of increasing use of computers and participation in resource sharing programmes the academic library now-a-day is no longer solely dependent on its own collections and can avail of the opportunity of interactions with other libraries for meeting the demands of the users. This is another aspect of modern concept of library cooperation through which the users may be benefitted to be informed of the desired issues without possessing the materials in their own collections. But while rendering Referral Services the concerned employee of that library should be much cautious and self-confident in intimating about the library/ libraries from where the exact information desired by the clientele would be available. Unless there are healthy cooperation and efficient networks among the libraries the Referral Services cannot be successful and the users could not be served adequately.

Precisely, 'Referral Services' signify the acts of sending someone who needs professional assistance to person (S) or institution (s) who/which can provide. These are the services which direct enquiries to the appropriate sources of information or the required data. 'Referral' may be to the libraries and documentation centres or to appropriate agencies and individuals. Requests for information not available in the parent library can be referred to another source(s) wherefrom the needed information can be obtained.

Sample Questions

I. Long Answer Type

1. Clarify the term 'Information Services' with adequate illustrations.

II. Short Answer Type

1. How are 'Referral Services' different from the traditional 'Reference Services'? Write in your own words.

III. Objective Type

(Mark the *one* right answer out of the following four alternatives with the tick-sign ✓).

1. 'Referral Services' refer to the
 - A. Source Materials.
 - B. Bibliographical Sources.
 - C. Other Institutions where the desired information is available.
 - D. Information Materials.

Answer is 'C'

Select Readings

1. Davinson, Donald. Academic and Legal Deposit Libraries. London, Clive Bingley, 1969.
2. Sahai, Sri Nath. Academic Library System. New Delhi, Allied Publishers Ltd., 1996.
3. Davinson, Donald. Reference Service. London, Clive Bingley 1980.
4. Krishan Kumar. Reference Service. New Delhi, Vani Educational Books 1996.
5. Ranganathan, S.R. Reference Service. Bombay, Asia Publishing House, 1961.

Unit 15 □ Users' Services

In the unit 7a discussion has already been of the Users' Groups and their Needs in an academic library. The present Unit is aimed to identify the Users' Services to be rendered by an academic library. The list of the potential users is repeated in this Unit for convenience. As already mentioned, the classes of Users in an academic library are as follows :-

- (A) pupils/students of the schools/colleges/universities/ institutes of higher learning;
- (B) research scholars/research students in the Universities/institutes of higher learning;
- (C) teachers of various grades belonging to the schools/ colleges/universities/ institutes of higher learning;
- (D) members of the non-teaching staff of the libraries and their parent institutions, i.e. school/colleges/ universities/institutes of higher learning; and
- (E) non-members or external users of the academic libraries.

Obviously the library services needed by and to be rendered to all these five categories of the users would not be of the identical nature. Hence a necessity appears to distinguish the Users' Services in the library according their categories.

A. The schools are mainly of four types, viz. Primary, Middle, Secondary, Higher Secondary. Hence the students' services are bound to vary very distinctly. The Primary School students' services are basically concerned with the simple reading materials which should be profusely illustrated. In some Primary Schools, if fund permits, the pupils maybe allowed to play video games for instructional purposes. At the Middle, Secondary and Higher Secondary levels the library services to the users are the (a) supply of textbooks and reading materials to prepare lessons and to enhance their general knowledge, (b) training in the use of computers to get the required information, and (c) guidance in the utilisation of library.

B. On the other hand, at the graduate and postgraduate levels, i.e. at the colleges, universities and institutes of higher learning, services of the users would be the availability of text-books as well as required books and preparation of the classroom instructions, of reference reading materials, and of computers for personal use in respect of their study and research inside the library.

But the initial objective of library services to the students, especially of the school and colleges, should be to help them to be good and holiest citizens of the country.

For that purpose the librarian taking initiative should personally guide them for following some basic moral principles which would prevent theft as well as other juvenile offences and thereby would maintain more or less a just social environment. Although this service to such a user group is generally mentioned last, but this should be treated as the first and foremost library service on the part of a librarian.

Services needed by the research scholars/students in the universities/institutes of higher learning are normally concerned with the supply of research materials through books and with reference services through traditional reference tools. But now because of advances in computer technology, Internet systems, and appearance of websites, the participation in the resource sharing for getting the required information from any library in the world has become almost necessary for successful library services to this group of users.

C. The members of the staff of all types of academic institution do not expect services of identical nature. Thus the services expected from the teaching staff of colleges/universities/institutes of higher learning distinctly differ from those required by the members of the staff of the schools of all grades. The first Group of Users' Services are mostly academic and concerned with study and researches, while the second Group's Services are of general types. Besides, the first Group would need services like Interact searches networking, and resource sharing with the assistance of computers and other sophisticated instruments.

D. The library services expected by the non-teaching staff of the libraries and their parent institutions are of simple general type since they do not belong to any specialised group.

E. The last or the fifth class of users are not the regular users of the academic libraries. They are

- (i) research scholars/students not affiliated to the parent institutions,
- (ii) individuals who are working on particular projects independently,
- (iii) persons who are registered with any university to use its library more or less permanently for their personal study and research, e.g. the University of Calcutta allows its statutory 'Registered Graduates' to use its library in lieu of payment of library fee.

All these Users belonging to the fifth class are served or expected to get library services following some restrictions. By allowing the outsiders or external members not academically attached as such to any academic institution, the academic library which permits them to utilise its materials, in one sense or other, performs the services of the public libraries, through this restricted use by the public.

Thus the Users' Services are different in various academic institutions with their independent aims and objectives. Such services cover both academic programmes and general information needs, in a restricted way, of the public.

Sample Questions

I. Long Answer Type

1. Identify the Users' Services in an academic library.

II. Short Answer Type

1. Classify, in brief, the users of an academic library.

III. Objective Type

(Mark the *one* right answer out of the following four alternatives with the tick-sign ✓).

1. The Research Scholars are attached to the
 - A. Primary Schools.
 - B. Secondary Schools.
 - C. Universities.
 - D. Undergraduate Colleges.

Answer is 'C'

Select Readings

1. Burlingame, Dwight F. ed. *Library Development: A Future Imperative*. New York, Haworth Press, 1990.
2. Poole, Herbert ed. *Academic Library by the year 2000*. New York, Bowker, 1977.
3. Wilson, L.R. & Tauber, M.F. *University Library*, 2nd ed, New York, Columbia University Press, 1956.

BIBLIOTHERAPY AND ACADEMIC LIBRARIES WITH SPECIAL REFERENCE TO INDIA

There are, in the complex social structure, many problems which are really very difficult to solve. And of these the one relating to the emotionally disturbed as well as mentally retarded individuals and criminals suffering from a kind of mental diseases deserves probably the immediate attention of all concerned. Undoubtedly the problem appears sometimes to be the gravest one. But it can also be efficiently handled by modern scientific methods. Bibliotherapy is one of such methods, which when properly adapted to the academic libraries, will yield immense benefit. It, with its distinct types of techniques, has the capacity to cure some of the ailments of the particular types of persons under a specialised situation.

Physicians, educationists, and academic librarians all over the world are becoming increasingly aware that the library, and especially academic library, "as an institution devoted to the human spirit... can be and is a major bulwark against mental illness". F.J. Moore and W.E. Breland record also that "Bibliotherapy is an interesting and challenging activity for the librarian, since it brings to life the printed word and its impact upon an individual personality may have a healing effect". They further assert that "just as in the general field of physical medicine, the use of treatments ranges from the self-administered aspirin to the physician-prescribed drug, so also in the field of psychological medicine, books or treatment agents range from self-selected reading of novels and magazines to the carefully, professionally, selected books and articles".

Definition of Bibliotherapy

Many and varied definitions of bibliotherapy have been forwarded by authorities who use or participate in the use of the technique designated by that term. In 1941 a definition of the term 'Bibliotherapy' first appeared in Dorland's *Illustrated Medical Dictionary* as follows: "The employment of books and the reading of them in the treatment of nervous diseases". Bibliotherapy is also being interpreted as a mode of communication. Books and related materials are media used to assist in establishing a means of communication and in reinforcing the therapeutic climate of acceptance. *Webster's Third New International Dictionary* defines the term 'Bibliotherapy' in the following manner: "Bibliotherapy: the use of selected reading materials as therapeutic adjuncts in medicine and psychiatry; also: guidance in the solution of personal problems through directed reading". But according to the psychiatricists Bibliotherapy is the conscious and deliberate use of reading materials and/or guidance of the student's patient's use of reading materials for the purpose of furthering or supporting the therapeutic programme as a whole as it relates to a particular student/patient or, in

some cases, to a more or less homogeneous group of students/patients. Bibliotherapy is further, regarded as a method of treatment and as such, must be directed by a physician and may be defined as the use of reading in the treatment of the sick. The term has often been used to denote the use of books in the treatment of the mentally diseased. To restrict the activities to this one group of student/patients, however, is unwarranted. Enough can be said and done about the place of reading in the rehabilitative work with hospitalized children and with geriatric, polio, and tuberculosis patients, to mention only a few of the long-hospitalized and chronically ill patients. So the term Bibliotherapy may suggest to some nurses that an inanimate, impersonal object is being used to accomplish the therapeutic goal which they feel that they should be achieving through the development of a meaningful interpersonal relationship with the patients. Some terms which the nurses may use instead of Bibliotherapy in their professional literature include 'remotivation therapy', 'group discussion', 'resocialization', 'group therapy' etc. Bibliotherapy has, therefore, been regarded generally as a technique which distinguishes the work of hospital and academic librarians. Even in that aspect it has been viewed with indifference, lack of understanding, doubt, and open hostility. But very recently Bibliotherapy has come into a new and important estate. It is being considered in a much broader sense than ever before, i.e. as a supplementary and adjunctive technique, and is thought as a programme of academic library service designed to contribute, as an integral part, to the treatment experiences of the student and to be administered in conjunction with the ministrations of other members of the helping professions. Hence for the geriatricians Bibliotherapy may be adjunct therapy which combines the reading techniques, academic procedures, retraining skills and which develops new forms of recreation as well as hobbies, new interests, and new reactions for continuous, fruitful motivation in living. Besides, much can be done to foster the creation and use of reading aids for the old or physically as well as mentally handicapped students. Apart from their use for reading for diversion and entertainment, books may be prescribed to increase a patient's fund of information, to develop interests outside himself/herself, and to help him/her understand his specific problem. The prescription would involve several factors : careful evaluation, selection, and prescription of the materials as determined by needs which vary from patient to patient.

History of Bibliotherapy

But Bibliotherapy appears to be a founding, of which origin is lost in history. Although the underlying concept of the use of books to ease a disturbed mind was not identified formally until the twentieth century, the idea itself was recognised quite early. Thus in the Vinaya of the Sarvastivada School of Orthodox Buddhism it is found that a person is appointed for the consolation of sick persons. Also in the Chinese translation of the Samantapasadika, a Commentary on the Vinaya-Pitaka, it

is said that “if the king of the country, or any great aims-givers (maha-danapati) of the locality are sick, they send to the temple and request the to recite incantations for them; the monks would recite for them the Atanativ a-Sutra.” In the West the great libraries of three millenia ago bore the following inscription in Greek: “Medicine (or remedy) for the soul”. Such an early association of reading with medicine is recorded in the writings of the Roman encyclopaedist of the first century, Aulus Cornelius Celsus, who urged that critical judgement should be stimulated in patients by means of the reading and discussions of the sayings of the great orators. Besides, early historical writings leave little doubt that books were made to serve curative objectives, especially in the treatment of the emotionally disturbed patients.

Scope of Bibliotherapy :

The Scope of Bibliotherapy includes the aims of the field of school and onward to adult education as also skill, knowledge, understanding, appreciation, and insight which affect the student culturally, vocationally, intellectually, and spiritually; while in a clinical setting it is the process of utilising the reading materials in a manner which will assist the reader want help him/her to get well, and assist him/her to sustain his/her, both physical and mental health upon his/her return to the community. The approach of Bibliotherapy should not be limited to any one age group and needs only that the individual will have reached the age of ability to read or to understand, because the literature used in Bibliotherapy is available for all age groups. Hence it consists of the reading materials prepared for all age levels, including of the very artistic, well-designed picture books for the pre-reader, which can assist in inculcating an acute sense of form as well as design at an impressionable age, a sense which may become the foundation of future appreciation and performance.

Indian Scenario and Bibliotherapy

In India it is witnessed that the causes of mental retardation may be grouped as follows, namely, (a) psychological, economic, cultural, social, and organic in the case of mild retardation which affects the 90 per cent of the whole population, and (b) organic in the case of moderate or severe retardation which constitutes the 10 per cent. As in other countries in India also the mentally retarded persons tend to develop hopeless attitudes about their status in the family or community; their failures and frustration have now-a-days become chronic; and ultimately they attempt to retreat from life. It is only through diligent and selfless services on the part of the Bibliotherapist that the patients can obtain an understanding of his/her potentialities as well as of his/her limitations and acquire the skill necessary to function in a normal manner. Hence in India an individual who wishes to practise Bibliotherapy should possess a basic, broad academic background plus the widest possible

acquaintance with all types and kinds of literature suited to all reading groups; he/she must have, an understanding of the principles of clinical psychology and learn some of the basic skills of the psychologist, because the bibliotherapist must know both the reader's clinical status and his/her abilities and interests. The Bibliotherapist further in this country may use the patient's interest and responsiveness to books in different ways; he/she may utilise reports that patient makes about his/her reading to further analyze and understand the problems of the patient. But valuable insight may develop in the Bibliotherapist from analyzing the choice of the patient— what he/she gets out of the book, his/her responses, and the like when he/she reports that he/she has gone through a particular book. Thus the bibliotherapist is primarily a librarian who advances further in the field of readers' guidance and becomes a professional specialist.

Institutions in India, for the mentally retarded people are mostly the hospitals wherein the librarians chose the library materials for the inmates under a directed reading programme and more attention is paid by them to accommodate the patients to the hospital life, less to the outside world. Thus as the patients' treatment and rehabilitation progress, orientation to the outward world and occupational skill are developed. Moreover, the give-and-take of day-to-day living requires to become familiar, and the over-protective atmosphere of the hospitals should be replaced with self-reliance; special care must be taken to select the reading materials which may stimulate interest, because non-fulfilment of these interests which are mostly beyond the scope of the patients will dishearten as well as discourage incentive. Another group of persons in this country, as in other countries, among the mentally retarded ones, who deserve special consideration is that of the older people who can no longer be included in the above programme and whose recreational opportunities are extremely limited. With this* group of people a book takes on special meaning, because their lives are so limited, their personal possessions so few, that a book, which is theirs to own and enjoy for a period of time, assumes added significance, and their practice of visiting the library to return books, browse, and borrow new books sometimes become almost a ritual to them, so the librarians who are to administer Bibliotherapy should arrange for them special hours. On the other hand, the librarians in the juvenile reformatories, correctional schools and prisons in India may be confronted with entirely different types of problems. As for example, the criminals generally cannot orient themselves as contributive human beings; they indulge in fanciful daydreams in which they have the role of victor or hero; they are removed from responsibility and secure in the knowledge that society, not they, are at fault. They will firmly stick to this belief until they can somehow realize that they are here because of their social failure. Thus organised group activities, such as, sports, academic programmes, celebrations of the birth anniversaries of great persons, and the library may be considered therapeutic, because intensive personal psychotherapy is not possible in India on a large scale, **save** in some cases in which group therapy may be extensively used.

SUGGESTED CURRICULUM OF BIBLIOTHERAPY FOR INDIA

Further, for the wide application of Bibliotherapy in India proper steps may be taken outright at the academic level. The university authorities should think over the possibilities of including Bibliotherapy as a distinct discipline in the medical/teachers' training, and applied psychology courses. In order to facilitate a healthy cooperation between the physician and the librarian, in the future, the medical students should have a fair idea of the science of Bibliotherapy and the training in Bibliotherapy among the teachers will help them to study the nature of adolescent and youth delinquency. Likewise, the psychologists who may also play the role of academic librarians, for the interest of their patients, should know the technique of Bibliotherapy. Again, as Bibliotherapy is a highly specialised subject it should be included only in the post-graduate programme of library science of the Indian universities and thus the potential Bibliotherapists should undergo rigorous training under such a systematic programme. Indeed it is then and only then when persons with adequate training in Bibliotherapy are available in a large number that this unexplored treasure of human welfare may be utilised for the best interest of the Indian society. The curriculum of Bibliotherapy in India should obviously include elementary psychiatry, psychology of the physically handicapped, psychology of reading, techniques of rehabilitation, techniques of diagnosis and counselling, medical and social problems of illness, basic anatomy and physiology, rehabilitation of the old, principles of motivation and remotivation, and the rehabilitation of different groups of patients as well as psychology of different types of ethnic groups. It should further provide a course in the techniques of clinical psychological test for background knowledge of this field, along with training in the interpretation of test results; and it should include statistics, report writing and group dynamics. Besides, the field service training here should have to be an important part of the Bibliotherapy training programme which should, therefore, have to be organised in a manner similar to the practical work of social service. This programme may be organised in cooperation with medical as well as mental hygiene clinics and hospitals. As the potential Bibliotherapist spends time in the clinical setting, he/she will find of immense value the same kind of field work in readers' advisory services in the childrens, 'young adults' -of an academic library and/or adult department of a large public library. Probably, two or three days during each week for one semester may be devoted to such a bibliotherapy training programme. Again, for the guidance of the librarians it is expected that the library associations, universities, and academic organisations should try to prepare standard guide-books on the use of Bibliotherapy in the Indian surroundings with international collaboration. Indeed in India there is every possibility of designing a course of therapy using books.

Bibliotherapy will receive in this country wide patronage because of the fact that its success is less dependent on automation and mechanical devices than on personal

ac-complishment, and also that the process will not involve much financial implications, and would save the expenditure involved in the training of the librarians for such specialised services. In reality, initiative, cares sympathy and adequate training on the part of the librarians are primarily required for the successful implementation of the bibliotherapy programme in India.

Librametrics for Academic Libraries

The Term Librametrics

The term 'Librametrics' is a compound of 'libra' and 'metrics'. The term 'libra' connotes library and 'metrics' signifies measurement. S.R. Ranganathan has conceived the idea of 'Librametrics' which is more or less analogous and synonymous to 'Bibliometrics' as early as in 1925 when he is the Librarian of the University of Madras. It first has been coined by him at the ASLIB's Annual Conference held in 1948 in Leamington Spa when he is asked to comment on the lecture of J.D. Bernal by the then President of the ASLIB, Mr. Henry Lemeister. As a mathematician S.R. Ranganathan know that statistical and mathematical' analysis is the key technology for all developmental and forecasting academic-studies. He had further pointed out that many of the matters connected with academic library work and services involve "large number". He argees that as application of statistical calculus has given rise to some viable new disciplines derived out of fusion with great potentiality like Biometry, Econometry, Psychom-etry, Sociometry etc. So the librarians should utilise appropriate mathematical and statistical techniques to develop Librametry or Librametrics in order to streamline the day-to-day academic library activities for better library management, to organise need based library services for their clientele and also for die betterment of academic library profession as a whole. Hence S.R. Ranganathan being a mathematician, foresees great possibility in the application of appropriate statistical and mathematical methods in librarianship he himself has initiated and applied techniques of statistics and mathematics to organise a more flexible academic library system in order to solve day-to-day library problems At the Annual Seminar held in 1969 at the Documentation Research and Training Centre (DRTC), Bangalore, S.R. Ranganathan hi a paper elaborately has discussed Librametrics in organising various library activities and services of the Madras University Library as its Librarian. In that Seminar A. Neelameghan presented a paper outlining the inves-tivation conducted in 1969 by the Research Unit of the DRTC on the applicability of librametric techniques.

Definition of Librametrics

Although the term 'librametrics' has been coined, discussed and consistently practised by S.R, Ranganathan during his career as Librarian of the Madras University Library and also afterwords, he has not supplied any concrete definition of the term.

However, I.K. Raviidracandra Rao, a faculty member of DRTC, Bangalore, in a paper presented in the 15th All India IASLIC Conference on Bibliometrics held at Bangalore University in 1985 has proposed a common definition for Bibliometrics and Librametrics as follows : “information processes and information handling in libraries and information centres by quantitatively analysing the characteristics and behaviour of documents, library staff, and library users”. However I.K. Sengupta, has more precisely defined Librametrics as “Quantitative analysis of various facets of library activities and library documents by application of mathematical and statistical calculus to seek, solution to library problems”. From this definition it is evident that the scope of librametrics not only covers different services and problems of academic libraries but also the fundamental units comprising them, i.e., it is also concerned with the incoming and outgoing macro-and micro-documents of an academic library.

Scope of Librametrics

The scope of Librametrics rests on quantitative analysis of various library activities in an academic institution. S.R. Ranganathan has foreseen that library activities and services are quantifiable by application of statistics as many of them involve large number. As for examples readers’ statistics, statistics of used documents, statistics of incoming documents, calculation of shelf space of the library, annual cost of purchased materials, various library indicators, say, library performances, circulation statistics, inter-library loan statistics, statistics of foot-notes and references, statistics of annual man-hour needed for each item of library work for developing a standard staff formula, statistics of deployed man-hours hi different sections of the library during different library hours, distribution of library documents according to authors or subjects, different structural aspects of the library, and the like which are quantifiable. All these suggest that application of statistics would become very effective for analysing different aspects of an academic library system. These may provide the basic data for librametric studies in the library. It may, therefore, be concluded that the scope of librametric studies lies in the quantification of the characteristics and behaviour of all types of library documents, library users, library personnel and other structural components of the academic library. Hence quantitative analysis of entire library services including management and activities fall within the jurisdiction of Librametrics.

Application of Librametrics

S.R. Ranganathan has asserted that the scope of librametric studies in an academic library system is manifold. The Librametric techniques man be applied to :

- (i) to determine optimal strength of library staff in different sections and their judicious distribution;
- (ii) to deploy library stafi to dispose of reference queries during different library hours;

- (iii) to systematics circulation of library documents;
- (iv) to develop and organise local, state, regional and national library systems;
- (v) to determine the optimal size of a service library;
- (vi) to design library building along with its fittings and furniture ;
- (vii) to distinguish between service and dormitory libraries;
- (viii) to analyse readers' queries;
- (ix) to streamline acquisition system by analysing library documents, i.e. books, monographs, journals etc.'
- (x) to determine the most helpful sequence for classification of macro-and micro-documents ;
- (xi) to test the accuracy of catalogue entries by sampling techniques; and
- (xii) to ensure accurate selection of library documents etc."

Thus it may be concluded that the basic aims of librametric studies is to help generation of new knowledge by organising a need-based academic library system and its utility rests on the fact that it can provide some potential tools which may help to ensure quantitative measurement of cost-effectiveness and cost-benefit of investment in the library segment.

BIBLIOMETRICS FOR ACADEMIC LIBRARY SERVICES

THE TERM 'BIBLIOMETRICS'

The term 'Bibliometrics' consists of two words,namely, 'biblito' which is a combination of a Latin and Greek word'biblion', 'byble(os)'meaning book, paper, and'metrics' that is derived respectively from Latin and Greek 'metricus' and metrikos' signifying science of metre or simply measurement. The British Standards Institution defines 'Bibliometrics' as "the study of the use of documents and patterns of publication in which mathematical and statistical methods have been applied".

Biblioraetrics is comparatively a new word used in the discipline of Library and Information Science. Even before its formal introduction in 1969 by A. Pritchard, its idea has been known since 1922 in the name of Statistical Bibliography through E.W.Hulme. Bibliometrics is undoubtedly new branch of Information Science whiich lies between the border lines of Social Science and Physical science.

DEFINITION OF BIBLIOMETRICS

A.Pritchard has defined the term 'Bibliometrics' as the "application of mathematical methods to books and other media of communications" and has assigned its purpose as "to shed light on the process of written communication and of the nature and course of development of a descriptive (in so far as this is displayed through written communication) means of counting and analysing the various facts of written communication". W.G. Potter while defining the term 'Bibliometrics' states that it is "the study and measurement of the publication patterns of all forms of written communication and their authorship". But Indra Narayan Sengupta, popularly known as Dr. I.N. Sengupta, has defined the term more explicitly and relates that Bibliometrics is the "organisation, classification and quantitative evaluation of publication patterns of all macro and micro-communications along with their authorships by mathematical and statistical calculus. He further considers that "the basic units of bibliometrics are all facets of written communications, such as primary and secondary periodicals, articles and abstracts published in them, bibliographies of articles' books, monographs and other media of communication". Also he has not endeavoured for devising or deriving any abstract theoretical bibliometric model that he cannot apply for solving the practical problems of the researchers and academic librarians. Instead he has presented an analysis of the results of his studies in the light of S. C. Bradford and E. Garfield's Laws. He has extended the Law of Scattering or Bibliographical Scatter formulated by Samuel Clement Bradford (1878-1948), and pointed out the deficiencies of the Law of Concentration sponsored by Eugene Garfield. His research is popularly called Sengupta's Law of Bibliometrics which states: "During phases of rapid and vigorous growth of knowledge in a scientific discipline appeal in increasing number in periodicals distant from that field". Mathematically it can be explained as: " $f(x+y) = a + b \log(x+y)$, where $f(x+y)$ is the cumulative number of references contained in the first $(x+y)$ most productive journals, x is the number of most productive journals of the same field, any y is the number of most productive journals distant from the field and $y > x$, a and b are two constants". According to him, "a major thrust area of bibliometrics is citation analysis which is based on a hypothesis that any act of citing the author of an earlier paper is always meaningful. By such a Law I.N. Sengupta has devised a new objective method of citation analysis capable of eliminating most of the limitation of traditional methodologies, identified the core periodicals of some biomedical disciplines, developed an Off-setting Weightage Formula and new bibliometric parameters. The Off-setting Weightage Formula provides proper citation weightage to newly incepted journals that generally have the disadvantage of getting fewer citations than the old established journals because of the latter's longer period of existence. This bibliometric model may be applied to rerank the bio-medical journals. On the other hand, the formulation of bibliometric parameters enables one to evaluate any journal according to research value of its

articles and compactness of information content. *Such a* Law of Bibliometrics has widely been accepted by the librarians and information scientists of India and abroad. Its extension has been enunciated in the review article on Bibliometrics in Allan Kent's *Encyclopedia of Library and Information Science* (Vol.42, Suppl.7, 1987). With regard to S.C.Bradford's Law it has been remarked: "Bradford's Law holds good only up to a certain point and does not strictly follow the observed pattern of distribution of scientific literature." Also it may be observed that during this period of tremendous advancement in learning in any discipline, articles of interest to that discipline appear in increasing number in periodicals far from that area. Under these circumstances, the small group of journals accounting for the larger part of significant literature in the subject contain a relatively larger proportion of unrelated journals.

PURPOSE OF AND SCOPE BIBLIOMETRICS :

A. Pritchard has assigned the Purpose of Bibliometrics as : "To shed light on the process of written communication and of the nature and course of development of a descriptive (in so far as this is displayed through written communication) means of counting and analysing the various facets of written communication". M.Ritchie and D.Nicholas of 1978 have further elaborated the scope of Bibliometrics. They opine "Bibliometrics... provides information about the structure of knowledge, and how it is communicated". They have further classified "Bibliometrics" into two broad groups viz. (i) Descriptive Bibliometrics' and (ii) Behavioural Bibliometrics. Descriptive studies generally describe the characteristics or features of a literature; while the Behavioural ones are those that examine the relationships formed between components of a literature.

On the other hand, while defining the Scope of Bibliometrics Daniel O' Conor and Henry Voos have stated that "the scope of bibliometrics includes studying the relationship within a literature (e.g. citation studies) or describing a literature. Typically these descriptions focus on consistent patterns involving authors, monographs, journals or subject language". Holland Stevens considers Bibliometrics as a quantitative science and divides it into two basic categories: (i) Descriptive Bibliometrics (productivity count)' and (ii) Evaluative Bibliometrics (literature usage count). He has further divided these two areas into different sub-areas. The Descriptive Bibliometrics or productivity count is divided into (i) geographic, (ii) time period, and (iii) disciplines. The Evaluative Bibliometrics' i.e. the literature usage count is bifurcated into (a) reference count, and (b) citation count. While elaborating the scope of Bibliometrics Holland Stevens further adds that Descriptive Bibliometrics includes "the study of the number of publication in a given field or productivity of literature in the field for the purpose of comparing the amount of research in different countries, the amount produced during different periods, or the amount produced in different subdivisions

of the field. The kind of study is made by a count of the papers, books and other writings in the field or often by a count of these writings which have been abstracted in a specialised abstracting journals. The other (i.e. the Evaluative Bibliometrics)... includes the study of the literature used by research workers in a given field. Such a study is often made by counting the references cited by a large number of research workers in their papers”.

APPLICATION OF BIBLIOMETRICS :

I.N. seugupta has enumerated the following Bibliometric techniques to

- (i) identify research trends and growth of knowledge of different scientific disciplines;
- (ii) estimate comprehensiveness of secondary periodicals;
- (iii) identify users of different subjects;
- (iv) identify authorship and its trends in documents on various subjects ;
- (v) measure usefulness of adhoc and retrospective SDI services ;
- (vi) forecast past, present and future publishing trends;
- (vii) develop experimental models correlating or bypassing the existing ones;
- (viii) identify core periodicals in different disciplines;
- (ix) formulate an accurate need-based acquisition policy within limited budgetary provision;
- (x) adapt an accurate weeding and stacking policy; (xi) initiate effective multilevel network system;
- (xii) study obsolescence and dispersion of scientific literature (clustering and coupling of scientific papers etc.);
- (xiii) predict productivity of publishers, individual author, organisation, country or mat of an entire discipline ;
- (xiv) design automatic language processing for autoindexing, autoabstracting and autoclassification; and
- (xv) to develop norms for standardization (Indian Journal of Information, Library and Society, Vol. IV, No. 1, 1991, pp. 50-51).

The Law of Bibliometrics stands unparallel. The methodology adopted for the implementation of this Law is an “excellent paradigm” for the analysis of literature in all disciplines of sciences and humanities including languages and literatures in the libraries of college, university and the institutes of advanced studies.

BIBLIOMETRIC ANALYSIS AND COMPUTER PROGRAMMES

As already mentioned, bibliometric methods to identify the core journals in specific discipline to formulate the need based acquisition policies in the academic libraries for studying the citation analysis of research as well as growth of literature in different subjects and identification of authorships and reference patterns and the like at present have attained maturity in the discipline of library and information science. The actual measurement and calculation of sundry bibliometric indicators are firmly rooted in solid mathematical and statistical foundations. And thus the work of bibliometric analysis has become compatible to computerization at the optimum level.

Hence the use of suitable computer programmes is of utmost assistance to minimize the labour-oriented and time-consuming jobs concerned with bibliometric analysis. A methodology for the development of a set of menu driven programmes by utilizing Application Programme Interface(API) of dBASE III + DBMS may be evolved. The major programme for the initial user interface includes some alternative facilities, which may be classified under the following three main Groups :

(A) Facilities related to the preparation of ranked list of journals are available to :

- (i) find ranked list of journals used for facilitating the preparation of the ranked list of journals utilised in the references;
- (ii) find normalized ranked list aiming at the preparation of the normalized ranked list of journals by following 'Weightage Formula' mentioned earlier;
- (iii) find correlation between the two journals lists meant for calculating correlation coefficient of citation numbers of journals in the lists.

(B) Facilities related, to the distribution of references assist to

- (iv) calculate age of references and percentage distribution of age of references in respect of facility for the preparation of a text file that will include distribution of references in different age groups ;
- (v) find age distribution for different years meant for the preparation of yearwise age distribution— a subset programme to be used for calculating half-life;
- (vi) calculate mean or average age of references.

(G) Facilities related to measure authorship pattern as follows:

- (vii) authorship pattern ;

- (viii) Degree of collaboration in authorship ;
- (ix) mean value of authorship collaboration

Since software upgradation is a continuous process, further development of bibliometric analysis with the help of computer programmes the following features become visible:

- (a) use of graphical user interface for the main and sub menus ;
- (b) display of pick-up list(s) at the time of the end user data entry, e.g. name of database, text file, start year, end year and the like ;
- (c) use of RDBMS (Open source RDBMSs are available for free downloading, e.g. MySQL. Post GreSL) to satisfy the complex user queries and to support variety of data extraction format;
- (d) development of a subset programme to import data (in System Data Format. ASCII text format etc.) from electronic databases (CD-ROM databases, Online databases etc.) into the core databases of the programmes to reduce manual data entry works.

Sample Questions

I. Long Answer Type

1. Write an essay on the application of Bibliotherapy to the functioning of the academic libraries of India.
2. Define the term 'Librametries' and write about its Scope.
3. What is the definition of 'Bibliometrics' ? Write in details about its Scope and Application in the academic libraries.

II. Short Answer Type

1. Define the term 'Bibliotherapy' ?
2. Briefly enumerate the areas in the Academic Library System where Librametric techniques can be applied.
3. Write a short note on the purpose of 'Bibliometrics'.

III. Objective Type

(Mark the *one* right answer out of the following four alternatives with the tick-sign ✓).

1. 'Bibliotherapy' is activated by the
 - (A) Librarians only.
 - (B) Physicians only.
 - (C) Psychologists only.
 - (D) Co-operative action of the Librarians, Physicians and Psychologists.

Answer is 'D'

2. 'Librametrics' is concerned with the
 - (A) Library.
 - (B) Laboratory.
 - (C) Workshop.
 - (D) Foundry.

Answer is 'A'

3. 'Bibliometrics' is defined as the
 - (A) Bibliography of Bibliographies.
 - (B) Application of psychological method to books and other documents.
 - (C) study of measurement of publication patterns of written documents and their authors.
 - (D) Biblical Study.

Answer is 'C'

Select Readings

1. Library Trends. October 1962.
2. Indian Journal of Library Science. Vol.1, March, 1975 (Barua, Dipak Kumar. Application of Bibliotherapy to Indian Complexities)
3. Chakl'abarti, Bhabaneswar ed. Modernisation of Library Services. Calcutta, West Bengal Govt. College Teachers' Association, 2000. (Barua, Dipak kumar.

The Concept of Bibliometrics and its Application in Library and Information Science).

4. Indian Journal of Information Library and Society, Cuttack, vol. 4, No. 1, January-March 1991.
5. Sengupta, I. N. *Bibliometric Research : Growth of Biomedical Literature*, Vol. I. Calcutta, SBA Publications, 1988.
6. Baudyopadhyay, Ainit Kumar. Bibliometrics with the help of computer : Computer Programmes, and Bibliometric Analysis of some doctoral dissertations. Burdwan.

Module IV ■ COLLECTION DEVELOPMENT

The present Module, i.e. Module IV consists of five Units, The Unit 16 deals with 'Collection Development Policies and Procedures', the Unit 17 treats of 'Problems of Collection Development', the Unit 18 discusses the 'Library Collection-Books, Serials etc.', the Unit 19 delineates 'Co-operative Collection Management', and the Unit 20 describes the 'Infra-structural Facilities, Library Planning, Library Building, Equipments etc.', in relation to Collection Development.

The concept of the 'Collection Development' which is a recent coinage in the discipline of Library and Information Science means simply the acquisition of library materials to examine collection control or collection management which encompasses the design of a process for selecting bibliographic materials for meeting the library goals, objectives and preferences.

During the 21st Century the academic libraries all over the world have been introducing the policy of the levels of collection development based on understanding cooperative management. The areas of discipline in which an academic library is specialised is thought before the individual libraries consider upon their own intensity level in collection development. Each academic library adopts a collection development policy which should be regularly examined through the continuous need-based collection analysis, of which the primary planning process should be periodic evaluation of the uses as well as potential users' needs of a particular collection. The utility of such an evaluation of the collection of an academic library may be assessed in various ways. There are two methods of such evaluation, viz. quantitative method and qualitative method. The quantitative method consists of the compilation, preparation of the analytical statistics on circulation, counting a collection materials, determination of the amount already spent as well as is being spent for the collection development, and surveillance on the uses, citation analyses, and the like. But the qualitative method is not based on such quantitative measures. Thus detailed examinations of a collection's present as well as potential users would supply meaningful information that could be utilized as one of the indicators in the process of collection development plan, of which the major function is to identify the procedures for collecting new materials of the academic library. The collection development plan also assists to prepare the library budget for meeting numerous needs and formulating the policies to review and alter the plan according to the changed situation. The collection management as a part of collection development includes storage, weeding, and preservation policies of an academic library.

As at present the academic library services do not solely depend on a particular library's collection, but rely also on the materials available in other libraries of all

types, the collection development policy or plan of that library should take into account of the library materials obtained elsewhere. Hence dependence on other collections for serving the needs of own users of any academic library formal cooperative agreements for inter-library loans should be made with other libraries. For such agreement resource sharing is only the procedure for all types of libraries.

Precisely the 'Collection Development' in an academic library would signify building up and improving the library collection which includes all the library materials like books, manuscripts, periodicals, serials, government documents, pamphlets, catalogues, reports, recordings, microfilms, microcards as well as microfiche, punched cards, computers as well as computer tapes that make up the holdings of that particular academic library.

Previously the academic librarians had been concerned with only acquisition and preservation of reading materials collected in that library. But in the mean time there has been a major change in this concept. Now the concept of Collection Development emphasises the necessity to respond to the users' demands. According to B.C. Bloomfield : "To meet the demands, librarians here evolved theories of collection development, which imply a more active role is managing libraries collection and indicate that the role may change and develop in response to changing conditions" (Collection Development the Key Issues in Collection Development Options For Efficient Management, *ed.S. Corral*. London, Taylor Graham, 1987). In *Harrod's Librarian's Glossary* (*comp. Ray, Prytherch, BroofieId, Vennont, Gower Publishing, 6th ed., 1987*) the expression 'Collection Development' has been explained as : "The process of planning a stock acquisition programme not simply to cater for immediate needs but to build a chereant and reliable collection over a number of years to meet the objectives of the services".

Sometimes 'Collection Development' is used synonymously with 'Collection Building' that implies that there is already a nucleus of collection in the academic library and the librarian is to build up the 'Collection'. But it should be noted that 'Collection Development' is not simply the 'Collection Building' as the word 'Development' indicates qualitative improvement of the 'Collection'. Hence Joseph C. Shipman has rightly pointed out: "Building a Collection may occasionally involve the selection and acquisition of... materials ab initio. but in most cases it is likely to mean the planned systematic development of an already existing collection" (*Collection Building in Encyclopaedia of Library and Information Science. Vol.V, ed. Alien Kent & others. New York, Marcel Dekker, 1971*).

The Purpose of Collection Development is to detect the users' needs for information with the help of books and other library materials through the

- (i) availability of the library's collection to the users for providing necessary information,

- (ii) tracing out the needs of the users with regard to information or reading materials,
- (iii) selection and acquisition of documents which are meaningful to the users,
- (iv) systematic and judicious expenditure on reading materials collection, keeping the objectives of the services in mind, and
- (v) review periodically the collection for weeding out undesirable and outdated reading materials from it.

Hence the concept of collection Development removes the possibilities of arbitrary selection and acquisition of reading materials. Also it ensures the periodic evaluation of the library collection for improving it as well as weeding out the outdated materials from it and the users' needs through such examination.

As to the Prerequisites of Collection Development in an academic library B.C.Bloomfield has identified some of the key issues to be considered as follows :

- “(a) Identification of the purpose and mission of the *library*/ parent organisation.
- (b) Formulation of library's collection development policy by library committees or by library staff.
- (c) Matching between users' requirements and institutions' aims and objectives.
- (d) Budgetary provisions and the contingent problems.
- (e) Working out the strategies for implementing the policies and programmes.
- (f) Maintaining, revising and updating policy statements” (Collection Development the Key Issues in Collection Development Options For Efficient Management, ed. S. Corral, London, Taylor Graham, 1987).

However, already stated the term 'Collection Development' being used since the second half of the twentieth century as a professional term in the discipline of Library and Information Science indicates the systematic selection and building of library collections. Earlier in an academic library the selection responsibilities were entirely left to the faculty members of the parent institution.

But the of abundance of money and potential new library materials during the sixties and early seventies of the 20th Century compelled the academic libraries to take recovers to the changes which made 'Collection Development' less of an intellectual speciality and more of a managerial efficiency for which academic credentials became unnecessary. Hence the librarians sought systematic methods of managing existing collections and the available vast amount of scholarly materials. At this stage the idea of delegating even partial selection authority to the suppliers

was accepted. But such an idea was not universally approved. The librarians concern became very much concerned over the Collection Development since by this process the majority of the selection was done by the dealer as compared to the selection being done by the librarians themselves, who would know the curricula and research activities of their clientele. Under these circumstances, the term 'Collection Development' during the 1980s was changed to 'Collection Management'.

Collection Management

The term 'Collection Management has been defined as "...the systematic, efficient and economic stewardship of library resources" (*Collection Management*, 4,1982, p.45. Mosher, P.H. *Collection development to Collection management*). As the term 'Collection Development' marks a shift in professional emphasis from the individual title to the collection as an entity in itself, so 'Collection Management' represents an expansion of Collection Development to encompass all activities in cultivation and care of collection. Due to increased library budgets, greater attention has to be focussed on effective management of existing collections, involving bibliographers to a greater extent with such formerly marginal activities as collection evaluation, maintenance, weeding, storage, and preservation. Thus 'reselection' of existing collections could be as time consuming than the selection of new materials, resulting in a total management to serve better the needs of the present and future scholars. Thus many libraries begin to be engaged in collection evaluation, collection surveys, use studies as well as citation analyses, all measuring the effective match of selection choices against the library user demands. Hence the bibliographer gradually becomes less the research scholar and more a of a manager of increasingly rare materials. Commenting on the situation Marcia Pankake writes : "Major concerns in collection development today are neither title-oriented (bibliographic) nor explicitly value-oriented factors, although both still exist. Newer concerns are instead process oriented" (in *Advances in Librarianship*. Vol.13, ed. W. Simonton. New York, Academic Press, 1984, p.206. From book selection to collection management: Continuity and advance in an Unending work).

But by the 1990s in the libraries of the developed countries the emphasis has been shifted from collection building by careful selection of significant titles to the management of access to the sources of information, owned or not-owned by the library itself. The continued financial stringency and new media have tended to increase the focus on the process and on getting as much as possible from contemporary published materials either in conventional or electronic form, hi 1989, however, the Collection Development literature included such topics as 'finance', "Serials", and 'new technology' indicating a title "Lives of Noisy Desperation" (*Library Resources and Technical Services*. 34, 1989, pp.433-443. Schmidt, K.A. *Lives of noisy desperation ; A year's work in collection development*).

Thus the concept of the process of resource collection has gradually transformed from simple book selection to development management.

Sample Questions

I. Long Answer Type

1. What do you mean by the term “Collection Development”? Write in details about it.
2. What are the problems of ‘Collection Development’? Discuss them with your own opinion.

II. Short Answer Type

1. Mention briefly the prerequisites of ‘Collection Development’.
2. Which are the factors that guide to build up the library collection? Mention them in short.

III. Objective Type

(Mark the *one* right answer out of the following four alternatives with the tick-sign ✓).

1. The collection of an academic library is built up following the
 - A. Acquisition Policy of the parent institution.
 - B. Lists submitted by the faculty members.
 - C. Lists prepared by the librarian.
 - D. Catalogues of other libraries

Answer is ‘A’

Select Readings

1. American Library Association. *Guide to Review of Library Collections : Preservation, Storage and Withdrawals*. Chicago, ALA, 1991,
2. Chakrabarti, Bhuvaneshwar & Mahapatra, Piyush Kanti. *Library Collection : Selection and Preservation*, Calcutta, World Press, 1991.
3. Jenkins, Clare and Morley, Mary. *Collection Management in Academic Libraries*. Bombay, Jaico Publishing House, 1996.
4. Magrill, Rose My & Corbin, John. *Acquisition Management in Libraries*. Chicago, ALA, 1989.

Unit 16 □ Collection Development Policies and Procedures

Collection Development Policies

The Collection Development Policies are the courses of actions adopted for developing the library collection or stock. Such policies may either be the written documents or unwritten conventions. The written collection development policies form for any academic library a desirable tool that helps the selectors to decide with greater consistency towards defined objectives and to build the appropriate collection utilising wisely the limited funds available.

In fact, written collection development policies are preferred to non-written policies, because the former ones encourage stability and continuity in the library operations. Besides, the written Collection Development Policies

- (i) state clearly relationships with the aims and objectives of the parent academic institutions;
- (ii) constitute the very bases for planning Collection Development ;
- (iii) relate practical guidelines in the selection of reading materials;
- (iv) assist in determining the ideal method of acquisition;
- (v) help and support in justifying the selection of reading materials;
- (vi) provide a rational guide for budget allocation and thereby assist in long-term budget planning by identifying priorities;
- (vii) assist in making the best use of the library resources;
- (viii) ensure cooperative programmes like inter-library loans, resource sharing and networking;
- (ix) implement the uniform methods of reviewing before purchase; and
- (x) guide to suggest on types of library materials to be stored, weeded and discarded.

The Collection Development Policies in an academic library are generally concerned with the following factors:

- (i) selection and acquisition of the reading materials;
- (ii) nature and method of periodic evaluation of available reading lists;

- (iii) storage and weeding processes of the library materials; and
- (iv) resource sharing and networking programmes.

Hence the Collection Development Policies should note the following Guiding Principles:

- (i) aims and objectives of the academic institutions, e.g. those are very much different place to place and country to country as a college, university, or institute of higher studies is mainly concerned with teaching as well as research, while the school library with local factors being unlike will have to concentrate on instruction, recreation and extension activities;
- (ii) variety of demands from the actual as well as potential users who are mainly students, researchers, teachers and staff;
- (iii) possible financial and other including infrastructural facilities to be available by a particular academic library; and
- (iv) foreign exchange problems and time delay in the library materials from abroad.

Thus, in short, the Collection Development Policies are some sets of theoretical goals and actual practice. They appear to present some guidelines for various activities related to planning, budgeting, selection and acquisition of library materials. Through the Collection Development Policies it could be assessed whether the concerned libraries are following the collection development programmes correctly in the right direction or not. Indeed collection policies are statements indicating in what directions of the collections are headed; these are not descriptions of the existing collections. Hence the primary purposes of the Collection Development Policies are to state the principal collection objectives of the academic libraries.

According to Y.T.Feng "Collection development statement is not a substitute for book selection; it charts the forest, but does not plant the trees. It should be used as a guide post, not as a crunch". Such a statement provides the necessary rationale that builds up the collections in the academic libraries in the right direction. An explanation of this statement has been supplied by Paul Mosher as : "Collection development is a process that should constitute a rational, documented programme guided by written policies and protocols and should reflect, in sense a contrast between library users and library staff as to what will be acquired, for whom, and at what levels".

M.K. Donahve has related the following Purposes of the Collection Development Policies:

- “ 1. To provide a public document which reflects the internal process of evaluation by which the university library determines collection objectives.
2. To represent an objective process for establishing long and short-range priorities for collection intensity and depth.
3. To facilitate consistency in planning and communicating priorities.
4. To provide guidance for fund allocation and approval profile construction.
5. To determine areas for comparative sharing and development of resources.
6. To provide guidance in withdrawal of materials from the collection”.

The Needs of the Collection Development Policy Statement may be enumerated as follows:

- “1. It helps to develop a consistent and comprehensive collection in the desired and effective way.
2. It envisages current and future needs of the users taking into consideration the aims and objectives of the library.
3. It can act as a tool by providing the required guidelines to carry out the tasks involved in specific selection of library materials along with effective collection building.
4. It explains the mission of the library and helps administrative authority in establishing priorities for fund allocation.
5. It is a tool for justification of financial support for acquisition of various kinds of library materials.
6. It can facilitate the library to have the optimum use of the resources by providing the right types of materials to be used by the right users at the right time for the appropriate purpose.
7. It helps to evaluate the quality of the existing holding. It reveals the strength and weakness of the existing library resources at any point of time.
8. It will make the library staff more cautious and careful in selecting library materials, meaningfully required by the current as well as potential users.
9. In a university, research or special library different categories of users should get the respective main focus, and keeping in view their needs the library collection is to be developed. To make it more effective and meaningful they would be actively associated in formulation of policy statement.

10. Assessing and analysing the trends of use of collection, enables the librarian to anticipate future use, a prediction which must be the deciding factor in formulation of the collection development policy for the potential users.
11. The policy should specify the application of sound professional judgement. It should not be formulated only to face a crisis.
12. It should be adjusted in accordance with the changes in the programmes of the parent institution and the budgetary situation from time to time” (Mahapatra, Piyush Kanti. *Collection Management in Libraries*. 1999, pp. 31-32).

Thus it is evident that the Collection Development Policies set up some rules and regulations for planning, budgeting, selecting and acquiring library materials for the maximum utilisation of the intellectual legacies by the users for materialising the aims and objectives of both the libraries and their parent academic institutions.

Collection Development Procedures

The Collection Development Procedures are the checking lists of titles appropriate to the subject focus of the academic libraries. For that purpose the union catalogues, printed catalogues of large academic and research libraries, national libraries, subject bibliographies, author bibliographies, and other source materials should be taken into account. Further, the shelf list and the library catalogue of the own library collection of that particular academic institution may be consulted. Indeed the high percentage of materials traced in an academic library collection reveals the effective collection development. As a procedural method the following List of Tools may be suggested :

- “1. Standard catalogues and basic lists of books on various subject areas.
2. Printed catalogues of university libraries and special libraries.
3. Union Catalogues.
4. Subject bibliographies.
5. National bibliographies.
6. Books in print and similar publications.
7. Current publication lists prepared for various purposes.
8. Lists of reference works.
9. Lists of periodicals, both primary and secondary.

10. Lists prepared by government departments and professional organisations.
11. Publication lists of universities, research institutions, etc.
12. Citations contained in publications like bibliographies reading lists, suggested reading, footnotes etc.
13. Lists of most frequently cited journals.
14. Lists of current issues of journals.
15. Publishers' and books sellers' catalogues and trade lists.
16. Syllabi of various courses and suggested reading lists.
17. Lists of theses and dissertations.
18. Lists of books and journals prepared by individuals, research projects reports, lists of bibliographic services, etc.
19. Lists of cartographic materials published by competent authority.
20. Lists of audio and audiovisual materials available in the market.
21. Catalogues of CD-ROM databases and online databases" (ibid., pp.43-44).

Besides, the individual subject specialists, faculty members, project directors and researchers should be consulted for developing the collections of the libraries. Indeed the above mentioned lists as also consultation with those persons are not enough for Collection Development Units of the libraries belonging to the academic institutions. The procedures of the Collection Development in the academic libraries reveals a collective and cooperative endeavour of the concerned individuals. For better and improved services in the Collection Development Procedures computer systems with the networking facilities for easy access to CD-ROM databases and online searching and use of other electronic media should be introduced immediately in the libraries of the academic institutions.

Sample Questions

I. Long Answer Type

1. Enumerate the advantages of the written Collection Development Policies and their guiding principles.

II. Short Answer Type

1. Write a brief note on Collection Development Procedures.

III. Objective Type

(Mark the *one* right answer out of the following four alternatives with the tick-sign ✓).

1. The Collection Development Policy Statement' helps to evaluate the
 - A. Quality of the existing academic library holding.
 - B. Efficiency of the library staff of an academic institution.
 - C. Facilitation of minimum use of the academic library.
 - D. Quantity of library resources.

Answer is 'A'

Select Readings

1. Worttman, W.A. *Collection Management Background and Principles*. Chicago, American Library Association, 1989.
2. Mahapatra, P. K. *Collection Management in Libraries*. New Delhi, Ess Ess Publications, 1999.

Unit 17 □ Problems of Collection Development

The policies, programmes, assessments, procedures, fund allocation and similar other factors determine the collection Development issue of the library in an academic institution. But the ideal factors of them are not generally available in many academic libraries for various circumstances which would sometimes create numerous problems. But the main problems of Collection Development are seen in four directions as follows: (a) Inadequate financial resources, (b) Non-availability of proper library materials for purchase, (c) Severe shortage of space for placing the ever-increasing library materials, and (d) Frequently changing needs of the user community.

But considering from the perspective of Qualitative Collection Development in a library C. A. Gar Iner points out the following *Problems* :

- “1. Increasing volumes of books and journals that come out from the ever-growing number of publishers.
2. Relentless rise in prices of books and journals year after year that outstrip the rather fixed library budget.
3. Fluctuations in the exchange rates of foreign currencies.
4. Widening and changing scope of activities of the user-groups.
5. The restrictions on imports, especially of non-book materials.
6. Unfair trade practices that are followed by some of the book sellers, distributors and publisher agents.”

Due to unprecedented advancement in information and communication technology, new trend of information packages, and availability of full text in electronic media, especially online access and CD-ROM databases many academic libraries throughout the world have been facing some new problems, a greater portion of which is extraneous, since the 20th Century. Hence Colin Steele has remarked ; “As academic libraries enter the 1990s the challenges, both positive and negative, to their role and operations are probably greater than at any time in their history. New technologies rising serial prices, diminishing budgets, governmental and institutional interventionist policies and rising staff expectations are just some of the myriad of factors impinging on the operations of academic libraries”. Further, M. B. Line examining the present library environment opines: “the academic library of the future must be efficiently managed, and be able to prove that it is efficiently managed. It must be much more user-oriented, it must have clear objectives and it must be planned. The utmost

efforts must be devoted to developing staff so as to increase their personal satisfaction and at the same time increase their productivity. Political skills are also needed". Here political skills would indicate the pressures and forces operating in the libraries by the non-professionals. A.B. Veaner having witnessed the "transformed world of librarianship", notes that "the perceived inadequacies in socialization for administration and management, the changes in staff attitudes and expectations and the decline in institutional autonomy". So also M. J. Lynch and A. Young have gone through the reviews of a good number of papers published on Collection Development and its related topics and have commented: "the challenge of advancing technology, combined with related economic and social dynamics, make this a very uncertain time for academic libraries". Broadly the problems of Collection Development may, however, be classified, apart from others, under the following three major factors:

I. Problems of Storage: Shortage of stack accommodation is generally the result of an over estimate of its capacity during the planning of the academic library building. The Collection Development grows very rapidly. The rate of an academic library collection depends on the

- (a) type of the institution and its library,
- (b) nature of collection,
- (c) sizes of volumes,
- (d) present rate of growth in a distinct library, and
- (f) changes in that rate which may properly be expected.

It should be noted that all the academic libraries do not grow at the same rate, and they will not continue to grow at the present rate. The rate of growth of the academic libraries depends upon the following factors also: (i) increase in the size of the student community, (ii) broadening of the curriculum, (iii) changes in syllabi, (iv) introduction of new courses of studies requiring extensive additions to the collection, (v) introduction of new faculties, (vi) proliferation of academic departments, (vii) undertaking long-term as well as short-term innovative research programmes, (viii) establishment of schools, centres of advanced studies in specialised areas, (ix) new developmental programmes, and (x) sudden collection growth required under the compelling circumstances.

The storage problem may, to some extent, be avoided through cautious weeding and relegation of library materials to the available additional space.

II. Problems of Financial Resources : The financial problems, as already discussed, appear mainly due to (i) sudden cut in financial grants both from the

central as well as state governments and non-governmental agencies (ii) non-availability of adequate fund for new acquisitions, (iii) increasing prices of books and other library materials, (iv) growing number of core journals, (v) enhanced rates of foreign currency, (vi) worldwide inflation, (vii) financial stringency of the parent institutions, (viii) spectacular increase in railway freight, parcel, postal charges, transport expenses, (ix) restrictions of foreign exchange along with increase in bank rates, (x) inability of the publishers to supply bulk orders without any payment, (xi) stringent financial rules and audit objection against full advance for supply of library materials, and (xii) long time practice of allocating an amount for purchase of library materials by the parent institution without reviewing the current situation.

III. Problems of Resource Sharing : The Resource Sharing activities include the inter-library loan facilities and exchange of documents. If the academic libraries do not possess computer-based collection, it cannot participate in the resource sharing programmes. Hence it is expected that a major portion of the academic libraries should be fully computerised to exchange information about the Collection Development among themselves.

Sample Questions

I. Long Answer Type

1. Narrate briefly the problems of Collection Development in an academic library.

II. Short Answer Type

1. Write about the problems of storage in an academic library.

III. Objective Type

(Mark the *one* right answer out of the following four alternatives with the tick-sign ✓).

- I. The academic library faces the financial problems due to the
 - A. availability of adequate fund.
 - B. enhanced rates of foreign currency.
 - C. non-increase in railway freight.
 - D. liberal financial rules of the parent institution.

Answer is 'A'

Select Readings

1. *Futas, Elizabeth.* Collection Development Policies and Procedures : Phoenix, Arizona, Oryx Press, 1995.
2. *Martin, Murray S.* Collection Development and Finance. *Chicago, ALA, 1989.*

Unit 18 □ Library Collection-Books, Serials Etc.

The main objectives of an academic library are to collect and disseminate reading and other materials suitable for study and research. The library collection consists of such materials which vary from one kind of academic library to another because of different types of users. Thus the school and college libraries remain confined to their study programmes, while the university library is concerned with conservation as well as dissemination of knowledge and class room teaching, fundamental researches, publication of books on various subjects, and extension services.

The library collection which depends mainly on the **Acquisition Policy** of any academic library would gradually be built up considering the following issues, viz.

- (a) size and nature of the existing collection;
- (b) courses of studies followed;
- (c) pedagogy;
- (d) size of student community;
- (e) types of research programmes accepted; and
- (f) infrastructural facilities available;

Broadly **Library Collection** may be classified into two groups, namely,

I. Under - Graduate - Collection which consists of (i) multiple copies of textbooks or course books for the under-graduate students, (ii) books for supplementary reading, (iii) reference books, (iv) books of fiction and non-fiction types, (v) union catalogues, and (vi) journals, periodicals, and serials.

It is almost obligatory of any academic library to make available adequate number of copies of those text-books which constantly needed by the student community. Depending on the demand of any subject title a number of copies of that particular title may be kept separately to build up ultimately text-book library in the reading room. For up-to-date information some titles of such text-books are revised from time to time, several copies of such text-books may also be added to the collection of the text-book library, for which sometimes an entirely separate building is recommended. But now such attitude has been changed, because of the fact that the undergraduates, though basically required to use only a limited number of text-books, should be exposed to the larger collection and allowed access to all other collections in the library. The under-graduates also need other reading materials like the government reports, statistics, and some other documents. These publications may be

kept in such a library. Besides, there are a few books which are frequently referred to in those text-books which actually belong to the non-text-book collection may be included under the text-book library.

II. Post-Graduate-cum-Research Collection consists of some advanced specialised materials, treatises, monographs, reports of the professional conferences and symposia, proceedings and transactions of societies, abstracts of papers published in the journals, back volumes of journals and periodicals, indexes, manuscripts, archival materials and computer based information resources, for a better services to the postgraduate students researchers and teachers the academic library for higher learning should participate in the resources sharing programmes.

Apart from the Post-graduate Collection there are also collections of the departmental libraries/ seminar libraries, students' hostels/halls libraries mainly containing course materials.

Reference Collection

The publications like the encyclopaedias, dictionaries, bibliographies, biographies, indexes, abstracts, atlases, concordances, almanacs, statistical statements, catalogues, standard treatises, which are the sources of basic information constitute the Reference collection.

Rare-Book Collection

Rare and out-of-print books on any subject, which are essential for any research work/project form the Rare -Book Collection. Such books stimulate and develop the interest among the students and researchers and publicly exhibit occasionally to highlight the importance of the concerned library.

Special Collection

Some libraries in the academic institutions, especially university libraries possess Special collection that is a self-contained collection quite different from the main collection. Generally the Special Collection is received in a library through donation/ bequest and relate to a particular subject of interest of an individual, the original owner of that collection, which is named after him/her.

The Special Collection acts as the magnet for other gifts and bequests, is of great importance to the scholars of a particular subject area, appeals to the collecting instinct of the library staff, and encourages to staff to pursue bibliographical studies based on that collection, the logic behind the acceptance of the Special Collection is that the library has a repository function.

Government Publications

Other important sources of information about various social problems, scientific and technological inventions, reports, recommendations and the like are recorded in publications published by the central, state, and Foreign Governments, and local statutory bodies. These are important assets for any academic library.

Serials

The serials are publications which are aimed to be continued indefinitely. Each issue of the serials is numbered consecutively. They may be published at a regular or at irregular intervals. Thus the publications which include annuals, year-books, memories, proceedings, transactions, college as well as university catalogues, government publications may be treated as serials. It should be noted that the serials present problems relating to acquisition, their organisation, storage, cataloguing, and indexing, But the serials are very much necessary for higher study and research. A separate division of serials may be established within the library for better service to the clientele.

Periodicals

The periodicals on numerous subjects are generally published regularly. They bear successive issue numbers for an indefinite period and are essential to the research students/scholars constituting the very backbone of a large academic library with indispensable sources of new information in various subject fields. A separate budget for periodicals— old and new— should be maintained by the library authority. Occasionally some periodicals become less important. That is why during renewing subscription reappraisal by subject experts is required.

Other Library materials

Apart from those mentioned above a large academic library should keep some leading Newspapers utilised for research purposes/ Theses and Dissertations for reference use by the students and teachers, Manuscripts and Archives as the primary sources of information, Incunabula, Maps/Microfilms, Microprints, Microcards, Slides, Compact Discs (CDs), and other materials to assist the study and research.

All such materials actually form the Library Collection in an academic institution of any country.

Collection Preservation

As already mentioned, the term Collection Management represents “an expansion of ‘Collection Development’ to encompass all activities in cultivation and care of the collection”. A brief discussion on Collection Preservation therefore, is necessary.

Since the beginning of twentieth century Bookbinding and the care of Books has been the prime preservation function of the Collection Development. Apart from the poor quality of acidic papers and book binding leathers, there are some injurious influences who cause books to deteriorate.

Some environmental factors also play a great role in the preservation of library materials.

Besides, library building design for manuscript-collections, needs also attention as a managerial or technical function with regard to the conservation of library materials.

The Library of Congress, U.S.A. in 1967 developed a pilot project to compare the degree of embitterment of its collections with those of other libraries and to test the feasibility of identifying a “national preservation collection, that could be stored in stable environmental conditions, probably in a cave or mineshaft (College and Research Libraries. 30.1969. pp.5-11 , shaffer, N.J. The Library of Congress Pilot Preservation Project). A Committee on Preservation of Library Materials in the U.S. was constituted in 1970 to enhance the professionalism of preservation.

Many academic libraries of the world in the early 1970s the acknowledged preservation functions were only confined to basic repair and commercial binding activities. However, during that decad many authors tried to provide some practical information for use at the local level with strong sense of alarm for the damaging conditions of library holdings. But it became evident that it was not possible for a single library in isolation to protect its resources.

Under these circumstances, the collections in the academic libraries and especially the University libraries which possess national wealth and heritage of every country should adopt preservation programmes nationally considering the cost-effectiveness. Such programmes envisage the following three basic assumptions, viz. (a) research collections are assumed to be in imminent danger of deterioration, and any solution must be comprehensive enough to save a reasonably representative sample of those collections in a comparatively short period of time ; (b) those programmes must be efficient in terms of both productivity and cost per unit; and (c)meeting expectations of improved access, and the end product must be distributed to other academic libraries at low price. Hence the motto of the assumption should be: to save the most books and manuscripts in the least time at the least cost.

Hence massive microfilming effort should be avoided since filming is to be non-duplicative and earned out to exacting standards, with access provided via a national bibliographic utility. Such subject-based microfilming projects which also would save space may be considered as a field of preservation.

Still the traditional method library collection remains equally relevant today. But the recent concept of preservation has effectively been divided into the following two tracks : (i) cooperative projects devoted to mass reformatting of subject-based collections and funded by private or government grants and locally organized, and (ii) funded initiatives focussed on the traditional preservation operations of binding, repair, and conservation. These two tracks, one devoted to reformatting of information and the other which continues to carry out traditional operations to maintain objects, have one goal: the preservation of scholarship for the present and future use by whatever means and regardless of physical format.

Hence Collection Development and Preservation have evolved into mutually reinforcing disciplines centred on collections as whole entities. The collection development has traditionally centred its attention on the intellectual processes of selection ; while reservation has developed the more technical focus on maintaining collection usability.

Sample Questions

I. Long Answer Type

1. What do you mean by the expression 'Library Collection'? Discuss on the different types of the Library Collection.

II. Short Answer Type

1. Write a brief note on 'Collection Preservation'

III. Objective Type

(Mark the *one* right answer out of the following four alternatives with the tick-sign ✓).

1. Government Publications are published by'the

- A. University REgistrar.
- B. Learned Societies.
- C. Ministry of a Government.
- D. School Authorities.

Answer is 'A'

Select Readings

1. *Gunha, G. M. and Cunha, D. G. Conservation of Library Materials : A Manual, and Bibliography on the Care, Repair, and Restoration of Library Meterials. N. J. Metuchen, 1971 -72.*
2. *Horton, C. Cleaning and Preserving Bindings and Related Materials. Chicago, ALA, 1969.*
3. *Martin, Murray S. Collection Development and Finance. Chicago, ALA, 1995.*

Unit 19 □ **Cooperative Collection Management**

It is a fact that no single academic library can acquire, processor store all available publications and documents which its users require. Such a library cannot afford to possess even half of all published materials considering cost, space and personnel needed to process and provide access to a bulk quantity of information. Also interdisciplinary and multidiseiplinary subjects taught in the academic institutions compel them to depend on other institutional libraries.It is observed that on the one hand some books and library materials collected long ago become, in course of time, obsolete and outdated and on the other hand demands for new library materials are placed from time to time by the users. Al these factors force the libraries to take recourse to Cooperative Collection Management (CCM) which is becoming more and more important for the use of an enlarged user community.

Concept

Now-a-days Library cooperation (LC) and Resource Sharing (RS) have become almost obligatory because of inflation, increased prices of library materials, and enhanced budget cuts. But apart from these factors the main issue relating to Resource Sharing willingness to share resources for the benefit of the users. Thus Resource Sharing has not only become a compulsive library activity, but also a concept which is to be carefully planned, and implemented for proper utilisation of human intellect. Hence primary step towards Resource Sharing among the parci paring academic libraries is to examine the actual resources, i.e. collections, the active portion of which one library can share and the other part of it cannot share with others. Due to such practical obligation cooperative acquisition has become almost a reality. The success of Resource Sharing and Cooperative Collection Management programmes depends on speedy transfer of documents so that the need is served as quickly as possible with cooperative use of modern technological instruments.

Needs

Since the 20th century the scope of library cooperation has been diversified and included under it various library activities like abstracting, indexing, acquisition, cataloguing, collection development, bibliographic access, literature searching, micro filming, information processing, referral services, and union catalogues. Consequently the Library of Congress (LC) of the U.S.A. begins cooperative cataloguing project working on the National Union Catalogue (NUC). And also worldwide information programmes like Universal Bibliographic Control (UBC), Universal Availability of Publications (UA), National Information System (NATIS), United Nations Information System in Science and Technology

(UNISIST) have gradually been established.

For mutual benefit academic libraries may cooperate with each other by sharing resources to materialise cost-effectiveness through agreement. The two very important aspects of the Library Cooperation (LC) programme are (i) availability and access to the materials to the users of all the libraries, and (ii) lower cost of manpower and management by sharing the cost for Collection Development and library activities.

Areas of Library Cooperation

According to Maurice B. Line the four main areas of Library Cooperation (LC) are the following :

- “1. Acquiring books —selection, ordering, purchases, etc.
2. Recording books — cataloguing and classification.
3. Making them available —their own books by consultation and lending books not held by them by borrowing from elsewhere.
4. storing books - for present and future use.”

Thus the four major areas of Library Cooperation (LC) activities are very effective and meaningful because they allow access to a broad range of library materials which are financially impossible for any one library to support.

Library Cooperation for Resource Sharing

Resource Sharing may only be materialised through library cooperation which can help library operations and services as follows :

- “1. Shared acquisition of the library materials;
2. Shared collection development programmes ;
3. Sharing the library holding by cutting costs in book purchase and journal subscription costs ;
4. Economy in acquisitions both in books and journals;
5. Subject specialisation in individual libraries;
6. Providing with increased number of research materials to researchers;
7. Avoid duplicate purchases;
8. Avoid repetitive jobs of classification and cataloguing for the same documents in all the libraries in the cooperative programme;
9. Assuring collection of special materials and services;

10. Establishment of efficient communication systems among the libraries ;
11. Preparation of union catalogues;
12. Developing information marketing mechanism through cooperation and control of the quality of collections” (Mahapatra, P.K. Collection Management in Libraries, 1999, pp. 167-168).

In short. Resource ‘Sharing (RS) in its positive aspects shows reciprocity implying a partnership in which each member has something useful to contribute to others and in which each is willing and able to make available when required.

Problems

According to Joseph A. Bramin there are following eleven problems to Library Cooperation (LC) and Resource Sharing (RS) :

- “1. A desire for everything here and now.
2. Changing priorities for collection Development.
3. Control of collection policies and priorities.
4. Staff and faculty attitude.
5. Document delivery time.
6. Lack, of awareness among users about cooperation.
7. Lack of needed support services.
8. Lack of required administrative structure and support.
9. Non-conducive political environment.
10. Reluctance to yield autonomy.
11. Lack of common language for analysis and description 1.

Inspite of such constraints of planning and implementation of Library Cooperation (LC) and Resources sharing (RS) Programmes, there is no other alternative but to introduce Resource Sharing and to overcome the problems relating to the Cooperative Collection Management (CCM)for ensuring more meaningful library services through the technological development in electronic media used in generation, storage, retrieval and dissemination of information.

Activities

The development of electronic databases as well as publishing, and improvement of telecommunication networking have facilitated Cooperative Collection Management

(CCM) to a great extent. Without having the necessary library materials and information a considerable part of collection development activities can be operated. According to F.W. Lancaster acquisition policies involve the following two general alternatives :

“1. To make a capital investment in the ownership of a particular item and a continuing investment (e.g.in handling, storage) to keep it on the shelves. This can be considered as an investment in ‘access’ — a book or other item purchased in order to make it readily accessible to users.

2. To acquire access to the item, or part of it, as and when the need arises. This access could be achieved by borrowing /acquiring a photocopy/tearsheet/reprint, or (for some publications) accessing the item online”.

Such an observation leads to the rationale of Library Cooperation and Resource Sharing as at present the services of a particular academic library cannot be limited within its own resources, but services are extended beyond its resources which are available anywhere. From this point of view any academic should have its own collection as the ‘Primary Collection 1’ which is acquired through purchase, gift or exchange; again it should have access during needs to the ‘Secondary Collection’ which without being its own can be acquired and accessed through an agreement with other libraries and organised databases beyond any geographical boundary. But without library cooperation no access is possible to the secondary collection which requires the consideration of the collection Development Policy and Principles of that particular academic library. Thus the library cooperation and networking programmes have been conceptualised in the inter-institutional Resource Sharing of library materials. But the effective resource sharing depends on the (a)possession of sharable resources, (b) willingness to share the materials, and (c) planned mechanism for collaborative use. If these factors are fulfilled the users would be much benefited.

In spite of cooperative acquisition, inter-library loan, and shared cataloguing as well as storage with maximum materials as well as services and minimum cost the programmes of Library Cooperation (LC) would not be effective without successful networking and fulfilment of the following four primary objectives, viz. (i) precise understanding of the use of the library collections, (ii) bibliographic apparatus to allow appropriate access, (iii) efficient system for delivering library materials, and (iv) impact on the purchase of materials to ensure consistent and continued services.

Successes

The successes of Cooperative Collection Management (CCM) and Resources sharing (RS) among the participating libraries are based on the following agreement issues :

- (i) agreement to share currently owned resource materials with priorities and limitations with clear objectives, an independent administration, and long-term funding support for Resource Sharing;
- (ii) agreement on acquisition and collection development policies for judicious development of collections among the participating libraries ;
- (iii) agreement on bibliographic control and standardisation in cataloguing ;
- (iv) agreement on loan period;
- (v) agreement of nature and number of library materials and information;
- (vi) agreement on modes of transfer of library materials;
- (vii) agreement on payment for lost library materials.

Such issues of agreements relating to Library Cooperation and Cooperative Collection Development among the participating libraries should formally be recorded in a document of 'Memorandum of Understanding' (MOU) with in clauses and subclauses would detail the Collective Development Policies Principles/Operational Procedures, and Security Aspect of the library materials — both in-house and outside— of a particular academic library. For monitoring the activities of such a cooperative system an agency should be established and for evaluation procedures adopted and methods designed for the success of library cooperation programmes must be set up.

Cooperative Collection Management through Electronic Media

Throughout the world both at the national and international levels electronic media are being utilised for Cooperative collection Management (CMC). For daily routine work and storage of internal databases in the libraries are effectively used the computers which promise greater efficiency in Cooperative Collection Management and resource sharing. Thus computer based library system like the online Computer Library Center (OCLC) in the U.S.A., University of Toronto Library Automation System (UTLAS) in Canada, and Birmingham Libraries Cooperative Mechanisation Project (BLCMP), presently called BLCMP Library Services Ltd.in U.K. with gorwing databases and rmultidimensional activities are performing very well.

The Cooperative Collection Management (CCM) through electronic media in the developed countries with advanced technology and sound finance has been adopted for the following reasons :

- (i) worldwide access to bibliographic and non-bibliographic databases,
- (ii) speedy access time and ready availability of any quantity of data,

- (iii) low cost of acquiring or 'owning' library materials which are frequently used,
- (iv) wide interconnected networking system through exchange of information through electronic mail/ online search as well as document transfer, and
- (v) availability of databases in machine-readable form for searching from remote computer terminals through Network/Networking.

Network for CCM

Network/Networking has been defined by the National Commission on Libraries and information science (NCLIS) in a document as : "Two or more libraries and/ or other organisations engaged in a common pattern of information exchange, through communications, for some functional purpose. A network usually consists of a formal arrangement whereby materials, information, and services provided by a variety of libraries and other organisations are available to all potential users. Libraries may be in different jurisdiction but agree to serve one another on the same basis as each serves its own constituents. Computers and telecommunications may be among the tools used for facilitating communication among mem". Library Network (LN) has also been defined by A.R Trezzaas it is "... a formal organisation among libraries for cooperation and sharing of resources, in which the group as a whole is organised into subgroups with the exception that most of the needs of a library will be satisfied within the subgroup of which it is a member". On the other hand, R.C. Swank has remarked that Library Network is a "concept that includes the development of cooperative systems of libraries on geographical, subject, or other lines, each with some kind of centre that not only coordinates the internal activities of the system but also serves as the system's outlet to, and inlet from, the centres of other systems. The concept is also hierarchical."

It is to be noted that Cooperative Collection Development (CCD) or Cooperative Collection Management (CCM) is not synonymous to Network/Networking that is based on information technology through which information and databases can be exchanged and transferred via electronic media and that is the vehicle which can be used for Cooperative Collection Development programmes. That is why Richard M. Dougherty has remarked: "If enough libraries would combine with major (academic and) research libraries -and if each library could state specific needs for its own core collection based on the library's strengths, weaknesses, and special local conditions - a rational, coordinated pattern of collection development could be created to satisfy all participants' self-interest." In fact, during the eighties of the last century many online union catalogues and automated Resource Sharing Networks with operational facilities were established in the U.S.A. mainly for two purposes,

viz. (i) to support the local operations for a large number of libraries, and (ii) to provide statewide Union Catalogues and Inter-library loan Networks. Consequently it was felt that there should be automatically route searching transactions from one system to another and for that became essential the interface standards and protocols which were recommended as follows :

- “1. American National Standards Institute (ANSI) Z 39.50 (Information Retrieval Service Definition and Protocol Specification for Library Applications).
2. ANSI Z 39.53 (Common Command Language for Library Applications).
3. International Standards Organization Open Systems Interconnection (ISO- OSI) Reference Model,
4. TCP/IP Suite (Transmission Control Protocol and the Internet Protocol) .
5. ISO International Standards for Interlibrary Loan.”

Database for CCM

There are mainly two types of Databases, viz. i) a participant library's own catalogue that forms the Primary Database of that particular library' and (ii) the computerised online public access catalogues including the Online Public Access Catalog (OPAC), commercial databases, and specialised bibliographic as well as non-bibliographic databases in the Internet which constitute the Secondary Database, But Chifford A. Lynch pointing out the technical problem relating to the connection of public access catalogues to Internet has written: “Historically, library catalogs have been rather insular, often based on specialised hardware and/or operating systems lacking industry-standard networking capabilities. Network access was not a major consideration in the design or selection of these specialized systems.” Many bibliographic and non-bibliographic commercial databases available in Internet assist cost-effective access and search. The access to Internet and other library as well as information networks facilitates to cross over all the geographical boundaries even without knowing the exact location of the databases by the users.

The databases - both institutional and commercial-may be classified under some specific subjects required for the academic libraries. For the researchers the computer systems with networks and communication facilities can have worldwide access to specific subject databases which form the most comprehensive collection of discipline based data available through such network connectivity to Internet in the academic libraries at the local, regional, national or international level.

CCM and Resource Sharing

The basic functions of the Resource Sharing are the inter library loan facilities and

exchange of library materials. Although these functions are not less important, but the term 'Resource Sharing' because of introduction of electronic media during the 20th century has radically been broadened to library cooperation. Hence James E. Rush has aptly remarked: "Although resource sharing in this traditional conception is important today, it cannot continue to be justified, much less supported, as an important means of sharing resources because: (1) it is labor intensive and therefore quite costly (and such costs will only increase); (2) it causes resources to be out of the reach of everyone but the client to whom they have been lent (in fact, they are out of the reach of everyone during transit); (3) it involves distribution costs (i.e. packaging, shipping, receiving, record-keeping) that are significant and increasing; and (4) it is not timely, frequently taking a week or two to get materials into the hands of a client. Traditional resource sharing also reflects too limited a view of what resource sharing should encompass." Thus the traditional methods neither qualify the Resource Sharing nor the Library Cooperation in the true sense of the term. Now the concept of 'Library Cooperation' including 'Resource Sharing' has become the coordinated endeavour of all participating libraries in particular library cooperation system which envisages Cooperative Collection Development including cooperative acquisition, cooperative cataloguing and sharing the resources of other libraries in the system by any particular library. Only through the electronic media the collection management activities in a particular library or in a centralised cooperative system can be most efficiently and effectively planned because the computerised databases with the data communication networks would make available to everyone who wants to get access and the information resource to be retrieved. The Collection Management in electronic media can ensure full text of any document or any part of it and a number of correlated documents when the necessity arises.

CCM Through Computers

The Cooperative Collection Management (CCM) programmes through the computers ensure convenient and specific access for expanding as well as consolidating the information as well as database resources through the machine readable formats, for which the essentials are as follows :

1. Hardware and operating systems with maintenance facilities ;
2. Application software, interface software and network connectivity software ;
3. MODEMs and other peripherals;
4. Vendor support and contractual requirements;
5. Transferable bibliographic format and record structure;

6. Access to communication network ;
7. Access to Internet ;
8. Ownership and licence of databases, information and products ;
9. Training of personnel and end-user assistance requirements ;
10. CD-ROM drives ;
11. CD-ROM network resources ;
12. Local Area Network (LAN) facilities among libraries in the cooperative collection management project.”

Indeed computer based collection management procedures helps Cooperative Collection Management. But initially the implementation of these procedures needs capital expenditure for installation of computer system and other infrastructural necessities, although ultimately from the perspectives of the access points and services the whole process is cost-effective and requires less time for immediate access. Besides, the computer based Cooperative Collection Management programmes are being more successful because of the support of a large number of databases frequently updated and the packaged information resources obtained through networking. The present financial stringency, on going technological developments and ever increasing demands of the users have almost compelled the academic libraries to be united under centralised and cooperative Collection Management programmes.

Sample Questions

I. Long Answer Type

1. How can Resource Sharing be materialised through Library Cooperation? Enumerate the points.

II. Short Answer Type

1. Write briefly about Cooperative Collection Management (CCM) through Electronic Media.

III. Objective Type

(Mark the *one* right answer out of the following four alternatives with the tick-sign ✓)

1. Library Resource Sharing is related to
 - A. acquisition of teh library materials.

- B. issue of books to the clientele.
- C. development of library collection.
- D. Library Cooperation through the Electronic Media.
- B. E

Answer isz 'A'

Select Readings

1. Lancaster, F. W. *If You Want to Evaluate Your Library*. Illinois, University of Illinois, 1988.
2. Wilson, Thomas C. *ed. Impact to Technology on Resource Sharing : Experimentation and Maturity*. New York, The Haworth Press, 1992.

Unit 20 □ Infra-structural Facilities, Library Planning, Library Building, Furniture and Equipment etc.

INFRA-STRUCTURAL FACILITIES

The infra-structural facilities in an academic library are those facilities by which the students, scholars, teachers and other user community may get better library services. Through the two types of library properties, viz. immovable and movable, the library users may be benefitted.

Under the immovable properties mention may respectively be made of land and building which should be easily approachable and so constructed as to be pleasing to the eyes and dignified. It should be spacious enough to accommodate workrooms for acquisition, classification, cataloguing, storage, typing, lobbies, reading places, issue counter, elevators, seating arrangement for the library staff, computer-room, air-conditioning machines, and the like.

The immovable properties include

- i) functional furniture for both the staff and users;
- ii) proper lighting arrangements in the reading areas, stock rooms, work rooms;
- iii) typing and photocopying machines;
- iv) automatic shelving and book retrieval for saving time of the users;
- v) closed circuit televisions;
- vi) linguaphones” for teaching languages;
- vii) computers and their accessories with Internet facilities.
- viii) vehicles for library extension services.

These and many others help cost-effective and efficient library operations, indeed without these infra-structural facilities no academic library can serve its users in an impressive manner.

LIBRARY PLANNING

The problem for the academic library in the planning for their buildings for service is the conflict between the need to provide for enough and easily extendible storage areas, and the possibility of making service to the users as swift and efficient as possible. The larger the storage areas become, the more difficult it is to retrieve

needed materials readily, Generally it is observed that the larger an academic library becomes' the slower would be its rate of growth. The 'swift growth' in terms of building university libraries has been described by Ralph E. Mc Coy as "a library which had 1,70,000 volumes in 1955' 3,50,000 in 1959 and an expected 1,000,000 volumes by 1970" (in *The cordeal of a university library* published in the *Library Journal*, 85(9); May 1,1960, pp. 1729-1734). This description on his own library designed on the modular principle, a concept elaborated in the UNESCO Bull tin For Libraries (17 : 16, November-December 1963, pp. 346-350), with the library located right in the heart of the Campus. With regard to *University Library Planning* F.G. Van der Riet is also enthusiastic about the modern modular planning (South Africanii libraries, 27 : 3, January 1960, pp. 97 -100). He has mentioned various stages in the evolution of university library architecture as follows :

“1. The grand architectural manner — libraries as the vehicles for the expression of the architect's personality — an evolutionary stage displayed by buildings dating from the late nineteenth and early twentieth centuries.

2. A more realistic approach to the function of the library, as displayed in the period since the second world war, leading into the present phase.

3. The modern trend towards planned flexibility in the organization of the interior, while still maintaining a clear view of function in the planning stage” (Davinson, Donald. *Academic and Legal Deposit Libraries : An Examination Guidebook*. London, GIVE Bingley, 1965,p.52)

In planning a large academic library now-a-days much emphasis is being laid on the creation of interiors which will enable as much as possible of the collection to be displayed in such a manner that the users may have easy and swift access to it without going through the members of staff as intermediaries while some propose a reversion to the closed access mode for such a library, with the collection being compactly being stored by segregation into sizes, since that library would have a tendency to collect as well as store far too many publications at any cost but too much marginal materials should not be at all in the collection and thus the storage problems would considerably be reduced.

The most significant contribution has recently been made to the planning problems of a large academic library by keyes D. Metealf in his book titled *Planning Academic and Research Libraries* (Mcgraw Hill, 1965) which deals with such topics as modular construction, problems of height, traffic flows, storage, heating, lighting and ventilation, furniture and planning.

But the increasing difficulties of retrieving library materials from the collections have created much interest in the possibilities of automation of the library not only

in the context of routine clerical processes, but also in respect of physical retrieval of books from the shelves. Stanley Humenuk has suggested “that a system keyed matrices similar to those on a linotype machine be used for the automatic shelving and retrieval of books”, because according to him “while computers are being used for various library functions, they have limited usefulness until the problem of what to do with the books is solved”.

‘Still on the general level of library planning, the librarian at the very outset has to define “clearly and precisely the function or functions the library is to fulfil vis-a-vis the users. Without close consultation between the librarian and the architect the library planning cannot be useful. Regarding selection of site for the university library Keyes D. Metcalf in his above-mentioned book on planning the library building has strongly opined “against the centre-of-campus sites”, since he considers, “given a central site, architects would find the temptation to erect an unfunctional monument quite irresistible”. Hence “less cynically but more practically, he draws attention to the fact that centrally located buildings call for access from all sides, with a consequent increase in the need for lobby and circulation space, and for an increased provision for the supervision of entrances. A central site is also likely to cause difficulties in providing for further extension of the building should that become necessary”.

LIBRARY BUILDING

Planning the Building

The library building of a large academic institution is a complex and specialised structure and demands careful planning, designing, structuring and furnishing. In fact, the task of planning an academic library building is very important since it reflects the depth of knowledge in library science in general and imagination as well as foresight in particular. Considering library building planning as a highly skilled and prolonged job some countries have entrusted it on a small building committee. It should be noted that while planning a new library building the interests of the librarian and architect must largely merge. Both of them should have mutual understanding and particularly the librarian must “learn how to read architect’s plans and be able to draw up a brief for the architect on the functions, processes and needs of the library” (Neal, K.W, *British University Library*, 1971, p. 116)

Besides, the following points should be considered during the planning period :

- i) the construction of a new library building would be economical in the long run;
- ii) the recent history of the growth of academic libraries in a particular region should be examined before preparing any plan for the proposed academic library building;

- iii) thinking the increasing rate of expansion of the academic libraries in the region in future the proposed academic library building should be planned with the provision for maximum flexibility;
- iv) the interior layouts should be capable of easy and cheap replaiiuing ;
- v) the site on which the new library building is proposed to be erected should allow enough space for utilisation during future expansion;
- vi) in the proposed library building the provision for a large accommodation for storage should be made, although initially a greater portion of that storage area would remain empty for many years;
- vii) the empty space or site kept open for future expansion of storage may be fully utilised without much difficulty at a later period to accommodate the increasing collections ;
- viii) in the academic library that remains open until late in the night provision should be made for working space which should be adequately lit as well as air-conditioned with a reasonable degree of quietness; and
- ix) in the new building rooms for smoking, if allowed, for typewriters as well as business machines, a snack bar, and open space for car parking may be arranged.

PROCEDURE OF PLANNING

The planning of the academic library building is drawn considering the details of the spatial and technical needs. The undemoted three steps consecutively in such a planning programme are to followed :

- I. Initial preparation of the blue-print of the library building.
- II. Approval of the preliminary building planning.
- III. Fiualisation with specifications of the entire building programme.

At every level of these three steps the librarian should maintain a close link with the library authority including the architect and his/her senior colleagues.

Charles C. Soule has suggested the following general principles to take into account while a librarian is to plan a library building :

“1. Library should be planned especially for the kind of the work to be done and community to be served.

2. The architectural effect of the building should not be superimposed over the convenience of arrangement.

3. Before the exterior of the building is considered, the interior arrangement should be planned.

4. Accommodation for readers near the books stacked in the library should be provided as far as possible.

5. The arrangement of the rooms for readers' use should be made in such a way as to allow complete supervision with the fewest possible staff and the attendants.

6. The plan should be elastic enough to admit of and adopt to probabilities and possibilities of growth and development.

7. Full economy in administration should be the objective to be achieved out of the plan of the building.”

The *Purposes* for adopting such a planning procedure are to

(a) consider the climatic conditions, especially in view of the tropical countries so that the architect can give necessary suggestions with regard to selection of site/land, treatment of the building, exterior and interior designs, insects control and the like.

(b) determine the actual and future requirements of the library;

(c) emphasize the physical needs of the library, such as, collection development, spaces for reading as well as for working and get formal approval of the whole planning programme from the appropriate authorities;

(d) enrich the basis and activities as the foundation for planning a suitable building for the academic institution;

(e) specify the interior decoration with regard to aesthetics, colour, space dimensions, ceiling fans/ air-conditioning, lighting fixtures, sun as well as noise control, wall treatment, floor coverings, fittings and furnishings, elevators, stairways, security arrangement and fire protection;

(f) spell out the description of the site, plot plans, master plans, relationship of the proposed building to the existing structure, prepared by the architect in consultation with the librarian;

(g) prepare the planning in such way so that the proposed building would be monumental and at the same time functional with architectural beauty, impressive external appearance featured by a big entrance hall and stairway, massive interior wall, large reading rooms multi-tier book stacks, and storage for audio-visual materials; and

(h) provide restricted open access, i.e. partially open' and partially 'closed' ,with one entrance as well as one exit under the surveillance of the security staff and with well-protected door as well as windows of the library.

Thinking of the Indian scenario S.R, Rangaiathan has suggested the following provisions of a library building:

“(a) A gangway down the wall should be provided. This should be at least 1 m wide in the stack-room. Such a gangway will protect the book-racks from rain and sun,

(b) Taking into consideration of the Indian conditions, the lengthwise walls, in which these stack-room windows occur, should run from east to west.

(c) The floor of the reading-rooms should preferably be sound-proof and if it is financially not possible, it should at least be covered with coir matting”(Ranganathau, S.R. *Library Manual*. Bombay, 1962, p. 230).

MODULAR PLANNING

Considering the availability of the maximum flexibility in the library building in recent years has been preferred the modular planning which envisages the construction of a building in modules or units initially advocated by Angus Snead, Mac Donald, Ralph Ellsworth and Keyes Metcalf.

CONVENIENCES OF MODULAR SYSTEM

The modular system of construction is convenient because

i) it has replaced the old concept of ‘permanent room’ into the new concept of ‘area’ or ‘space’ ;

ii) in the interior of such a building there are few permanent walls;

iii) the interior walls mostly supported by pillars erected at regular intervals;

iv) the size of the modules is mostly identical, although there may be modules of different sizes varying from 3 feet to 27 feet in different areas of the building—the greater the size of the module, the better the flexibility in the building as the open space without columns would facilitate working;

v) such a construction would avoid the rigid dimensions to the maximum and keep the building as open as practicable;

vi) all the internal walls would serve as partitions and the partitioned rooms may be utilised as per the library requirements;

vii) it is cost-effective and economical in the long run, although the initial cost of the building with larger modules of 26 feet or more would be high;

viii) through it identical bays of usually square and rectangular in shape, are separated by four columns;

ix) the functional space within each module may be easily altered and interchanged;
and

x) comparatively at a less expense the partition of an area may be made by dry construction with the prefabricated materials like pressed plywood, glass, aluminium or simply by book racks.

“Under the modular system... a building is supported by columns placed at regular intervals. Nothing within the building is weight-bearing except the columns, though the outside walls may be. It follows in theory, that nothing within the building is fixed and immovable except the columns, though in fact, it is generally impracticable, if not impossible to shift location of stairways, elevators, heating facilities, ducts and plumbing... a building consisting largely of space that can be used for almost any purpose without extensive and expensive alterations should, in the long run, save money and prevent complications which so often arise as space requirements change” (Thompson, James. An Introduction to University Library Administration. London, Clive Bingley, 1970, pp. 106-107)

LIMITATIONS OF MODULAR SYSTEM

But in spite of its multifunctional flexibility the modular system of construction is not free from any limitation as no system cannot be permanently ideal, as the following limitations would reveal;

i) under this system no module size or one column spacing or bay size can be ideal for all library activities;

ii) standing in the specified places the columns may obstruct the general view of floor areas;

iii) pillars restricting the freedom to arrange layout cause to waste the space indirectly because one size of the module is suitable for only one particular function;

iv) through the spartan application of the so called standard modules, beauty and symmetry of the structure would be badly affected;

v) modular system of construction does not ensure soundproof environment due to the partitions;

vi) this system demands the use of uniform standards of ceiling, ventilation and flooring, which may not always be possible to maintain.;

vii) monotony is another disadvantage of this system of construction and

viii) modular system of construction is still too much costly.

Thus it is observed that inspite of so many advantages and absolute flexibility the modular construction of the academic library building may not be universally accepted. It also requires some alterations and modification from time to time.

Hence from the above discussion it is evident that the te librarian and architect cannot wholly depend on the modular system of construction while designing and planning an academic library building. They have yet to evolve new ideas and to find out innovations in the process of library building programmes.

Architect's Brief

At the time of planning a new library building the librarian of an academic institution—big or small—has to explain the needs and requirements relating to building programme to the architect, discuss with his colleagues and experts, gather information by visiting libraries of his/her own country and, if possible, abroad, and consider the future growth of the library. After the completion of the comprehensive home-work in consultation with the architect is finalised the 'Client's need-based Document' or technically called. 'Architect's Brief which is important and necessary because it

- i) explains the necessity of the proposed items;
- ii) assists both the librarian and architect to follow the proceedure during the building programme, step by step and item by item systematically;
- iii) reminds both the librarian and the architect of the provisions for the library building;
- iv) reflects the librarian' s careful assessments of the size of site, number and characteristics of the users, design, effectiveness, and fund available;
- v) reveals a long range development of the library.

It is expected that while planning a library building both the librarian and architect would cooperate with each other and propose some amendments, additions or changes if necessary; from time to time. But the preparation of the 'Architect's Brief is not enough. There should be continuous dialogues among the librarian and his/her staff, architect, and members of the Library Committee and several copies of that document should be available to the persons concerned.

“The 'Architect's Brief should consist of the following items :

- “i) a table of contents;
- ii) summary tables of the space requirements;
- iii) a short history of the library;

- iv) a brief survey report outlining the directions of the library's future and the emerging needs, its functions, operation and the expansion;
- v) emphasis on the stack area according to the proposed acquisition of documents and their location;
- vi) the reading-rooms and research rooms proposed for the students and teachers;
- vii) notes on important features like flexibility, lighting, heating, air-conditioning, ventilation, carpeting and acoustics etc.;
- viii) notes on open access to stacks with necessary and adequate safeguards of seating arrangement near them;
- ix) details of the specifications of areas like entrance, reading space, work-rooms, stairs and lifts etc;
- x) notes on rooms for display of current periodicals and storage of their back volumes;
- xi) details of the room for the audio-visual aids in the library;
- xii) details of the ancillary services like refreshment room, office, tea, coffee and milk bar for readers and staff etc.;
- xiii) notes on the provision of cloak-room;
- xiv) janitorial and security staff accommodation in the library; and
- xv) index to the brief."

The Indian standard (IS : 1533:1976) has recommended some standards in the primary Elements in the Design of Library Buildings as follows :

- “* location of the library vis-a-vis other buildings of faculties, laboratories, hostels,
- * sizes and relative position of various sections of the library with specifications for windows and ventilators,
- * location and sizes of staff, group discussion, conference, seminar, committee rooms,
- * basic requirements for water supply, drainage and sanitation.”

Alternatives to a new Academic Library Building

But under some circumstances due to non-availability of fund for designing and constructing a new library building in an old established large academic institution

a few alternatives have been suggested Keyes D.Metcalf, although by adaptation of old library building to fit the pressing present and future needs relating to the additional space for the new staff, storage and reading places for library users may not always and completely be solved the acute problems concerned with more accommodation. Hence an examination of all such alternatives to the provision of a new building is almost obligatory to mounting any claim for the construction of a new library building and if that claim is rejected “a quick follow-up with a less expensive but functional alternatives only remain for efficient library services. But these alternatives are applicable mostly to solve space problems of a small academic library which is located in large rooms. However, these alternatives may be grouped under the following three headings as per urgency felt in any academic library:

(I) For Reading Areas

“a) Refurnishing will often create more reader space through the use of better designed and more functional furnishing - many older library buildings feature heavy, or—nate furniture, which is difficult to move about and very space consuming.

b) Older library buildings often feature hoilways, lobbies and wide corridors, which represent an inefficient use of space. They can be fitted out as exhibition spaces and thus release rooms previously used for such purposes for reader services. Large entrance halls can be adapted to become catalogue halls and enquiry and service counter areas, with a consequent release of space for reading tables in the library proper. Non-public corridors can be lined with shelving to provide extra storage space.

(c) Large, high ceiled reading rooms were often a feature of old library buildings. They can be successfully adapted by the addition of mezzanine floors or galleries to accommodate more readers and more books shelving.

(d) In small colleges, where the library is located in one or more rooms within a larger building, it is often possible to exchange the library rooms for a larger one—for example, by swapping the functions of a lecture theatre or -a machine room.

(e) Departmental collections might be established in other buildings in an effort to reduce pressure on the main library.”

II. For Storage Areas

“a) The existing stores may be reshelved with compact shelving on rollers. Stock might be ‘ double banked, on existing shelves, or reorganized into several parallel sequences, according to size, to make the greatest use of the available shelf space.

- b) Older and less used stock may be moved to stores away from the campus, where rental or building costs are lower.
- c) A programme of micro-recording of older stock and runs of periodicals may be adopted.
- d) Little used stock may well be disposed of, and greater reliance placed upon cooperative schemes. 1"

III) For the Staff and Technical Services Areas

But the difficult job under such alternative planning appears in redesigning areas in the library for the staff and technical services, for which from the inception the best possible less space has been allotted. Still the following steps may be taken to improve the working environment:

“1) The relocation of much of the technical services work — perhaps by securing rented premises elsewhere.

2) Introducing more mechanization or automation of technical services work might result in the improvement of productivity within the same basic area.

3) Often one of the greatest problems is the provision of additional offices for senior members of staff. This can sometimes be achieved by the subdivision of one or two large rooms into a series of small offices.

4) When space is very limited and none of the above methods results in any great improvement in efficiency over a long period, then it is essential that a firm of management consultants should be called in to advise on the replanning of space to improve overall efficiency of use of the available rooms.” (Davinson, Donald. *Academic and Legal Deposit Libraries : An Examination Guidebook*, 1965, pp. 55-56)

FURNITURE AND EQUIPMENT

Furniture

Furniture consists of book shelving in the storage areas, chairs, tables, staff desks, vertical files, card catalogue files, small book trucks, supply cupboards, staff lockers, exhibition cases, etc.

Relating to the design of the library furniture Martin Van Buren has stated: “The physical environment of a library depends on two factors; architectural quality of the building and the design of its furniture. These closely related elements must be harmonious if a successful aesthetic result is to be achieved,” and regarding the design of the library furniture he remarks that it must fulfill some functional requirements.

According to him aesthetic and utilitarian needs must be determined simultaneously and he has, therefore, said that the following six factors constitute the 'Principles' of library furniture design:

- “ 1. **Function** — This relates to comfort, convenience, efficiency of operation, and serviceability.
2. **Construction** — Durability and resistance to wear are important. Surfaces must withstand abrasion and impact. Joints should not loosen. *Infolding type* of furniture moving parts should be sturdy and simply designed.
3. **Materials** — Materials in furniture are selected for the following characteristics : beauty, versatility in forming and fabricating, strength, resistance to wear, resistance to dirt, adaptability to various finishing techniques and cost.
4. **Finish** — The main purpose of the finish is to protect the surface of the materials and enhance its natural beauty. Finishes may be surface -coated, penetrating or integral.
5. **Scale** — This defines a certain value in size or degree within a group or system of related items. Furniture should be scaled to pleasing proportions with relation to the size and bulk of surrounding furniture, the dimensions of the room in which it is placed, and the mass of related architectural elements.
6. **Proportion** — whereas scale relates to other elements, proportion is an inherent quality in the design of a unit of furniture, implying the relationship of the parts of the whole. Proper proportions among the various parts result in aesthetic overall balance and symmetry” (*Library Trends*, 13:4, 1965, pp. 388-395).

In addition to the above six factors there are some others which should also be taken into consideration:

7. **Quiet Enjoyment** — Apart from durability the furniture should provide a quiet enjoyment to the readers.
8. **Easy Maintenance** — The cost of maintenance of furniture should be as low as possible so that the same may be easily maintained.
9. **Mobility** — Furniture should easily and conveniently be moved away,
10. **Standardization of shelving** — The book shelves should be standardized so that the parts can easily be interchanged.
11. **Local Climate** — Furniture should be adjustable with the climatic condition, especially in the tropical countries.

- 12. Economy** — This is the last but not least factor as it is ardently expected that the furniture should be economical.

Equipment

The equipment includes telephones, photographic instruments, phonograph, record players, sound motion picture projectors and screens, microfilm readers, typewriters, photocopying machines, computers with Internet facilities and their accessories, computer printers, e-mail technology, reprographic and micrographic instruments, audiovisual aids, television sets, video cassette recorders, overhead projectors, automation and networking equipment, on-line devices, telecommunication instruments, air-conditioning machines, digital cameras, etc.

The cost of furniture and equipment varies in relation to the amount, style, and types of equipment selected. Generally, in an academic library the cost of furniture and equipment should respectively be ten and fifteen per cent of the building cost, in preparing the budget for a new academic library building it has recommended that at least ten per cent be allocated for furniture and equipment in addition to the building cost. The amount would probably be adequate during the first few years that the library is in operation in its new building. Additional furniture and equipment could be purchased in the future as the need arises.

Sampel Questions

I. Long Answer Type

1. Write a note on the Procedure of planning for construction of an academic library building.
2. Suggest some alternative methods in case you are not in a position to build a new library building for your academic institution.

II. Short Answer Type

1. Sum up the conveniences of Modular System of construction.
2. How would you rearrange the reading space if you are not able to erect a new library building ? Discuss.

III Objective Type (Mark the one right answer out of the four alternatives with the tick-sign ✓).

1. The 'Architect' s Brief
 - A. reveals a long range development of the library.
 - B. does not reflect the librarian's assessment of the size of the site.

C. explains the proposal of demolition of the academic library building. D. does not assist the librarian to build a library building.

Answer is 'A'.

2. Alternatives to a new academic library building are thought of if A. financial resources and land are not available. B. a well planned sophisticated new library building already exists. C. enough accommodation for storage and reading space are available. D. the collection is not alarmly large.

Answer is 'A'.

Selected Readings

1. Davinson, Donald. Academic and Legal Deposit Libraries: A Examination Guidebook. London, Clive Bingley, 1969.
2. Colleges and Research Libraries. 22, V, September ,1961 pp. 345-354 (Metcalf, Keyes D. Alternatives to a new building).

Module V ■ LIBRARY PERSONNEL

The success of the academic libraries largely depends upon the efficient, scholarly and sincere staff-members, who for the advancement of learning in the forms of teaching and research offer the following sundry meaningful specialised services through the speedy

- (i) identification, accumulation, and processing the required library materials ;
- (ii) preparation of the circulating lists of the latest additions to the library ;
- (iii) evaluation as well as interpretation of the new arrivals and supply of information about their reviews, abstracts, tables and contents, photocopies to the needy users;
- (iv) maintenance of the highly specialised reference files and indexes ;
- (v) continuance of literature searches;
- (vi) supply of actual, factual and relevant information to the inquirers;
- (vii) preparation of bibliographies and documentation lists;
- (viii) translation of a required publication partially or wholly;
- (ix) supply at a cheap rate the photocopies of the publications needed ;
- (x) quick reference and referral services;
- (xi) inter-library loans, cooperative acquisitions;
- (xii) preparation of the Union Catalogues;
- (xiii) compilation of bibliographies for the use of the readers and
- (xiv) setting up of network programmes to help the borrowers.

Operational Activities

The operational activities of the persons who are responsible for organisation and arrangement of the library holdings as well as for users services are important in the library which must have required number of competent, well-trained, qualified as well as motivated professionals and supporting staff needed for the particular kind and size of that library. Hence in order to serve the students, scholars, teachers and staff of an academic library with its various types of materials and information sources the library personnel and the supporting staff should have

- (a) good academic background ;
- (b) adequate professional qualification ;

- (c) awareness of information sources and information technology; and
- (d) competence and attitude to sincerely serve the users.

Sample Questions

I. Long Answer Type

1. How do the library staff-members offer meaningful services to the academic library ? Explain.

II. Short Answer Type

1, Enumerate the qualifications of the library personnel to serve the students and teachers.

III. Objective Type

(Mark the *one* right answer out of the following four alternatives with the tick-sign ✓).

1. For operational activities the library staff should not be
 - A. aware of information technology.
 - B. competent to serve the users.
 - C. unprofessional.
 - D. academically sound.

Answer is 'C'

Select Readings

1. Marshall, Don R. The Four Elements of Successful Management. New York, American Management Association, 1998.
2. Rubin, Richard E. Human Resource Management in Libraries : Theory and Practice. New york, Neal - Schuman Publishers Inc., 1991.

Unit 21 □ Staff Pattern

The Staff Pattern of an academic library depends very much on the type and size of that particular library, i.e. school, College, or university library.

Staffing Framework & Organisational Chart

The Staffing Framework and the Organisational Chart should be designed and planned in an academic library on the basis of the

- i) work analysis for easy workflow;
- ii) job description of the individuals;
- iii) activities of the operational section/s or unit/s as well as functional coordination;
- iv) supervision as well as control;
- v) nature of work to be done ;
- vi) services to be performed;
- vii) developmental programmes to be undertaken in future; and
- viii) hierarchical order according to the organisational chart of the operational professionals and of the administrative persons.

Nature and Quality of Service of the Academic Library

It should be kept in mind that the nature and quality of service and smooth workflow in an academic library largely depend on the activities of the efficient library personnel or human resources who should have

- (a) a wise collection development;
- (b) proper organisation of knowledge and information sources through perfect technical processing;
- (c) knowledge of storage and retrieval of information;
- (d) immediate availability of documents whenever asked for;
- (e) reference and information materials;
- (f) bibliographical sources;
- (g) current awareness; and
- (h) capability of readers' guidance.

Hence merely professional or technical training of the library persons would not be sufficient for the best services in an academic library unless they have adequate academic knowledge with awareness of comprehensive information sources and intensive intellectual capability. Besides, the library personnel should know the changing patterns of the up-to-date documentary sources in different physical formats, nature of exponential growth of literature, trends of development in various branches of knowledge, ramifications of the wide area of knowledge, emerging new subject areas, evaluation of appropriate information sources, changing needs of the users for very specific and specialised information, communication channels of information transfer, location of various types of databases and their availability, new technologies applied in library and information science, and information resources throughout the world..

Thus the library personnel with all such qualifications can perform various jobs in an academic library properly. The motto of the selection of the library personnel should be right persons for the right jobs. Occasionally they should be deputed, if required, for undergoing orientation programmes and intensive in-service training to undertake the responsibilities to be vested on them. On the whole in any academic library there should be continuing education programmes to keep the library personnel updated with the latest developments in automation and networking programmes in the areas of library and information science.

Non-Professional Activities in the Academic Library

But apart from the basic activities like information services in an academic library there are other different types of activities like reprography, micrography, maintenance of audiovisual materials, binding, conservation of library materials, computer application, preparation of budget and financial management, accounting, convening the meetings, organisation of office and other records, and daily office administration. So persons who have qualifications and experiences in such activities should be employed and further trained according to the needs of the particular library.

Classification of Library Personnel

From the perspectives of job requirements the library personnel may broadly be classified under the following four categories :

(A) Professional, (B) Semi-Professional, (C) Administrative including Financial, and (D) Supporting.

(A) Professionals

In an academic library, Professionals of different grades are employed for professional management activities. They are persons who are entrusted with the higher

and middle levels supervisory responsibilities for administrative, managerial, professional and technical activities. The organisational chart of an academic library has worked out the hierarchical order from top management level like the Director/Chief Librarian. Librarian/Library-in-Charge down to operational level of Assistant Librarian, Senior Library Assistant as the case may be. The library personnel under this top management category must have sound scholarship, comprehensive academic interest, adequate professional knowledge, technical expertise, and knowledge of the latest developments in the discipline of library and information science with sufficient experiences and capabilities of materialising the aims and objectives of the library following those of the parent institution, leadership directing departments and divisions, identification of needs, analysis of problems, organisational and operational efficiency, implementation of various programmes, interpersonal as well as inter-library cooperation and, Spartan administrative in all library affairs,

(B) Semi-Professionals

The Semi-Professionals are generally employed at the lower level in the hierarchical order to perform the routine professional and technical activities with their qualification in library and information science. Their jobs include book-ordering, accessioning, cataloguing, preparation of books for the selves, physical verification of books and other library materials and necessary rectification, preparation of the shelf-list cards, maintenance of periodical records. These Semi-Professionals may be designated as the Technical Assistants, Library Assistants, Reference Assistants, Information Assistants who may be prompted to the posts of professionals after acquiring necessary qualifications and experiences.

(C) Administrative and Financial Staff

There should be adequate number of Administrative and Financial staff to look after the non-professional activities in an academic library. The staff-members would look after and maintain the infra-structural framework of the library. They include the routine jobs relating to advertisement for appointment, interview, selection and appointment, promotion and retirement records, preparation of salary bills, leave records, maintenance of office files, records of various meetings, inviting tenders, purchase, stores and supplies, printing and stationery, written communications, numerous types of registers, receiving and despatch, building maintenance, dusting and cleaning, security, canteen for the users including staff, budget and financial management, accounts and audit, maintaining cash and cheque-book/s, postage and courier service, printing and publication, and similar library activities. The persons performing such activities would be designated as Finance Officer, Accounts officer, Audit officer, Administrative Officer, Security Officer, Accountant, Superintendent, Section Officer, Chasher and similar other posts as required by an academic library — small or large.

(D) Supporting Staff

The members of the Supporting Staff are those persons who are employed by the academic library authority for some specific jobs concerned with reprography and micrography, maintenance and handling of audio-visual and other non-book materials, operation of different types of equipment including air-conditioning machines and photocopying units, preparation of accession lists, conservation of library materials, maintenance of stack rooms, repairing and restoration of damaged books, deacidification, lamination, book-binding, maintenance of fumigation chambers, and other official nontechnical jobs. For rendering such services library persons should have minimum academic qualification with professional training and experiences in their respective specialisation. They may be designated as Reprographic Assistants, Book Binders, Conservation Assistants, office Assistants, Literate Assistants and Bearers.

Staff-Requirement— Its Assessment

Relating to the assessment of staff-requirement and preparation of the organisational chart of an academic library, big or small, the following stages should be followed :

I. At the first stage decisions are taken, planning is made, programmes are defined, infra-structural facilities are available, functions are listed, activities are identified and thereafter implementation of the same are done by the library personnel responsible for specified jobs. Hence the needs of the particular library primarily depend on the job requirements of that library. Generally the higher level library officials become responsible for materialising those activities and for supervision, monitoring and evaluation of those activities performed by the next lower level library personnel in the hierarchical order at the first stage. The total workload for the present and the planned workload for the future should be considered during the assessment of staff-requirement and preparation of a well articulated organisational chart for the efficient management of any academic library.

II. At the second stage, the total work-load should be chalked out and divided into two broad groups, viz. management and operation. Sometimes the management and operational activities are overlapping.

III. At the third or last stage, the specific job analyses as well as job descriptions and individual tasks should be well defined so that the number of persons needed, at different levels on the basis of total work-load may be considered to prepare a well articulated hierarchy of smooth operational activities with help of flow-charts.

Analysis of Jobs

The term 'Job' is defined as a piece of work or pieces of work to be completed by any individual. After completion 'Job' being a part of activity would lead to a

result. It is the smallest unit of a planned network of activities and is assigned to a particular person to be done within a specified period. Hence the library management with a careful design for getting maximum organisational effectiveness is responsible to identify the tasks which should be included in the jobs and become integral parts of a single library function or activity. The analysis may be done in the following hierarchical order:

- I. Decision making, Planning, Programming,
- II. Jobs, Functions, Supervision, Control, Monitoring.
- III. Activities, Jobs, Supervision.
- IV. Work Blocks, Jobs, Supervision.
- V. Works, Jobs.
- VI. Job units.

Analyses of Jobs at Various Levels

The jobs performed by the library personnel at various levels in an academic library should be carefully assessed through the effects of the result by the individuals with academic background, professional expertise and varied experiences. Hie job analysis at various levels would indicate the successes or failures of the whole operational process in the academic library and assist to understand step by step procedure of each operation, period required for each job, professional skill and experiences required for eachjob, the work-flow in the library. It also helps to create the new posts and selection of persons for the same and ensures performance ratings of the library personnel to utilise the modem management techniques like Programme, Evaluation and Review. Techniques (PERT) and operational researches. Through the job analysis, job description and staff manuals for jobs as well as responsibilities may be defined. Such analysis is needed for computer application to prepare the work-flow chart in an academic library.

S. R. Ranganathan's General Staff Formula

But has worked out R, Ranganathan to be applicable to different types of academic libraries as follows :

“(a) Professional Staff

SB + SC + SL + SM + SP + SR + ST

(b) Non-Professional Staff

$$\frac{B}{30,000} + \frac{S}{100}$$

(c) Unskilled Staff

$$SB/4 + SC/2 + SL + SM/4 + SP/2 + SR/8 + A/20,000 + D/500 + B/60,000 + (S/100)/4 + V/30,000$$

Explanation

SB = Number of persons in book section

$$= \frac{A}{6000} = \frac{\text{Number of books accessioned in a year}}{6000}$$

SC = Number of persons in circulation section

$$= \frac{G}{1500} = \frac{\text{Number of gate – hours for a year}}{1500}$$

One gate hour = one counter gate kept open for one hour

SL = Number of persons as librarian and Ms deputies.

=

$$SM = \text{Number of persons in maintenance section} \left(\frac{\text{Number of hours library is kept open in a day}}{HW} \right) \times \left(\frac{\text{Number of working days in a year}}{1500} \right)$$

$$= \frac{A}{3000} = \frac{\text{Number of volumes accessioned in a year}}{3000}$$

SP = Number of persons in a periodical section

$$= \frac{P}{500} = \frac{\text{Number of periodicals currently taken}}{500}$$

SR = Number of persons in a reference section

$$= (R/50) (W/250) = \frac{(\text{No. of Readers per day})}{50} \times \frac{\text{No. of working days}}{250}$$

ST= Number of persons in technical section (that is classification and cataloguing section).

$$= \frac{A + 40D}{2000} = \frac{\text{Number of volumes accessioned in a year} + 40 \times \text{Number of periodicals abstracted and indexed in a year}}{2000}$$

- B = Annual budget allotment in rupees
 S = Number of seats for readers
 A = Number of volumes accessioned in a year
 D = Number of periodicals abstracted and indexed in a year
 A = Number of volumes in the library

It may be noted that the requirement of staff for each section has been calculated on the basis of assumptions based on experience. For instance, the number of professionals required for a periodical section has been worked out and is based on the assumption that one professional is sufficient for procuring and recording 500 periodicals per year”.

However, such a staff pattern as formulated by S. R. Ranganathan needs review in the background of modern technologies and their applications to the academic libraries, especially college and university libraries.

But the School Library which is located in the Primary School/Middle school (8) / High School/Secondary School (9&10)/ and Higher Secondary School (10+2), However, presents a separate staff pattern considering aims, objectives,infrastructural facilities, and number of pupils.

Thus in a Primary school a graduate with six months’ training in librarianship or one of the teachers of that particular school with a short-term training in librarianship may be appointed as the librarian/incharge of the library. The librarian in such a school should preferably be female employee with pleasant personality.

But in case of other schools from Middle standard to Higher Secondary level the librarian should be any male or female graduate both in the general stream as well as in library and information science. He/she should be assisted by one attendant.

Generally the following staff pattern may be followed in different schools other than the primary school :

- i) In Middle School = One Librarian and one Library Attendant.
- ii) In Secondary School = One Librarian, one Assistant Librarian, and One Library Attendant.
- iii) In Higher Secondary School = One Librarian, One Assistant Librarian, and two Library Attendants.

Sample Questions

I. Long Answer Type

1. Classify the Library Personnel and assess the Staff-Requirements in an academic library.

II. Short Answer Type

1. Discuss the general Staff Formula as formulated by S. R. Ranganathan.

III. Objective Type

(Mark the *one* right answer out of the following four alternatives with the tick-sign ✓)

1. The Quality of Service in an academic library depends on
 - A. improper or ganisation of knowledge.
 - B. availability of documents after a long wait.
 - C. inefficient readers' guidance.
 - D. current awareness of the library staff.

Answer is 'D'

Select Readings

1. Gleuck, William F. Personnel Management : A Diagnostic Approach. Dallas, Business Publications, 1974.
2. Ranganathan, S. R. Five Laws of Library Science. Madras, The Madras Library Association, 1931.
3. Taylor, Frederick W. Scientific Manageeinent. New york, Harper and Row, 1947.

Unit 22 □ Human Resource Training and Orientation

Human Resource in an academic library consists of all library employees — both male and female, old personnel and new entrants — who need periodical training and orientation, as the case may be, for better services to the user community. All the training and orientation programmes designed aiming to perform any job/jobs more efficiently from time to time are meant for human resource development in that particular library.

The selection and appointment of the right person for any specific job would add to the appropriate human resource in an academic library. That newly appointed individual should have adequate knowledge, professional proficiency and ability to fulfill the assignments given to him/her from time to time. Besides, as a dedicated human resource he/she should have the following qualities:

- i) obligation to the aims, objectives and ideals of the parent institution ;
- ii) commitment to the library and job;
- iii) sincerity in action and purpose;
- iv) sense of responsibility in work;
- v) natural propensity to learn and enhance both general as well as professional knowledge;
- vi) ability to accomplish the tasks assigned to and to adapt changes in the work;
- vii) experience and maturity for taking right decisions at the right moment;
- viii) seriousness with desire to work hard for completing the jobs assigned to him/her;
- ix) creativity in thinking activities ;
- x) sense of cooperation and community life; and
- xi) capability to communicate the acquired knowledge and understanding through general patterns.

Hence after the appointment of any person to a particular post in the academic library the management should make arrangement for training since he/she is not expected to perform the assigned job with much perfection and the through such programmes he/she should have an opportunity to be acclimatized to new work environment of the academic library. Only the training orientation programmes could

make the newly appointed person confident in his/her work, motivate him/her to serve in the best possible manner, inspire him/her to be involved in participating events and create a sense of oneness with the library as well as the parent institution.

Thus the training and orientation programmes have become now almost essential to any person at any level after joining to the new post. These programmes should be designed in such a manner so that the new incumbent would be informed of

- i) the library and the parent institution in general;
- ii) aims, objectives, goals and functions of the library;
- iii) rules and regulations of the library;
- iv) procedural methods followed in the library;
- v) organisational chart as well as hierarchical order of management and manner of working in the library along with the respective duties as well as responsibilities of the superiors and colleagues;
- vi) library's activities, services to be rendered, previous achievements;
- vii) library's relationships with other academic libraries and
- viii) plans and programmes for future development.

Training

Basically library training differs from orientation. By the term 'training' is meant imparting both the theoretical and practical knowledge to the persons in the particular work atmosphere and activities in library operations for maintaining a desired standard of efficiency, behaviour and ability with motivation accompanied by cooperation from the colleagues in the library. Training programmes are generally designed for those individuals who are already in the library service.

The in-service job training is almost necessary in the academic library for enhancing and maintaining the service quality and for playing the crucial role in the increasingly technological developments in library and information science. Thus in order to meet the optimum, expectations 'of the users the library personnel should be adequately trained, preserving the traditional values of any particular academic institution, in the computer and information technologies along with new innovations in these areas. The library personnel should be properly trained in generation, storage, retrieval and dissemination of data in the electronic media, commercialization of databases and their updatedness, CD-ROM and on-line access, global information networks, new concept of library cooperation and resource sharing since now both in concept and operation the traditional library services are becoming gradually obsolete and out-

dated. The management and supervisors should, therefore, organise the training of the library personnel realising the long-term impact of the same on the employees as well as on that academic library itself.

These training programmes should be periodical, but continuing as per the specific needs of the users. Training should again be arranged when a new department/unit is opened in the library. In order to enhance the professional skill already trained personnel should be retrained for some specific new jobs. The in-service library training also appears to be effective and meaningful for overcoming work problems relating to attitude, communication, morale, motivation, a sense of responsibility, and sincerity.

Objectives of Training

The basic objectives of training are

- i) to impart teaching and professional knowledge to a group of library personnel on some specific job areas for enhancing the quality of library services;
- ii) to develop confidence and good judgment among the library employees;
- iii) to perform the jobs in a better way than before;
- iv) to infuse motivation to work sincerely and seriously with competitive attitudes;
- v) to impart knowledge which include both the conceptual and theoretical constituents of a subject;
- vi) to enhance the ability or capability to perform any activity;
- vii) to improve the skill to do the jobs in the best possible manner; and
- viii) to help to be expertise with full technical knowledge of specific jobs or areas.

Hence the training programmes should be so designed as to intensify the dimensions of jobs with some specific objectives. It is to be noted that each training programme should be effective and meaningful both for the individual participants and for the academic institution as a whole and all training programmes conducted for all levels of employees must contain the concept of corporate culture in the library which is especially needed during this age of technological advances in library and information science to cut off any type of psychological barrier.

Such kind of training should not be concerned with any particular post, group or job. Even the senior staff may also be trained continuously in sophisticated areas of library services to develop cognitive skill and managerial efficiency.

Planning for Training

The planning for training of the library staff— both senior and junior—should

take note of the following points :

i) need for the particular training course should be ascertained as a part of the human resource development programme;

ii) objectives of the training should be defined and the period for such training should be stipulated;

iii) faculty for the training courses including the suoersisors should be selected aiming at the target group for whom the training is to be arranged;

iv) library management should provide adequate financial grant and necessary infra-structural facilities;

v) initial planning after its completion, if needed, may be modified, updated or repeated for the same or for another target group;

vi) there should be gradational relationships among the training courses and each training programme should be considered as a component of library human resource development programme

vii) while planning training the job analysis for the job description of both the individual and a group of persons becomes almost unavoidable;

viii) training course contents should contain academic theories, practical training for proficiency in skill and motivation ; and

ix) training courses should be so designed as to maintain the standard of performance at the highest level.

Methods of Training

Indeed the success of any training course depends on the training methods which are of various types depending on the course content, levels of trainees, purpose of training and results to be obtained. But each method should consider quality of instruction to be maintained and its acceptability to the trainees.

The following Methods of Training may be followed :

i) Initially lecture and discussion methods would be useful to provide the background information to the trainees.

ii) The methods should be in the form of structured discussion so that learning of the trainees could be evaluated orally.

iii) The demonstration method may be used for job training.

iv) The training materials like audio-visual aids, such as, slides, tapes, film strips, transparencies, video cassetts, and computers would play an important role during the instructional period.

v) The effective communication during the training period is essential for interactive and multidimensional activities relating interpersonal relationships.

vi) The trainees should make assessment both formally and informally of the training even during the training process and after the completion of the training.

Evaluation of Training

The objective of the Evaluation of Training is aimed to gather and analyse information in order to justify the past activities and to finalise the future programmes for the utilisation of human resource. In fact, the evaluation of each training course, would unfold its usefulness, effectiveness and limitations. It is expected that all job training courses should be evaluated, although there are differences in approaches to evaluation and methodology based on the objectives and the trainees for whom the training has been designed. During evaluation of job training two points become necessary, viz, (a) an assessment of the trainees' performance as the result of training, and (b) the effectiveness and efficiency of training, the trainee has also a role to play in the evaluation process. His/her reaction or opinion on the content, appropriateness, methods, and logical purpose of such training should seriously be considered. Thus the job training evaluation becomes a very important source of information to consider the question of proper development and utilisation of the human resource.

Orientation

It should be noted that there is a difference between training and orientation. Training offers the library persons some instructions and acquaints them with the techniques which will enable them to perform and complete their specific tasks according to the job description and job specification. But the orientation programme is very important for the new entrants for maintaining their positive and active attitudes. Thus orientation is *not* the training in specific area of library activities, but to make an individual familiar with the overall condition of the library as a new entrant and to acquaint oneself with the new institution, new work condition, and above all with the colleagues working with him/her.

With orientation a new entrant would

- (a) be a full and productive member of the library and its parent institution,
- (b) get the focus to work environment and approach to job performance,
- (c) be able to find the means of fitting into the total library structure,
- (d) be inspired to accept the challenges to work in various circumstances,
- (e) create a sincere commitment to the library and its parent institution,

(t) be provided with the needed printed materials, viz. staff manual indicating rules and regulations of the library, organisational chart, description of different divisions and sections, work schedules, interrelationships of the academic departments, and the total picture of that particular library.

The orientation programmes should be conducted by senior persons to impart knowledge about the aims and objectives of the library and its parent institution, work situation, activities, work-flow, services, assignment of the post to which the person is appointed and the like.

Through orientation a new entrant has not only to undergo a learning process related to policies, procedures and expectations, but also he/she has to learn about his/her role, desired behaviour, work style and culture in that institution.

In fact, orientation of the new library employee in an academic institution is the best method for absorbing him/her in the mainstream. It should be fitted to the new entrant as much as possible to obtain the best out of himself/herself. Apart from the individual orientation, the group orientation for the new entrant is necessary for developing general awareness, knowledge, skill, and capability to work harmoniously. Hence immediately after joining to the new post the person must be initiated to the workforce of the academic library. Only the organised orientation programmes would enhance the morale and productivity of the new entrant.

In practice the orientation programmes for the new library person commence on the very first day after joining by the supervisor and colleagues in an informal manner. The new employee's performance is often directly related to attitude, and, therefore, shaping a positive attitude must begin on the first day of work and continue throughout the first few months. The formal new employees orientation programmes reduce would absenteeism, prevent performance problems, instill positive attitudes about the organization, and pave the way for better communication between the supervisor and the new employee.

Objectives of Orientation

The objectives of the orientation programme for the new entrant in the library have been enumerated by H. Scott Davis as follows :

“* To make all new library employees feel welcome and comfortable as they begin the new job ;

* To provide consistent documentation and interpretation of major library policies and philosophies for all new employees and, in course of doing so, strive to avoid 'information overload' ;

* To acquaint all new library employees with other library staff and other departments and units within the library system ;

* To provide continuing orientation support to all new employees during the initial months of their employment through mentoring and other activities;

* To tailor individual orientation activities/information according to the varying information needs for different positions within the library and, in doing so, to be mindful of individual differences among new employees in terms of personal experience and educational background ;

* To emphasize the new employee's role and potential for contributing to the overall mission of the unit/ department, division, and library; and, finally,

* To call attention to the importance of continuing staff development and the library's commitment to staff training, and to emphasize new employee's share of responsibility in self-initiating/communicating staff development needs to their supervisor.”

Study Materials for Orientation

The supervisors should identify for orientation programme the study materials which are required for the new employees appointed in different departments/units of the academic libraries. In view of the introduction of new technology and automated systems in the academic libraries the study materials both for the existing as well as new employees should be technical in nature, expressive, easy to learn, and well-documented. However, for the new entrants the appropriate study materials should include the following items :

“* The objectives, organisational structure,size, activities and other relevant information of the parent organisation and its relationship with the library.

* Description of the mission,goals, policies, procedures, services, and other information of the library.

* Library organisational chart, description of basic activities of the divisions and departments of the library.

* Organisational charts of the departments, description of activities performed by the departments, names and positions of the library staff of the departments;location of the departments and work-flow.

* Description of classification scheme followed, catalogue code used, charging system, and other technical works.

* Job description of individual new employee,names of immediate supervisor and co-workers.

* A short history of the library and its progress reports.”

To the above-mentioned study materials for orientation the following items should also be added :

(a) instructional materials hi the use of automated systems in the academic library operations or the state-of art activities of the library—whether manual, partially automated, or fully automated, with complete technological and communication supports; and

(b) personal instructions with course materials supplied by the supervisor.

Nature of Study Materials for Orientation

During the period of preparation of the Study Materials the following points should be taken into consideration:

i) the Study Materials should be prepared to supply with the information at a time on a single task;

ii) those materials should be so designed as to improve the skill of the new entrant; iii) new entrant should be able to utilise independently the study Materials;

iv) the Study Materials should be used for practical training during orientation period and

v) new entrant should have the oopportunities for self-assessment about his/her knowledge and professional skill,

Indeed the preparation of Study Materials for orientation is a difficult task. For the production of quality materials it needs considerable technical skill and education. The Study Materials for orientation should be designed to supply with the enough information with specific purposes. It should be noted that a ‘Library Manual’ cannot be treated as a Study Material for orientation which should be given to the new entrant on the activities and operations actually being done in the academic library. The orientation course should continue for three months at the maximum, although the major activities of orientation should be taught during the first few weeks.

The orientation programmes should be evaluated from time to time at the end of specified periods by collecting sufficient data for evaluation of those programmes and not of the persons involved in those. In order to measure the effectiveness of the orientation programmes the best method would be the analysis of itnput provided by the new entrant who has undergone through such programmes.

It is to be noted that the University Grants Commission of India has been encouraging continuing education and staff development. This Commission is

supporting the Academic Staff Colleges established in different universities in India to provide continuing education in the form of Orientation or Refresher courses for the librarians and teachers of library and Information Science of the Universities.

Sample Questions

I. Long Answer Type

1. What should be the qualities of a newly appointed employee in an academic library? Discuss.

II. Short Answer Type

1. What is the basic difference between 'Training' and 'Orientation' in the context of the Academic Library System? Describe the 'Objectives of Orientation'.

III. Objective type

(Mark the *one* right answer out of the following four alternatives with the tick-sign ✓)

- A. is concerned with theoretical knowledge.
- B. covers both the theoretical and practical knowledge.
- C. is related to practical knowledge.
- D. is not connected with knowledge.

Answer is 'B'

Select Readings

1. Jerris, Lind A. Effective Employee Orientation. New York, AMACOM, 1993.
2. Sullivan, Maureen ed. Developing Library Staff For the 21st Century. New York, Haworth Press, 1992.

Unit 23 □ Job Description And Job Specification

Job Description

The Job Description becomes a formal document describing duties and responsibilities of the library personnel in an academic library. But the Job Description may vary from one academic library to another considering the type, size, number of users, nature of users' services, total collection, methods followed in technical processing, circulation per day, rendered, and infra-structural facilities available. The following items should be included in the Job Description records :

- “1. The job title.
2. The purpose of the job and its relation to other jobs in the unit.
3. Job activities and procedures including a description of the tasks to be performed and the time-limit specified.
4. The duties and responsibilities of the incumbent with some flexibility, if required. The enumeration of tasks and procedures are very important part of the job description.
5. Title of the person to whom the incumbent will report, after completion of the job or any problem relating to the job performance.
6. Salary scale of the incumbent.
7. Academic and professional qualifications required.
8. Experience or training required.
9. Promotion to next higher post.
10. Methods of performance rating”.

(Mahapatra, Pivush Kanti. Human Resource Management in Libraries. 2002, pp.29-30).

The Job Description is the primary characteristic of personnel management in an academic library. It may be used for various purposes, viz. planning the overall establishment, review of the organisational structure including transfer of incumbent from one post to another post, job evaluation, preparation of lists of duties and responsibilities for the employees, responses to the applications against the advertised posts, staff appraisal and the like.

Job Specification

With regard to the suitability of an individual in an academic library for the

immediate post and for promotion thereafter as well as the attitude of the person to adjust with the work environment of that library is very important. Academic library appoints from time to time a number of personnel of various categories constituting the basic work-force. Hence selection of individual as new entrants is significant because

i) a newly appointed individual has to perform some jobs and is assigned some responsibilities for the time being and for the future in various capacities ; and

ii) he/she has to accept the work environment with full motivation and should be psychologically attached to that particular academic library.

For every new post — whether professional, semi-professional, and supporting staff — the advertisement should clearly mention the job specification.

As already mentioned, the term 'job' may be defined as a piece of work or pieces of work to be done by a person. When the job is completed' it leads to a result and becomes a part or activity. In fact, a job which is assigned to a particular person to be done within a definite period, is the smallest unit of a planned network of activities. Hence job should be efficiently specified to obtain the maximum organisational benefit. It is the duty of the library management to identify the task that should be included in the job. Thus a job becomes the integral part of a single function, process or activity and the principle of job specification should be closely connected with the performance of the definite function.

It should be noted that there are in an academic library some jobs which are already fixed and some others which are rotational in nature, i.e. some jobs are performed as routine activities and some jobs are done by new technology introduced in the library to meet readily the needs of the users. Hence the library management may get the idea and information as to the tasks actually to be performed by any individual having specific job through the job analysis which ultimately helps to assign him her that job. Each library employee with a specified job is responsible to the person holding the next higher rank, who supervises his/her job.

The job specification is applied to the description of the physical and mental capabilities needed for the stipulated jobs. Thus the specific skills of the job needed, ability to handle the job, judgement needed in decision making and the experiences need to undertake the same. Occasionally it is found that a specific job needs some special qualifications, e.g. the qualification of a Conservation Officer in an academic library should have sufficient knowledge of library conservation and preservation, or the qualification for the post of Senior Technical Assistant/Assistant Librarian in charge of the Computer Section of an academic library requires efficient command over computer science and its application in the management of the libraries.

Sample Questions

I. Long Answer Type

1. What do you understand by the expression 'Job Description'? Enumerate the items to be included in the 'Job Description Record.'

II. Short Answer Type

1. Write a brief note on the 'Job Specification'.

III. Objective Type

(Mark the *one* right answer out of the following four alternatives with the tick-sign ✓).

1. The 'Job Description Record' must include
 - A. designation of the post.
 - B. details of any academic library.
 - C. income and expenditure of the academic institution.
 - D. annual report of the library.

Answer is 'A'

Select Readings

1. Stuart, Robert D. and Moran, Barbara B Library and Information Centre Management. Englewood, Colorado, Libraries Unlimited Inc., 1993.
2. Terry, George. A Guide to Supervision. Homewood III, Irwin, 1982.

Unit 24 □ Motivation and staff Participation

Motivation

Motivation implies an incitement of the will. It is the quality of initiating action in oneself and an attitude to get oneself involved in any job of activity assigned to one. Such an attitude is more or less an inherent attribute of each person.

There are several aspects of each job description which an employee must perform through training and the particular job performance would be better after each training programme. One of such aspects of training objective is motivation, because training does not signify merely class room teaching. Hence any library personnel should undergo appropriate training to perform more efficiently the assigned job. But efficiency of a person cannot be developed through mere class room teaching and practical training, unless if he/she is not mentally involved and desire to perform the job sincerely. This mental involvement of a person with the assigned job could be enhanced by training through encouraging a competitive attitude, and revealing exploring his/her unknown potentiality. It is only the well-designed training programmes which can motivate any library staff by specifying their appropriate jobs.

Staff Participation

It is experienced that in the present context of innovation, productivity and competition the rapidly changing computer and communication technologies, networking systems, global access to information and sundry demands of the users have compelled to academic library professionals to be more participative and collaborative. Thus the commitment of the library personnel to change behaviour and service pattern could only be achieved through participation and collaboration. Hence the supervisors and subordinates at all levels of employees in an academic library require to know the significance of participation and relationships.

The Staff Participation in an academic library means the participation of the library personnel at all levels in the activities like the solving the problems, planning, designing, and decision-making. Because of competition and improved productivity more personnel in an institution need to be positively involved in the library activities in the participatory manner.

Participative culture in an academic library does not mean only cooperation and communication among the persons working in that particular library.

Needs

- i) The staff Participation creates a cooperative atmosphere that encourages, integrates and relies upon the individuals for expressing ideas and implementing some of them into activities through the exchange of knowledge and views among themselves. Thus the act of staff participation signifies an act of shared creation as well as shared discovery.
- ii) It makes a person self-confident with cooperative attitude.
- iii) It helps the library personnel to be acquainted with innovations in the discipline of library and information science for the improvement of productivity by updating the databases.
- iv) It is essential to set up working relationships with work groups based on horizontal connections for the efficient utilisation of the staff resources and for the encouragement of creativity among the library personnel.
- v) It is necessary for the individual innovations to flourish in the group.
- vi) It makes the group of personnel more aggressive in pursuing change to workflow for effective operations upholding the morale at a high level and maintaining a positive working environment with technical services.
- vii) It assists to take decisions instantaneously through highly sophisticated electronic media.
- viii) It would help to avoid repetitive jobs within a department or within more than one department, saving manhour and cost, to participate in resource sharing of various subject fields under a broad discipline and to streamline the job description for efficiency and accomplishment of jobs within a strict time limit.

Benefits

The immediate benefits of Staff Participation are as follows:

- “1. Removing the artificial and... functional barriers between public and technical services and instead promote all activities as service for the users.
2. Providing a structure that should encourage, over time, greater collaboration among librarians in the delivery of services,...
3. Taking decisions at lower levels in individual units by encouraging lateral relationships and interactions rather than reliance on the hierarchy,
4. Creating a networked organisation which is in itself the most critical resource,

5. Motivating the library personnel to deliver appropriate results” (Mahapatra, Piyush Kanti. Human Resource Management in Libraries. 2002, p. 134).

Thus all the staff-members should be involved in groups to design and implement a process in respective units. Besides, the committees and groups should deliberate formally in the meetings. But apart from the personal interaction within units and cross-sections of groups are essential the clear understanding of the situation and taking decision. Thus in planning, designing, organising and implementation the staff participation approach is needed in the whole academic library system.

Sample Questions

I. Long Answer Type

1. elaborate the needs and benefits of teh staff Participation in an academic library.

II. Short Answer Type

1. Define the term ‘Motivation’ in the context of the academic library system.

III. Objective type

(Mark the *one* right answer out of the following four alternatives with the tick-sign ✓).

1. The Staff Participation creates
 - A. a sense of aggressiveness.
 - B. a cooperative attitude and atmosphere.
 - C. a non-working environment.
 - D. unproductive databases.

Answer is ‘B’

Select Readings

1. American Library Association. Staff Development: A Practical guide. Chicago, ALA, 1992.
2. Heilman, Madeline and Harvey, Hornstein. Managing Human Forces in Organisation. Homewood III, Irwin, 1982.

Unit 25 □ Staff Training for new services and new Technology

The modern computer based communication and information technology offer a new challenge to staff training, of which elaborately has been discussed in the unit 22. Hence a review of the staff training programme is needed because the new technology has opened up novel opportunities to introduce innovations in library services.

In fact, through the new technology electronic communication systems in an academic library, efficiency, speed, ability and accomplishment of operational activities may be enhanced to a great extent. Such systems can contribute to distinct quality control in interaction among library personnel.

Also electronic group mail can diminish group coordination costs. During such staff training period the scheduling constraints of getting everyone into the same room at the same time would disappear, since electronic mail is asynchronous, i.e. everyone can 'talk' at his/her convenience and everyone can 'listen' at his/her convenience.

Because of numerous facilities like instant communication within the library and outside the library for administrative purposes and information exchange the libraries should change over from manual administration to electronic management to explore and exploit the human resources for individual as well as group activities. The library staff, therefore, must be trained in electronic communication which is a distinct departure from the traditional communication system.

Under this newly developed library surrounding the staff must be trained in the latest technological innovations and electronic infra-structural facilities which have radically changed the human behaviour. The members of the library staff should be well acquainted with the highly capable computer hardware, a variety of software, networking and information technology. They should be aware of and willing to accept the recent technological developments.

Hence in these changed circumstances, the library personnel must be psychologically involved in groups to design and implement a process in respective units of a library.

Also a sense of belonging to the library among the employees should be instilled through staff training programme in electronic technology.

Thus staff training is essential for new services with new technology.

Sample Questions

I. Long Answer Type

1. “Staff Training is essential for new services with technology”. — Elucidate.

II. Short Answer Type

1. What is New Technology in an academic library? Write, in short, about it.

III. Objective type

(Mark the *one* right answer out of the following four alternatives with the tick-sign ✓).

1. The New Technology in an academic library works through
 - A. electronic communication system.
 - B. traditional communication system.
 - C. manual administrative system.
 - D. computerless information system.

Answer is ‘A’

Select Readings

1. Gurnsey, John. The Information Professions in the Electronic Age. London, Bingley, 1985.
2. Prytherch, Ray. Information Management and Library Science : A Guide to the Literature. Aldershot, England, Gower Pub., 1993.

Module VI ■ FINANCIAL MANAGEMENT

By the expression ‘Financial Management’ initially was meant ‘raising of fund’ only and some other aspects like ‘financial decision - making’, ‘solving of financial decision - making’, ‘solving of financial problems’, and the like had been neglected much. But now-a-days the concept of ‘Financial Management’ of academic libraries has undergone a great transformation. The modern concept of ‘Financial Management’ lays much importance on the wise utilisation funds, dynamic decision -making policies, and solution of complex management problems analytically by raising funds economically as well as utilising the same efficiently and effectively. Hence ‘Financial Management’ of an academic library appears to be an integral part of the overall management. An academic library being a service component of its parent institution and a non-profit organisation has a special obligation to manage its finances in a judicious manner for its services to a specific segment of the community totally free or at a low but nominal membership fees and late fines to discourage misuse of its services.

Definition

The term ‘Financial Management’ is defined as a managerial activity related to the planning and controlling of financial resources of an academic institution.

Scope

Any organisation acts in three important areas, viz. (i) finance, (ii) production and (iii) marketing. The funds which are received from various sources or investors are invested to render services or produce selected products. Thereafter the services and products are marketed.

In case of academic library ‘production’ is concerned with ‘Collection Development’ by purchase, gifts/ exchanges and resource sharing through electronic media; ‘marketing’ includes services rendered to clientele or users — students, scholars, teachers, staff, and community in the restrictive sense.

Hence ‘Financial Management’ of an academic library is related to the principles and procedures which are concerned with financial operation of the parent institution include procurement, distribution and utilisation of funds, balance of revenue as well as expenditure, general control and evaluation of financial matters.

The Senate/Syndicate/Executive Council/Governing Body of the parent institution is generally responsible for :

- a) Procurement of finances.

- b) Investment of funds.
- c) Getting the sanction for the budget,

On the other hand the academic library, on the whole, reveals its own following responsibilities :

- i) Efforts towards procurement of finances from sundry sources including individuals;
- ii) preparation of annual/interim/long-term budget for fulfilling the aims and objectives;
- iii) management of the appropriated funds;
- iv) spending of the available funds within a specified period;
- v) Maintenance of accounts of income and expenditure; and
- vi) Preparation of an Annual Report about financial operations and management.

Sample Questions

I. Long Answer Type

1. Narrate the scope of 'Financial Management'.

II. Short Answer Type

1. What is 'Financial Management'? Define this expression briefly.

III. Objective type

(Mark the *one* right answer out of the following four alternatives with the tick-sign ✓).

1. 'Financial Management' means
 - A. raising of funds.
 - B. solving financial problems.
 - C. managerial activity related to planning and controlling of financial resources.
 - D. financial decision - making.

Answer is 'C'

Select Readings

1. Johnson, E. M. Protecting the library and its resources : A Guide to physical protection and insurance. Chicago, American Library Association, 1963, (LTP Publication No. 7).
2. Oslen, H. A. The Economics of Information : Bibliography and Commentary on the literature. 1971

Unit 26 □ Library Budget, Budgeting Techniques

The Budget of an academic library which is the financial statement of that particular library for a specified period, generally for one year or for six months, is based on the estimate of expected income and expenditure of the concerned library. Following the aims and objectives of the parent institution it is prepared in the best interest of the services to be rendered to the users that academic library budget proposes a financial analysis of its comprehensive, logical and progressive policies with a view to convincing the appropriate authorities about the needs and means to fulfil its undertakings.

Needs

The following are the needs for the preparation of the budget of an academic library:

- i) It helps, to the economic as well as planned expenditure and judicious saving of the limited funds available.
- ii) It provides an opportunity to review the existing plan and functioning of that particular library.
- iii) It assists to redesign the future programmes in consonance with the changed policy and availability of the funds.
- iv) It meets the frequent changes for the effective management and administration of the library economy.

Objectives

The primary objectives of the academic library budget are to

- (a) systematically coordinate and correlate the resources with the expenditure;
- (b) ensure a planned as well as meaningful expenditure ;
- (c) control the overall expenditure of the academic library; and
- (d) serve as an instrument for planning the expansion of that academic library.

Planning

The budget planning of an academic library should note of the funds already available, expected grants, revenues to be accrued from all possible sources, estimated expenditure on maintenance of the existing services, schemes already adopted for its development, and implementation of its future policy.

The budget can be of short-term, i.e. annual or bi-annual, and long-term, i.e.

quinquennial, duration. It is not merely an annual financial report or statement of the financial targets achieved during the previous year, but it clarifies the financial position and commitments of the ensuing year or years. The appropriate authorities generally fix up the target date for submission of the library budget which, therefore, should be planned sufficiently in advance in the form and procedure prescribed by the parent academic institution. For preparation of the budget the concerned librarian may consult the heads of the academic departments, faculty members, in-charges of the departmental/seminar/campus libraries for a more meaningful planning of the resources in some particular areas of study as well as research and for creating their interest in the library programmes.

Classification

The budget-items of expenditure may be classified on the basis of the following three features :

(A) Periodical — Generally the academic library budget is prepared for a specified period, e.g. annual/calendar year, financial year/bi-annual/quinquennial, for two types of expenditure, viz. (i) Recurring that includes expenditure on salaries, electricity and telephone charges, postage, stationery supplies, heating as well as cooling, water tax, repayment of debt although in nature it is non-recurring but since payment is made every year in instalments such payment is included under recurring expenditure, and similar other items and (ii) Non-Recurring/Contingent Expenditure or Capital Outlay for some physical and tangible assets like books and other reading materials, audio-visual aids, equipments as well as furniture, buildings not immediately essential.

(B) Objective —The objective expenditure is by nature of the library materials acquired or the type of services derived out of them. Such expenditure includes purchase of books, periodicals, other reading as well as audiovisual materials; preservation and maintenance through binding of books as well as journals and the like; construction, extension and maintenance of library buildings, purchase of equipments, furniture and fittings, electric as well as telephone charges, salaries as well as wages, expenses for postage, book-exhibition, conferences and seminars and the like.

(C) Departmental — Budget estimates may be prepared for different departments under the following purposes :

(i) Acquisition, (ii) Classification, (iii) Cataloguing, (iv) Reference Service, (v) Circulation of reading materials, (vi) Purchase of periodicals and serials, (vii) Organisation and Administration.

Through this budgetary system all sections of the academic library would get an opportunity to participate in the preparation of the budget by assessing their estimates by themselves and assisting the heads of the respective sections to keep watch as well as control over the expenditure. This system also helps all departments of a large academic library to provide funds in the budget to be proposed,

Preparation

For a well-planned budget of any academic library preparation is needed throughout the year keeping view of the following practical steps methodically :

(i) *“Opening a general budget file* : All policy decisions on various aspects of the budget items taken from time to time, should be recorded subjectwise and maintained properly in a file.

(ii) *Estimating the income* : Details of the sources of the estimated income should be maintained and noted from time to time.

(iii) *Sectional budget file* : The different sections of the library should maintain respective files of their financial needs to be incorporated in the total budget of the library.

(iv) *Exploring the new sources of revenue* : Efforts should be made to explore the new sources of income to meet as far as possible the estimated expenditure and minimize the deficit,

(v) *Justifying the items* : To make the budget comprehensive as well as convincing, the proposed items should be properly explained, argued and justified; giving reasons for the increase or decrease of the estimated expenditure.

(vi) *Working out the exact expenditure* : To make the budget realistic, the exact and actual amount of expenditure should be explained showing the sources of revenue and then the actual amount required be worked out” (Sahai, Shri Nath. Academic Library System. New Delhi, Allied Publishers Ltd., 1990, p. 101).

BUDGETING TECHNIQUES

For preparing the budget of any academic library, small or large, the following techniques should be adopted to make it more meaningful :

(I) Save in case of a newly established academic library, the budget figures of the previous year, the appropriations done during the current financial year and the estimated expenditure of the next year should be put on a comparative table before finalizing the next budget. Besides, budget estimates of other similar and comparable libraries should be examined. This technique is called *Comparison with Previous Expenditure*.

(II) Keeping in view the aims and objectives of the parent institution, the needs and requirements of an academic library should be assessed in terms of the services to be offered and the work to be undertaken in future. Thereafter, the items of the budget should be drawn and formulated according to the envisaged programmes with modifications, if necessary. This technique is known as *the Budgeting according to the work programmes* which include the items like (a) *Fixed Charges* for the maintenance of the catalogues and other library documents, meeting expenses for reading-room, binding cost, office expenditure, communication charges, and expenditure on the maintenance of the library building including insurance premia against fire, theft and the like; (b) *Modified Expenditure* due to reorganization of the library and its services/ deletion as well as addition of some work programmes, (c) *Expenses for Introduction of the Accepted Norms* against arbitrary practices.

Apart from the two techniques mentioned above, special budgeting techniques by an academic library should be adopted for meeting sudden contingent expenses. The following three issues also in this respect should be taken into consideration:

(III) Sometimes the academic library would face a situation when funds are not available for meeting some new programmes requiring a huge expenditure for providing library materials to new academic departments, arranging longer hours of service involving extra payment and the like. The parent institution sometimes may not be readily able to release fund in such cases. Hence the academic library has to find out the means through specially sanctioned *Capital Liquidating Fund* spreading over several years and phased out according to the financial needs and commitments of the library.

(IV) In order to meet the unforeseen expenditure out of pre-allocated library budget, the academic institution has to arrange *Contingency Fund* for the library as its financial support during emergencies,

(V) In an academic library the *Revolving Fund* that provides working capital which is the income derived from a source other than within the scope of the main activity of the library maintaining its control over that 'Revolving Fund', the characteristic of which is that the income and expenditure in this account should theoretically balance or wash each other out at the end of the year to leave a zero or nil balance of the available funds and, as such, it is sometimes called a 'zero' or 'wash' account. As for instance, in case of the photocopying and photostat services provided by the library to the readers the capital expenditure incurred to purchase photographic equipments, payment of salaries as well as wages to the staff employed for those services and for establishing the unit which involves expenses on items like almirahs, chairs, registers, tables and the like, which are credited to the account of the 'Revolving Fund'. On the other hand, fees realised on photocopying etc. services from users are

credited to that account. Likewise, the publication account can also be operative out of the income from the sales of institutional publications and the cost of printing, editing, advertising and mailing is charged to the 'Revolving Fund' .

Hence aperiodic appraisal with details of the ongoing programmes and proposals with their financial implications is prerequisite for the person entrusted with the task of the preparation of the budget watching over different allocations, deficit or surplus grants with regard to the particular items of the library budget and review of the fund-position from time to time at the beginning and at the end of the first quarter of the financial year and afterwards in the final year in every month for ensuring the optimum utilization of the library fund.

Sample Questions

I. Long Answer Type

1. What do you mean by 'library budget' ? Discuss the needs and primary objectives of an academic library budget.

II. Short Answer Type

1. Write about the practical steps to be adopted for preparing a well-planned academic library budget.

III. Objective type

(Mark die *one* right answer out of the following four alternatives with the tick-sign ✓).

1. One of the ritht step in the preparation of an academic library budget is
 - A. closing a general budget file.
 - B. estimating the income.
 - C. overlooking new sources of revenue.
 - D. neglecting the exact expenditure.

Answer is 'B'

Select Readings

1. Library Trends. 28, 1979, pp. 25 - 46 (Cohen, J. and Lesson, K. W. Sources and Uses of Funds of Academic Libraries).
2. Margo, C. Trumpeter and Richard, S. Rounds. Basic Budget Practice for Librarians. Chicags, ALA, 1985.

Unit 27 □ **Financial Resources**

Financial Resources of an academic library may be grouped under two classes as follows :

A. Primary Resources. B. Secondary Resources.

Primary Resources

The Primary Resources consist of

- I) Institutional allotment.
- II) Endowment Funds.
- III) Individuals.
- IV) Grants from Various Agencies.
- V) 'Government Grants - Central as well as State.

I. Institutional Allotment

The primary responsibility of funding the school/college/ university is of the respective academic institution which must sanction the fund for its library by providing it in the budget of that particular institution. The provision is met as unassigned grant/a lump sum amount and in the form of meeting the expenses individually due to some specific items. Some universities allocate funds direct to the research scholars or to the research projects, instead of the library. But such a system is not desirable for coordinating the library resources and putting effective control over the institutional grants.

II. Endowment Funds

These funds are created due to the donations received from some philanthropists interested in the development of education. These persons usually express their wishes whether such funds would be utilised for a general development of the library or for specific purposes like purchase of books or computers and the like. The librarian is authorised to withdraw the amount required from such funds deposited in the institutional account in accordance with the terms and conditions formulated by the donors.

III. Individuals

The individuals — both male and female - donate from time to time in the memory of their beloved/revered one an amount either for a definite purpose, like the purchase of furniture/books or overall development of the library. They may remit

their amount at *ad hoc* basis for one time or at regular intervals to meet the expenditure earmarked for the said purposes.

IV. Grants from Various Agencies

Sometimes special grants are received from some sources other than governments and institutions. Such grants are generally emanated from the international agencies like the UNO, UNESCO, UNICEF and renowned foundations and the national agencies like the UGC of India and UK, ICCR, ICHR, ICPR, ICHR. Among them, however, the University Grants commission (UGC) constituted by the Government of India under Act III of 1956 of the Parliament of India, has been providing substantial grants to colleges and universities in India for various academic programmes and development of those institutions especially for construction their library buildings and for purchasing books and subscribing to journals/ periodicals necessary for teaching and research. A sufficient amount of funds has been provided by the UGC to various Indian colleges and universities out of the Wheat Loan Exchange Programme granted by the U.S.A. for buying books and journals in the areas of Humanities, science, Engineering and Technology. The UGC has also released Book-Bank grants to various colleges of India.

The University Grants Committee, a non-statutory and non-governmental body, set up in 1919 by the UK Government has also been acting as a buffer between the Government and the universities to safeguard the latter's autonomy and arranges for the allocation of grants as well as distributes the funds received from the Government among the universities for' among other purposes, development of university libraries in the U.K.

V. Government Grants

The Governments — both Central and State — are the major providers of funds to the college and university libraries. Such funds constitute two types, viz. Recurring Grants received every year to meet the expenditure due to the salaries and allowances of the library personnel, daily office expenses, contingency expenditure etc. and Non-Recurriug Grants received, as the capital fund, occasionally for a definite period within a financial year to meet the one-time expenses for specific purpose like the erection of the library buildings, purchase of the furniture equipments, arrangement of fittings* and the like. Bom the Central and state Governments may release grants for library development and management through their affiliated agencies.

B. Secondary Resources

The Secondary Financial Resources of an academic library include

- I) Membership Fees.
- II) Fines.
- III) Reprographic including Photographic Services Fees.
- IV) Computer including Internet Services Fees.
- V) Inter-library loan / Resource Sharing / Referral Services Fees.

I. Membership Fees

Due to financial stringency now some academic libraries, especially the university libraries, charge membership fees for the library services by (a) their own students and scholars on yearly/semester basis, although it is quiet unreasonable to ask the students/scholars to pay membership fees for the library use as they are already paying tuition and other relevant fees at the time of admission, and (b) students/scholars and teachers of other institutions in the above manner for the use of library resources and other services. The membership fees, so realised, do not and cannot meet the total cost of services provided by the academic library, since they constitute relatively insignificant sources of income of the academic institution.

II. Fines

Library fines are charged generally for (i) overdue books, (ii) loss or damage of books and library materials, and (iii) issue of duplicate borrowing/membership cards. Such fines help the academic to maintain discipline among the users and to render better library services, although the amount received on the account would be meagre.

III. Reprographic including Photographic Services Fees

For the supply of xerox/photostat copies of the non-issuable library documents and rendering the reprographic including photographic services the academic library in order to promote study and research charges nominal fees from its users — both internal and extenal.

IV. Computer including Internet Services Fees

The users of an academic library who belong to the same institution and other institutions may be allowed to use for study and research puiposes the computers and avail of the Internet services, for which that library may charge fees at the nominal rate per hour basis,

V. Inter-library Loan/Resource Sharing/Referral Services Fees

Any academic library may charge fees for the services rendered for inter-library loan or resource sharing and referral services from its own users and other for their

reference purposes. It may be that sometimes a desired book / library material is not available in that particular library and it has to be procured from other library on inter-library loan basis or an information cannot be supplied to the users from the own resources and in that case through computer based networking that particular library would have to search the required materials from other sources through the resource sharing with other library/libraries or any type of information which cannot be met with from the existing collection and so the reference librarian/assistant has to refer the user to other library/ information centre where he/she may obtain the wanted information/ book(s). Naturally for such services the parent library has to pay to other library/ information centre. For such services an unavoidable payment that particular will charge fees to the clientele.

Sample Questions

I. Long Answer Type

I. Which items constitute the Primary Financial Resources of an academic library? Discuss.

II. Short Answer Type

1. What are the Secondary Financial Resources of a library ? Discuss in the light of academic library system.

III. Objective Type (Mark the *one* right answer out of the following four alternatives with the tick-sign ✓).

1. Referral Services Fees of an academic library are included under the
 - A. Primary Financial Resources.
 - B. Secondary Financial resources.
 - C. Endowment Funds.
 - D. Government Grants.

Answer is 'B'

Selected Readings

1. Parry, Thomas (Chairman). Report of the Committee on Libraries (University Grants Committee) .London, HMSO, 1968.
2. Thompson, James. An Introduction to University Library Administration. London Clive Bingley, 1970.
3. Withers. F.N. Standards for Library Service. Paris. UNESCO. 1971 (Mimeograph)

Unit 28 □ Resource Allocation

The financial resource allocation of an academic library may be viewed with respect to the following items which may also be of two types, namely,

A. Recurring Type.

B. Non-Recurring Type.

The *Recurring Type* of expenses are due to

i) Salaries of the library personnel, which include the Basic Pay, Dearness Allowance, House Rent Allowance, Provident Fund, and other Incentives.

ii) Contingencies for stationery including catalogue cards and book processing materials. Printing of library materials, Binding of books and Journals/Periodicals, Electricity Charges, Telephone Charges, Postal Expenditure, Overtime and other Allowances, Insurance Premiums, and other unforeseen contingent expenses.

iii) Expenditure due to the Resource Sharing/Library Cooperation Services.

iv) Miscellaneous Expenditure.

The following *Non Recurring Type* of Expenditure includes

i) Construction of a new library building/alternatives measures to be undertaken if a new building could not be constructed.

ii) Purchase of books and journals/periodicals including the back volumes of periodicals, rare books and manuscripts.

iii) Subscription to current journals/periodicals.

iv) Purchase of library furniture and equipments including digital instruments.

v) Purchase of new computers and their accessories including CDs, if necessary.

About the fund allotted to the purchase of books G.L. Trehan in his *College Library Management: Academic Library System, Services and Uses* (New Delhi, sterling publishers Pvt. Ltd., 1985) has remarked:

“The book funds allotment should be apportioned and allocated as under :

1) Fixed charges which recur annually and cover renewal of journal-subscriptions.

2) General fund for purchase of reference books, books of wide general interest and recreative reading.

3) Departmental fund which is allotted to departments generally on the basis of actual expenditure of the previous year and recommendations of the library.

4) Special fund for purchase of text books for poor student.”

Further, the allocation of fund for book purchase should consider the teaching practices and the methods adopted in different departments. The teaching programmes which are primarily lecture-based often need pupils to have ready access to a small number of basic texts. On the other hand, if the courses are based mainly upon the tutorial assessment of individually assigned work, there is a corresponding requirement for pupils to have access to a wide range of materials, rather than to have much emphasis laid on one or two text books. Also the amount of research already being earned out, or the possibility of the development of research activities within the particular departments requires serious consideration when finalising the allocation of financial resources. Indeed effective deployment of financial resources depends upon the number of separate service points which an academic library has. If there are several service points, overheads would be greater proportionately, due to necessity of duplicate basic reference books like bibliographies, encyclopaedias, and dictionaries at various service points. Also other consideration to be taken into account in deciding upon the allocation of financial resources is the assessment of the prospects of cooperation with neighbouring libraries in the provision of some specialised resources.

However, with reference to India 1957 the Library Committee of the University Grants Commission in its *Report* recommends that 50% of the total expenditure of a university library should be spent on books, periodicals and other reading materials, while the other 50% should be spent on the staff.

S.R. Ranganathan has, in *Academic Library System : Fourth Plan Period (Library Science, V.2.4, 1961, pp. 32, 7-328)*: suggested the resource allocation as follows

i) Staff	50%
ii) Books and other Reading Materials	40%
iii) Other Expenditure including Provident Fund, Binding and Other Contingencies	10%

But the present changed situation because of improvement in library technology and unusual increase in prices of all library materials the resource allocations mentioned above need reexamination and revision.

Sample Questions

I. Long Answer Type

1. Enumerate the Non-Recurring Types of expenditure in an academic library.

II. Short Answer Type

1. Mention the items under the Recurring Type of Expenses in an academic library.

III. Objective Type (Mark the *one* right answer out of the following four alternatives with the tick-sign ✓).

1. Broadly the financial resource allocation falls under

- A. Two Types
- B. One Type
- C. Three Types
- D. Five Types.

Answer is 'A'.

Selected Readings

- 1) Evans, G.E. *Management: Techniques for Libraries*. New York, Academic Press, 1983.
- 2) *Library Trends*, 28, 1979, pp. 25-46 (Cohen, J & Lesson, K.M. *Sources and Users of Funds of Academic Libraries*).

Unit 29 □ Expenditure Heads

Undoubtedly an academic library is a non-profit but spending institution, although it has to provide services to its users who usually do not pay any amount for such services. Still for some selected services like inter-library loan, resource sharing, searching of databases, and photocopying services the users have to pay a nominal amount. As the academic library is a growing organisation, the number of library materials, users, and personnel grows up continuously and consequently the library expenditure will also increase in course of time, since an academic library, once founded, would become a permanent establishment, money has to be provided for its services. But the nature of its expenditure is governed by some features.

The heads of expenditure in an academic library may broadly be divided under two groups, viz. Non-Recurring and Recurring.

Non-Recurring

Under the Non-Recurring expenditure are included the following items which are again divided under the *Immovable Properties* and *Movable Properties*.

The heads of expenditure to be incurred for *Immovable Properties* are :

- i) Purchase of land for the library building,
- ii) Construction of the library building. Under the *Movable Properties* the heads of expenditure would be as follows:
 - iii) Purchase of new books, rare books, and manuscripts, and back volumes of journals.
 - iv) Subscription to current journals and periodicals.
 - v) Purchase of library furniture- wooden or steel-including almirahs, book racks, book issue counter, chairs, tables etc.
 - vi) Purchase, of library equipments including computers and their accessories, CDs, tape recorders, digital cameras, audi-ovisual aids, digital televisions, short-circuit televisions, air-conditioning machines, room heaters etc.
 - vii) Introduction of Punch-Card System to maintain financial records.

Recurring

The heads/items of *Recurring Expenditure* for an academic library would be :

- i) Salaries including Basic Pay, Dearness Allowances, House Rent Allowance,

Overtime Allowance, and other Allowances to be spent for the library personnel.

- ii) Provident Fund, Gratuity, Pensions, Leave Encashment due to the library personnel.
- iii) Electricity Charges.
- iv) Telephone Charges.
- v) Postal/Courier Service Charges.
- vi) Insurance Premiums to be paid against fire, robbery, theft, and natural calamities.
- vii) Stationery including catalogue cards, book processing materials, punch-cards,
- viii) printing of library forms and the like.
- ix) Mending and Repairing of books and manuscripts.
- x) Binding of brittle books and back issues of journals.
- xi) Repairing of computers and Audio-visual Materials,
- xii) Contingencies.

In order to maintain efficiency in financial management in a large academic library, it is almost essential for the librarian to collect and organise various data revealing the costs of library services for acquisition, classification, cataloguing, processing, circulation, binding, reference service, documentation, resource sharing and the like to justify the proposals of the budget submitted to the parent institution and to strengthen his/her claims for increased grants. Such information portrays the true picture of the relation between the amount spent on a particular service and the units produced by the expenditure. In fact, this process which may be termed as *Cost Control*, supplies not only information about the total cost over a particular service, but also indicates very clearly the bulk of service rendered on that particular field and envisages any modification or improvement in that service.

Sample Questions

1. Long Answer Type

1. What is the difference between Recurring and 'Non-Recurring' expenses of a large academic library? Mention the items which fall under the 'Recurring' Expenditure.

II. Short Answer Type

1. Explain, in brief, the term 'Cost Control' with reference to the academic library system.

III. Objective Type (Mark the *one* right answer out of the following four alternatives with the tick-sign ✓).

1. The expenditure due to the construction of an academic library building would come under

- A. Non-Recurring Expenditure.
- B. Recurring Expenditure.
- C. Contingent Expenditure.
- D. Miscellaneous Expenditure.

Answer is 'A'

Selected Readings

1. Davinson, Donald. Academic and Legal Deposit Libraries: An Examination Guidebook. London, Clive Bingley, 1965.
2. Times Educational Supplement (2790), November 08,1968 (Scott, Peter. Declining status of the UGC, independence lost to Government).
3. Wilson, L.R. & Tauber, M.F. The University Library: The organization, Administration and Functions of Academic Libraries. New York, Columbia University Press, 2nd.ed.

Unit 30 □ Accounting and Audit

Accounting

An academic library in connection with the financial management has two following major issues to consider: (a) Budgetary Planning, and (b) Accounting.

Of these two, Accounting supplies with the information about the financial status and functions of an academic library. This information helps the management, at the highest level, to

- i) plan and control the activities of an academic library,
- ii) evaluate the performances of such a library,
- iii) take decisions about the resources to be invested in terms of time and money, and
- iv) decide about the future functioning of such a library.

The Accounts Department of a large academic library has, therefore, to prepare the undernoted documents to help the management for carrying out the above mentioned four functions :

- a) Preparation of the Financial Statement with cost information.
- b) Drafting of the Report on the activities of that academic library with the summaries of the previous events.
- c) Supply of the Forecasts of the future trends.

Audit

Audit is “an examination of accounts by an authorised person or persons : a calling to account generally: a statement of account”. Simply, it is a scrutiny of accounts or a statement of accounts by authorized financial experts. Since an academic library under an academic institution— whether the school/college/university/institute of higher learning-wholly or partially dependent on public funds, it is ethically almost obligatory to see the grants received from different sources are properly spent. In the auditing process the auditors should examine whether monetary grants received under different heads have usefully been utilised. Hence the prime conditions of Audit are that the auditors should perfectly be honest and should be committed to their duties.

The Audit Report of an academic library reveals its Receipts and Itemwise Expenditure and with necessary limitations, if any, along with the suggestions to maintain cost effectiveness and to avoid unnecessary expenses.

The audit of an academic library reflects also its future prospects and potential areas of its developments.

Sample Questions

I. Long Answer Type

1. What is the basic difference between 'Accounting' and 'Audit' ? Explain the terms clearly.

II. Short Answer Type

1. How does 'Accounting' help the management of an academic library to function? Write in brief.

III. Objective Type (Mark the *one* right answer out of the following four alternatives with the tick, sign ✓).

1. The 'Audit Report' of an academic library
 - A. is not obligatory .
 - B. is almost obligatory.
 - C. does not help to propose the library development programmes.
 - D. does not reflect the activities of the library.

Answer is 'B'.

Select Readings

- 1, Evans, G.E. *Management Techniques For Librarians*. New York, Academic Press, 1938.
Margo, C. Trumpeter & Richards, S.Rounds. Basic Budget Practices For Librarians. Chicago, ALA, 1985.

Unit 31 □ Cost Effectiveness And Cost Benefit Analysis

Cost-Effectiveness

It is a system of analysis of benefits of any particular expenditure to justify whether that expenditure could be utilised more effectively or whether the same benefits are attainable with less expenditure.

According B.C. Vickery there are the following three criteria of assessing performances of a system :

“1) The economic efficiency of a system, i.e. the degree of which it minimize costs in achieving an objective.

2) The effectiveness of the system, i.e. the degree to which it achieves its stated objectives.

3) The value of the system, being the degree to which the system contributes to user needs” (*Information Systems* . London, Butterworths, 1973).

Hence both (a) the economic efficiency of the library services and b) the effectiveness of the services would help to measure of cost -effectiveness of the services by an academic library. The measures of cost effectiveness may be helpful in understanding the impact of the library services in relation to the costs.

Cost-Benefit Analysis (CBA)

It is an analytical technique involving a monetary assessment of the total costs and revenues of a service, paying particular attention to social costs and benefits which do not normally feature conventional costing exercises.

Thus if the value of an academic library service could be measured in monetary terms and compared with cost, then through its value of service, being the degree to which such a service contributes to the needs of the users, the cost-benefit analysis could be assessed.

Sample Questions

I. Long Answer Type

1. Write, in details, about the Cost-Effectiveness in the academic library services.

II. Short Answer Type

1. What is Cost-Benefit Analysis ‘? Write, in brief, about it.

III. Objective Type (Mark the *one* right answer out of the four alternatives with the tick -sign ✓).

1. The Cost Effectiveness is
 - A. Not Applicable to an academic library.
 - B. Does not justify the expenditure in an academic library
 - C. Justifies that expenditure could be utilised more effectively.
 - D. Does not reveal the economic efficiency of an academic librarian.

Answer is 'C'

Select Readings

1. *LibraryTrends*, 28, 1979, pp. 25-46 (Cohen, J. & Lesson. K.W. Sources and Uses of Funds of Academic Libraries)
2. Vickery, B.C. Information Systems. London. Butterworths. 1973.

Module VII ■ RESOURCE SHARING

Definition of Resource Sharing

In the 21st century the undertaking of library networking programmes to help the information resource sharing among the libraries has almost become a common feature. The term 'Resource Sharing' means a wish to share library books as well as other materials, bibliographical data, facilities and precisely sharing the wealth of human knowledge.

In fact, inter-library loan facilities and exchange of documents as well as other library materials become the primary functions of Resource Sharing. In spite of remarkable changes in the concept and techniques in the modern electronic environment, the aims and objectives of such functions still remain more relevant, so James E. Rush has written: "Although resource sharing in this traditional conception is important today, it cannot continue to be justified, much less supported, as an important means of sharing resources because: (1) It is labor (or labour) intensive and therefore quite costly (and such costs will only increase); (2) it causes resources to be out of the reach of everyone but the client to whom they have been lent (in fact, they are out of the reach of everyone during transit); (3) it involves distribution costs (i.e. packaging, shipping, receiving, record-keeping) that are significant and increasing; and (4) it is not timely, frequently taking a week or two to get materials into hands of a client. Traditional resource sharing also reflects too limited a view of what resource sharing should encompass."

Utilities of Resource Sharing

Hence Resource Sharing, in the modern sense, in the academic library system is necessary to

- (i) decentralize and democratize the information which should be made readily and uniformly available as far as practicable;
- (ii) increase steadily the efficiency to cater all types of needs;
- (iii) share cooperatively the resources of the libraries belonging to a particular country or most of the countries of world;
- (iv) mark carefully the division of function based upon proper utilization of the cooperative networking programmes;
- (v) specialize gradually in the collections and interest of individual libraries in order to reduce wasteful duplication of intellectual effort and the expense incurred in providing duplicate coverage of the same materials;

(vi) create a sense of responsibility by the individual library to serve others and to support the costs of operating those particular collections ;

(vii) express willingness on the part of the libraries to cooperate in a responsible as well as voluntary manner and accept some common standards of collection, classification, cataloguing and operation methods in the voluntary but responsible manner;

(viii) form a new perception of the library as a centre for all types of information services both for the librarians and users;

(ix) identify the risk of loss of individual achievements;

(x) cooperate effectively with adequate resources, administrative efficiency, and swift communication;

(xi) maintain an attitude of flexibility and experimentation by all the participating libraries;

(xii) increase the opportunities for improving the comprehensiveness of coverage or reducing costs ;

(xiii) diminish the number sources which the user may check in a particular discipline and assist for deciding appropriate or feasible new library services through greater cooperation and coordination of services in the participating libraries;

(xiv) provide better services and more facilities to the users without corresponding proportionate increase in individual and personal expenditure ;

(xv) encourage the cooperative service instead of individualistic library service by merging into a single unit with a vast pool of library resources; and

(xvi) operate the libraries and disseminate knowledge in a fruitful manner through cooperation and sharing experiences of the modern library movement.

Thus the modern concept of Resource sharing becomes the coordinated efforts of all the participating libraries in a particular library cooperation system in online. The computerised databases with the data communication networks make them available to one and all who would desire to have access, and the information resources to be retrieved for teaching as well as research purposes. In this respect the electronic media also provide some additional facilities to the students and teaching staff.

Sample Questions

I. Long Answer Type

1. Enumerate the utilities of 'Resource Sharing in the academic library system.

II. Short Answer Type

1. Briefly define the term 'Resource Sharing'.

III. Objective Type (Mark the *one* right answer out of the following four alternatives with the tick-sign ✓).

1. 'Resource Sharing' in an academic library is possible through
 - A. Library Networking.
 - B. Library Loan.
 - C. Circulation Work.
 - D. Processing Method.

Answer is 'A'

Select Readings

1. *Encyclopedia Dictionary of Computer science, V4*. New Delhi, Anmol Publications, 1989.
2. Guha, B.ed. *Library Information Science Horizon B* (Misha, V.N. *Resource Sharing*).
3. Khanna, J. K. *Manual For Administering Academic Libraries*. New Delhi, Beakon Books, 1997.

Unit 32 □ Organization of Resource Sharing

Resource Sharing Programmes based on computer provide convenient and specific access to expanded and consolidated information resources and database resources, databases of individual libraries and interconnected libraries in Resource Sharing Organization. The machine-readable formats for Resource sharing organization require the following factors to be considered :

- “ 1. Hardware and operating systems with maintenance facilities;
2. Application (of) software/ interface software and network connectivity software;
3. MODEMS and other peripherals;
4. Vendor support and contractual requirements;
5. Transferable bibliographic format and record structure;
6. Access to communication network;
7. Access to Internet;
8. Ownership and licence of databases, information and products;
9. Training of personnel and end-user assistance requirements;
10. CD-ROM drives;
11. CD-ROM network resources;
12. Local Area Network (LAN) facilities among libraries in the cooperative collection management project” (Mahapatra, P. K. *Collection Management in Libraries I* New Delhi/ Ess Ess Publication/ 1999 pp. 187-188).

As already mentioned, the organization of Resource Sharing is primarily possible through the computerized system facilitates cooperative collection management. To organize such a system it needs capital expenditure for installation of the computer system and other infra-structural facilities, although considering the access points and services this system is cost-effective. The significant feature of it is that it saves money and time for access through electronic media. Harold Billings remarks: “There are more reasons to turn to inter-institutional information resources sharing these days than there were when the present cooperatives were being organized less than 20 years ago. First, libraries have had such success with resource sharing in the areas of bibliographic control and interlibrary lending that there is a natural tendency to turn towards cooperation as a means of solving other information difficulties. If it worked once, let’s try it again, Second, it is apparent that individual libraries cannot solve alone the information crisis and fiscal problems which are so overwhelming

and which so transcend the local scene what libraries generally still fail to see, however, is that the solution to the present problems will require somewhat different models of technological, economic and cooperative resource sharing than those which have served them so well in the recent past. It is no longer going to be business as usual-not even in long-standing library cooperative ventures”.

In fact, resources of all sorts including information sources built cooperatively computerized networks have already proved a success in all developed countries. Such a computer based cooperative Resource Sharing organization programmes have also become more successful because of the support of huge new databases updated frequently and the packaged information resources delivered through networking programmes. In spite of dire financial stringency, facets of new technology introduced in Resource sharing has opened up new avenues for better services to the end-users. Hence Harold Billings ultimately observes: “In addition to taking advantage of the new technologies, libraries and the larger information community must take concerted reassessments of the economy of the information flow, from information creation to information consumption. Historically, economic forces have always driven information transfer, providing the environment that has created the production of information machinery, information products, and information consumer markets.” So under the present financial environment and the continuous technological developments the academic libraries of both the developed and developing countries because of their budgetary provisions, have been compelled to be united under centralised and cooperative organization programmes. Further, the evergrowing demands of the end users have also been playing an important role to move towards cooperative system. Now the users are demanding information sources in classified order and the contents or full-texts of available books or journal articles as quickly as possible. Therefore they need online access to the databases or access to CD-ROM databases through the electronic media only.

Ultimately Resource Sharing should be organised in such a manner that the clientele in spite of economic constraints, dearth of appropriate human resource, and lack of physical facilities, would be able to receive optimal utilisation of resources and services available both in local libraries and well-organised academic libraries of the world.

Sample Questions

I. Long Answer Type

1. Which are the essential considerations for machine readable formats in collection management? Discuss.

II. Short Answer Type

1. Why is convenient Resource Sharing to the users? Briefly narrate.

III. Objective Type (Mark the *one* right answer out of the following four alternatives with the tick-sign ✓).

1. Resource Sharing requires essentially
 - A. availability of enough human resources
 - B. books and library materials.
 - C. computer networking connectivity.
 - D. knowledge connectivity .

Answer is 'C'

Select Readings

1. Alvi, Wajih Ahmed. *Rationale For Resources sharing in the III ALA conference*, 1987.
2. Kent. A & Galvia T.J. *Library Resources Sharing*, 1977.
3. Mahapatra, P.K. *Collection Management in Libraries*. New Delhi, Ess Ess publication, 1989.

PORTALS, VORTALS, AND GATEWAYS IN THE ACADEMIC LIBRARIES

A great challenge for the libraries in the academic institutions is to as quickly as possible innovate the means to select, organise and efficiently supply high quality web-based content, served up through easy-to-use information discovery and management procedures. There are some models for information systems which are being experimented by the academic libraries to serve up the Internet -based components like Portals, Vortals, Information Gateways and Subject Gateways .

Portals

At the very outset it is necessary to clarify the terms 'Portals' and 'Vortals' . The Coputing Dictionary defines ' Portals' as : "A web site that aims to be an entry point to the World Wide Web, typically offering search engine and/or links to useful pages, and possibly news or other services. These services are usually provided for free in the hope that users will make the site their default home page or at least visit it often" (*FOLDOC-Free On-line Dictionary of Computing — Portals. Visit <http://wombat.doc.ic.ac.uk/foldoc/>*) ,e.g. Yahoo and Ms N. *Butwhatis.com* defines: "Portal is a term, generally synonymous with gateway, for a World Wide Web (WWW) site that is or proposes to be a major starting site for users when they get connected to the Web or that users tend to visit as an anchor site". H. Strauss floats the definition of a portal as a special kind of Gateway to web resources —"a hub from which users can locate all the web content they commonly need"(in *What is a portal anyway?* Corporation For Research and Educational Networking, *Tech Talk*, January 20,2000. Visit <http://www.cren.net/know/techtalk/events/portals.html>). According to him, portals are customised to the role of the user who connects to the portal, as for example, a student or visitor of the portal might be prevented of entering faculty 1 s work space. Not only this but portals also feature personalization, i.e. the ability to change the position of channels on the page or to create a personal profile for current awareness services. Portals are different from web pages tied to a home page in the sense that a portal is centred around target community of users, whereas, web page is centred around the organisation that 'owns' the site.

Types of Portals

Portals are of the following two types, viz. (i)General Portals also called Horizontal Portals which are extremely broad but generally shallow in content, e.g. Excite, Lycos, Yahoo, Microsoft Network and Netscape; and (ii) Specialised Portals or Vertical Portals on Vortals focussing more or a specific community of users, which represent "a web search engine that locates very precisely a few web pages of particular

interest according to the character strings or subject entered as the search topic” (*Telecom Glossary 2K*. Definition: *Vertical Portals*. Visit <http://www.atis.org/tg2k-vertical-portal.html>)

Library Portals.

The Library portals like the Vertical Portals or Vortals are searchable, browsable and customisable presentation of library valued electronic resources. But the Library Portals on the one hand contain the functionality of Gateway, on the other hand these Portals-also provide tools for organised knowledge discovery. Indeed an ideal Library Portal will have the most thorough coverage possible in several disciplines of the library profession for all types of libraries, e.g. professional resources, organisations, publications, conferences and other events. Library web sites including web catalogues, communication channels, job announcements and information about suppliers of library-related products and services, e.g. Internet Library For Librarians www.librarycompany.com/inforetriever/ or Library Resource List www.dpi.state.wi.us/dpi/dltel/pld/libres.html.

Scholar’s Portals

The term ‘Scholar’s Portals’ has been suggested by Deborah Holmes Wong for a Vertical Portal facilitating in-depth research and to make sense of the Web for scholars, including exposing the highest quality, most dependable content and permitting cross-collection searching (Campbell, J.D. *The Case For Creating scholar’s Portal to the web: a White Paper*. ARL- Association of Research Libraries: A Bimonthly Report on research library issues and actions from ARL, CN I and SPARC. 211. August 2000. Visit <http://www.arl.org/news/1tr/211portal.html>). These Scholar’s Portals include features like virtual reference services, shared work places, tools to facilitate scholarly publishing, cross-platform access to commercial databases, and electronic thesauri adapted to the vocabularies of various academic specialists.

Vortals

The term Vortal’s is a word-creation from vertical and portals. Hence vortals are also known as vertical Portals which are business to business (B2B) extending the enterprise to its suppliers and partners. Such Vortals become the best keys to information on the Internet. It is said : “Vertical portals or vortals are different in the range of users they target. Vortals provide content, aggregation relevant to their industry, with links to related industry, supplier and even competitor sites. They may be community and collaboration capabilities, and e-commerce services for products and services relevant to its industry or niche. Vertical portals also try to leverage branding and associated technologies in a focussed way” (Vortal. *The Australian*.

February 1,2000.2). The examples of vertical Portals are : Search Networking.com (for network administrators), Nodigusa.com— a technical Vortal dedicated to Trench less Technology to advance the science and the practice of the technology for public benefit in the USA, or Compositnet. com— and industrial vortal providing wide range of business opportunities.

Gateways

The generic term of the ‘Gateways’ used interchangeably with ‘Subject Gateways’ generally refers to a network elements that acts as an entrance point to another network. It is used to describe a “range of Internet sites that in some way provide access to other, predominantly Internet accessible resources” (Renardus : *Gateways* Defines. Visit <http://www.renardus.org/about-us/subject-gateways.html>).

Information Gateways

Information Gateways are services on World Wide Web where resources are selected according to their quality of content, catalogued and classified. Thus they are more intensive than the normal link lists but more useful for the users as users find liigh quality resources through these Gateways. Besides, in these Gateways abstracts or descriptions given are of far better quality as compared to automatically extracted parts of web-pages extracted by majority of search engines on the Internet.

Subject Gateways

The following definitions of ‘Subject Gateways’ , of which the generic term is ‘Gateways’ used intechangeably, are found: (1) The Development of a European Service For Information on Research and Education (DESIRE) Project hes defined ‘Subject Gateways’ in details as “...’information gateways’ as quality-controlled information services that off l)online links to other Internet sites or documents; 2) selection of resources via an intellectual process, within a predefined collection scope; 3) intellectually -produced content descriptions, preferably with key words and controlled terminology; 4) an intellectually-constructed structure for browsing; and 5) at least partially manually created metadata for individual resources” (visrt <http://www.desire.org/handbook/>).

(2) According to Anil K.Dhiman: “Subject Gateways are internet based services designed to help users locate high quality information that it available on the Internet. They are typically databases of detailed metadata records which describe Internet resources and offer a hyperlink to the resources” (*Basics of IT for Librarians and Information Scientists*. New Delhi, Ess Ess, 2003).

(3) Its other definition is s “A subject gate way, in the context of network based

resource access, can be defined as some facility that allows easier access to network based resources in a defined subject area” (Visit [http://www.dlib.org/dlib/january 98/01 kirriemuir. html](http://www.dlib.org/dlib/january%2098/01kirriemuir.html)).

(4) The imesh Toolkit Project defines; “A subject gateway is a web site that provides searchable and browsable access to online resources focussed around a specific subject. Subject gateway resource descriptions are usually created manually rather than being generated via an automated process. Because the resource entries are generated by hand they are usually superior to those available from a conventional web search engine” (Visit [http://www.imesh.org /toolkit/](http://www.imesh.org/toolkit/)).

The Subject Gateways are also called :

(i) *Information Gateways* which as already mentioned, are services on World Wide Web where resources are selected according to their quality of content, catalogued and classified and thus Information Gateways are more intensive than the normal link lists but more useful for the users who find high quality resources through these Gateways with the supply of the abstracts or descriptions of far better quality as compared to automatically extracted portions of web-pages extracted by majority of search engines on the Internet.

(ii) *Subject-Based Information Gateways* (SBIG's) Which are quality controlled services and are mostly confined to specific subject areas of interest usually following subject specific classification schemes. Of these Gateways most of the services have scope policies defining subjects they cover as well as target groups. In their broadest sense SBIGs can be defined as “An academic institution owned and maintained system that builds a publicly accessible catalogue of subject specialist Internet resources by the application of a predefined set up of quality selection criteria” (Visit <http://www.ukoln.ac.uk/metadata/besire/quality/report>).

The Subject Gateways are further known as :

(iii) Subject Based Gateways

(iv) Subject Trees,

(v) Virtual Libraries, and

(vi) Clearing Houses.

Characteristics of Subject Gateways

Hence it appears that the Subject Gateways are nothing but information systems for quality assessed information resources on the Internet, within a particular subject. Such Gateways are aimed to assist the users for discovering high quality relevant web-based information effectively and readily. The above definitions of the Subject

Gateways reveal the undemoted characteristics :

- (i) “Mostly limited to a specific subject.
- (ii) Selection of the Internet resources on the basis of quality, authority, accessibility, relevancy and currency.
- (iii) Maintenance of collection on a regular basis so as to check links, and remove inappropriate resources,
- (iv) Manual creation of records having rich resource description in order to enable a resource identified and located easily.
- (v) Partly or manually generated metadata for individual resources,
- (vi) Distributed cataloguing where scattered group of subject specialists contribute to the database,
- (vii) Use of subject classification scheme to index all resources in order to facilitate subject browsing,
- (viii) Application of standards to allow interoperability with other services,
- (ix) Various value-added features” (*IASLIC Bulletin*, vol.50, No,2, June 2005, p. 107).

Features of Subject Gateways

The Subject Gateways reveal some of the following features :

- (i) institutional commitments in an academic library become the vital component for continued development of a Subject Gateway;
- (ii) each resource selected is evaluated by explicitly defined quality selection criteria;
- (iii) resources are classified utilising a range of schemes, e.g. DDC-MESH;
- (iv) metadata are provided based on a particular standard, e.g. Dublin Core ;
- (v) descriptions of written resources are provided for each resource by subject experts;
- (vi) by link checking software currency of resources is checked, e.g. Resource Organisation and Discovery in Subject-based services (ROADS).

Needs for Subject Gateways

Since the library websites are becoming increasingly intricate due to complexities in the form of links and services, profusion of the print and electronic formats, duplication and general web resources at present academic librarians and information

scientists are being interested in subject Gateways. In order to improve the effectiveness of Internet searching that will serve as a source of information in specific areas saving time of the users, the Subject Gateways are now becoming almost obligatory. The Subject Gateways are needed because of

- (i) complex library searches due to the cross functions and links between the online catalogue, journal aggregator databases, electronic resources and the like;
- (ii) many library websites get congested with ample content .general objectives and duplication of services;
- (iii) the increasing expectations of users for interfaces to lead directly, without under hunting to the information or service;
- (iv) the urge for identifying and presenting high quality free information resources on the web and distinguishing those from the library licensed materials; and
- (v) innovative ways of supplying information and rendering services, e.g. e-resources, library help pages and document delivery.

Major Subject Gateways and Universal Information Gateways

Below are enlisted some of the major Subject Gateways and Universal Information Gateways which are helpful in supplying specific subject based information to the users of academic libraries.

- I. Biz/ed (Business and Economics Information Gateway) [http // www. bized/aca.uk/Biz/ed](http://www.bized/aca.uk/Biz/ed)

It is a service for students and educators on business and economics related subjects. This web site contains current topics in a magazine style section with features, learning materials, data, company information, virtual worlds. Internet resources and the like.

- II. PAW

[www. tp. umu, se/TI PTOP/paw](http://www.tp.umu.se/TIPTOP/paw)

This is a world Gateway to physics around, which allows to search on resources appropriate for people of specific educational standards.

- III. SOSIG (Social Science Information Gateway) <http://www.sosig.ac.uk>

It is a part of U.K.Resource Discovery Network (RON) covers social sciences, business and law.

- IV. History

<http://ihr.sas.ac.uk>

This is a Gateway of network based on historical resources, with additional information on history academics and their research interests,

V. EESVL

www.eevl.ac.uk

This Gateway allows one to search for resources of a particular type in various engineering subjects.

VI. OMNI (Organising Medical Networked Information) [http : // omni.ac.uk](http://omni.ac.uk)

This is based at the university of Nottingham Greenfield Medical Library and covers high quality Internet resources allowing access to a catalogue of a large number of medical and health resources descriptions.

VII. EELS (Engineering Electronic Library, Sweden) [http : //eels .lub.lu.se](http://eels.lub.lu.se)

It is a cooperative project of the Swedish Universities of Technology Libraries and has presently discontinued as a manually indexed Subject Gateway, while The Royal Institute of Technology Library and Lund University Library, Sweden, are working on creating a new service based on the original All Engineering Service, consisting of harvested records automatically selected from their relevance in accordance with the Engineering Index Thesarus (EI).

VIII. Mathuide

[http : /www. Math Gujde.de/](http://www.MathGujde.de/)

It is housed in the Lower Saxony State and University Library, Gottingen, Germany. The Math Guide Gateway has currently listed 1110 records in mathematics.

IX. ADAM (Art., Design,Architecture & Media) [http; //adam.ac.uk/](http://adam.ac.uk/)

This Subject Gateway is useful resource for the art, design, architecture and media information.

X. History Guide

[http: //www. historyguide.de/](http://www.historyguide.de/)

It is a network of Subject Gateway of History and located in Gottingen State and University Library,Germany.

XI. Geo -Guide

[http : //www . geo -guide.de/](http://www.geo-guide.de/)

This Subject Gateway at present lists 3072 records on earth science, geography and mining and is located in Gottingen State and University Library, Germany.

Apart from the Subject Gateways mentioned above there are some of the following universal Information Gateways available in the universities :

I. BUBL LINK

<http://bubl.ac.uk/link>

This web site is run by the Centre For Digital Library Research (DLR) at the University of Strathclyde, Scotland, and renders national information service for higher education community providing a free user -friendly access to the selected Internet resources covering all subject-areas with a special focus on library and information science ,

II. NISS (Directory of Networked Resource) <http://www.lub.lu.se/>

NISS Information- Gateway developed by the Lunds University is access to information for the academic community.

III. DutchESS (DutchElectronic Subject Service) <http://www.konbib.nl/dutchess/>

This web site has been created for academic community as a Dutch national Subject Gateway developed by the National Library of the Netherlands.

The Subject Gateways,if adopted, will play a significant role in the academic libraries and in the libraries of the institutions of higher learning. They represent alternatives to the generalised approaches of search engines which fulfill the demands of the libraries on the Internet. But the Subject Gateways being primarily concerned with the special subjects positively support the teaching as well as research on their respective subjects.

From the perspective of the academic library system a number of web based Gateways which can be used to locate network based resources in some particular subjects and which have engine features. Hence being an inseparable component of the academic and more particularly University libraries, Subject Gateways will play an important role in academic library system. As already mentioned, in some countries the academic institutions are trying to find out as to how portals can be related to virtual learning environments, e.g. Boston College University Wide Information Portal (<http://www.mis2.udel.edu/ja-sig-whitepaper.html>).

Sample Question

I. Long Answer, Type

1. Define explicitly the terms 'Portals' 'Library Portals', 'Scholar's Portals' and 'Gateways'.
2. What are 'Subject Gateways' ? Mention some of their characteristic features.

II. Short Answer Type

1. Write a brief note on 'Information Gateways'.
2. Why are needed the 'Subject Gateways' ? Answer in brief.

III. Objective Type (Mark the *one* right answer out of the following four alternatives with the tick sign ✓).

1. 'Specialised Portals' are known as
 - A. 'Vortals'.
 - B. 'Horizontal Portals'
 - C. 'Gateways'.
 - D. 'Library Portals'.Answer is 'A'.
2. The generic term of the 'Gateways' used interchangeably is
 - A. 'Scholar's Portals'.
 - B, 'Subject Gateways'.
 - C. 'Horizontal Portals'.
 - D. 'General Portals'.Answer is 'B'.

Select Readings

1. *DESIRE (Development of a European Service For Information on Research and Education) Information Gateway Handbook.*
2. IMesh.Toolk.it. *What is a Subject-Gateway.*
3. Forrester, William H. and Rawlands, Jane L. *The Online Searcher's Companion*, London, 1A Publishing, 2000.
4. Dliiman, Anil K. *Basics of IT For Librarians and Information Scientists.* New Delhi, ESS ESS, 2003.
5. *IASLIC Bulletin*, Vol.50, No.2, June 2005, pp. 100-102., pp. 103-109.

Unit 33 □ Networking and Database Services

Networking

The National Commission on Libraries and Information Science (NCLIS) in its national programme document of 1975 defines a Networking as : “Two or more libraries and/or other organisations engaged in a common pattern of information exchange, through communications’ for some functional purpose. A network usually consists of a formal arrangement whereby materials, information, and services provided by a variety of libraries and other organisations are available to all potential users. Libraries may be in different jurisdictions but agree to serve one another on the same basis as each serves its own constituents. Computers and telecommunications may be among them.”

A.F. Trezza has defined the Library Networking as: “ a formal organisation among libraries for cooperation and sharing of resources, in which the group as a whole is organised into subgroups with the exception that most of the needs of a library will be satisfied within the subgroup of which it is a member.”

On the other hand, R.C. Swank remarks that the library networking is a “concept that includes the development of cooperative systems of libraries on geographical, subject, or other lines, each with some kind of centre that not only coordinates the internal activities of the system but also serves as the system’s outlet to, and inlet from the centres of other systems. The concept is also hierarchical...”

The library network ing may be Local Area Network (LAN), Metropolitan Area Network (MAN), Wide Area Network (WAN), National Network (NN), and International Network(IN) if the same may be considered from their objectives and geographical boundaries.

Database Services

The Database services are those services which are rendered by a particular library, evidently also by an academic library, through its own catalogue which represents the primary database. At present the Internet includes a large number of online public access catalogues of the world libraries. The Internet resources have been very useful to the users since they include the commercial databases and some specialised bibliographic and non-bibliographic databases. Being connected to Internet the online public access catalogues of individual libraries are accessible to all the libraries which have online facilities.

Such bibliographic and non-bibliographic commercial databases available in Internet appear to be cost-effective access and search. The online search of DIALOG databases provides access to a huge information resources and the libraries in the U.S.A. have

created localised versions of these databases by downloading them into their own computer systems. The information technology and networking have brought the data and the user in close proximity beyond the boundaries of all sorts.

Some institutional and commercial discipline-based databases subdivided into specific disciplines form significant resource bases for academic libraries. But it is not possible to create comprehensive and continually updated databases by the individual libraries with their own infra-structures. Hence various academic libraries throughout the world are becoming ready with computer systems to store and manipulate many databases which constitute the most comprehensive collection of discipline based data obtainable in the networking programmes.

Some Networking Programmes and Database Services

Since the libraries of various countries follow separate approaches to networking programmes of Resource Sharing with the sole object of dissemination of information, different patterns of their growth are visible.

The Resource Sharing is also being gradually recognised by the librarians in the countries like India, U.S. A., U.K., and Canada, since information with text-facilities are being readily available to a person with a personal computer, modem and a telephone connection at his/her residence. As a result a marked transformation in the information transfer scenario in India has been evident and a large number of library Resource Sharing Networks like the INFLIBNET (U.G.C., Delhi), DELNET (Delhi), CALIBNET (Kolkata), PUNENET (Pune), MALIBNET (Chennai), HYLIBNET (Hyderabad), ADNET (Ahmedabad), DESINET (Defence Libraries), TIFACLINE (Technology per se)

To set up such networks in India many agencies like the NISS AT/ DSIR, Department of Electronics of the Government of India, INSDOC/CSIR, DESIDOC/DRDO, DBT, and TIFAC/DST have been involved. Provisions have also been made for one institution to participate in more than one network, e.g. CDRI, TIFAC, has access to NISS AT networks, SIRNET and BTISNET, with a view to utilising the funds in a better way through sharing resources by the creation of commonly usable databases and communication between libraries and through automating the functions of individual libraries at a local level for effective and efficient services to the users.

Below is presented an evaluation of the programmes in India.

Sample Questions

I. Long Answer Type

1) Enumerate the 'Databases Services' applicable to the academic library system.

II. Short Answer Type

1) Define, hi short, the term 'Networking' and its utility hi academic library services.

III. Objective Type (Mark the *one* right answer out of the following four alternatives with the tick-sign ✓)

- 1) 'MAN' is the abbreviated form of
- A. Michigan Area Network.
 - B. Me Elroy Automation Network.
 - C. Minnesota Area Network.
 - D. Metropolitan Area Network.

Answer is 'D'

Select Readings

1. Haviours, Stefe. *Networking and Telecommunications for Information Systems : An Introduction to Information Networking*. London, The Library Association, 1993,
2. Kent, A Galvin. *The Structure and Governance of Library Networks*. New York, Marcel Dekker, 1979.

INFLIBNET

The University Grants Commission (UGC), New Delhi, India, having realised the significance of sharing information resources of different academic libraries, and faced financial stringency as well as hike in prices of books, periodicals and other library materials, constituted in 1988 a Committee under the Chairmanship of Professor Yashpal on “National Network Systems for Universities/Libraries”. The said Committee noted that in India a huge amount was being spent on the acquisition of academic library resources, although students, teachers and researchers could not be satisfied due to inadequate resources and inefficient services. It at its meeting on April, 22, 1988 constituted an Inter-Agency Working Group (IAWG) for preparing a project-report to develop a library and information network. Further, in order to review the progress of the IAWG a steering Committee on Library and information Network. (SCLIN) was formed with Professor Yashpal as its Chairman. This steering Committee recommended that the Information and Library Network (INFLIBNET) should “be the common network for educational institutions, R & D Laboratories/Institutions, Institutions of national importance and other agencies concerned with the higher education system”, in this regard the IAWG had prepared a Report and submitted it in August 1988 to the UGC and for a wide circulation the UGC released the same in December 1988.

In its Report IAWG recommended a project proposal for establishing and developing the information and Library Network (INFLIBNET) with one major objective for facilitating optimum utilization of available resources through various methods by creating an effective mechanism aiming to support and enhance the quality of academic and research activities in India.

The INFLIBNET *Report* (1988-Jan. 1989) contains twelve Chapters consisting of the following topics Introduction, INFLIBNET Organization, Services, Standardisation, Software Requirements, Hardware Specifications, Communication Architecture, Data Capturing and Preparations, Manpower, Management Mechanism, Implementation Machinery and Cost Implication. The said Report has also fifteen Appendices with valuable information advocating the textual contents.

The INFLIBNET Programme has been proposed to be taken up during the Eight Five-year Plan (1990-1995) period of India.

Concept

Hence the network known as INFLIBNET has come into existence to facilitate automation and networking of academic libraries for resource sharing among the libraries using networking and access to information. In fact, the U.G.C. sponsored in May 1991 this major programme with its Headquarters situated in the Gujarat University campus, Ahmedabad. The INFLIBNET Programme is directed towards

computerization of libraries and information centres, and establishment of a mechanism for information transfer and access for supporting scholarship, learning and academic activities, aiming to establish a national computer-communication network to link libraries and information centres, universities, institutions of national importance, and R & D institutes in India for improving the capability in information handling and services. The primary mission of the INFLIBNET has been to develop interactions among the academic and research libraries in India. Being also associated with the Inter -University centre For Astronomy and Astrophysics (IUCAA), Pune, in 1996 the INFLIBNET obtained an independent autonomous status of the Inter -University centre.

Aims and Objectives

The INFLIBNET as the computer based information network has been introduced with the following aims and objectives which may revolutionize the functioning of libraries and substantially contribute to improve national capability in information communication and dissemination of knowledge for supporting the academic, learning, research, and teaching activities to

- (i) evolve a national network of libraries and information centres in India and to improve information handling capability;
- (ii) initiate son a mechanism for sharing and utilishing resources offered by modem technology;
- (iii) modernize the libraries of academic as well as research institutions and information centres in India through the application of information technology;
- (iv) facilitate reliable access to document collection through online union catalogue of monographs, serials and non-book materials like manuscripts, audio-visual items, and computer media ;
- (v) provide better access to worthwhile bibliographic information sources with citations and abstracts, such as, articles in periodicals, conference papers, reprints, technical reports, standards and specifications, patents and monographs, through indigenously created databases of the Sectoral Information Centres of the NISSAT and the U.G.C. Information Centres and such others and by establishing Gateways for online accessing of international databases held by international information networks and centres;
- (vi) render document delivery services by establishing resource centres around libraries having a rich collection of documents;
- (vii) optimise information resource utilisation through shared cataloguing, interlibrary loan service, catalogue production, collection development and avoiding duplication in acquisition to the extent possible;

- (viii) computerise operations of libraries and information centres in the country following a uniform standard;
- (ix) facilitate communications among the scientists, engineers, researchers social scientists, academic faculties and students through electronic mail, bulletin boards, file transfer, and computer/audio/video conferencing;
- (x) enable users regardless of location and distance, to access information regarding books, monographs, serials, and non-book materials by locating sources and tapping them through new communication technologies and union catalogue of documents ;
- (xi) create a database of projects, institutions and specialists for providing online information service;
- (xii) encourage cooperation among libraries, documentation centres and information centres so that pooled resources can augment weaker resource centres;
- (xiii) develop professional manpower to establish, manage and sustain INFLIBNET;
- (xiv) evolve standards and uniform guidelines in methods, procedures, hardware and software, services and techniques and promote their adoption;
- (xv) introduce a mechanism for information transfer and access to support scholarship and academic activities;
- (xvi) to facilitate pooling, sharing, optimization of scarce library resources;
- (xvii) organize library services for maximizing benefits at the macro level with affordable cost, and
- (xviii) provide speedy and efficient services to the end users.

Services of the INFLIBNET

In order to fulfill the above-mentioned aims and objectives the INFLIBNET will have to render the following services which may broadly be classified under three categories as follows :

1. Catalogue -based services

- (i) shared cataloguing of monographs, serials and non-book materials;
- (ii) union catalogue of books, serials and non-book materials;
- (iii) online catalogue access for shared cataloguing and location identification;
- (iv) catalogue production in card, book, magnetic tape/ floppy, optical; (CD - ROM), and COM form. Book processing and preparation ;

II. Database services

- (v) bibliographic database services;
- (vi) retrospective searches, SDI, current awareness services;
- (vii) database of non -bibliographic information such as on-going and completed projects, institutions and specialists;

III. Document Supply Services

- viii) inter-library loan request processing;
- ix) document delivery (fax/non-fax).

IV. Collection development

- x) acquisition and assistance in selection and procurement;

V. Communication-based Services

- xi) electronic mail;
- xii) transfer /receive messages;
- xiii) bulletin board-view/update bulletin board; and
- xiv) academic communication through electronic mail, bulletin board, file transfer, computer/ audio /video conferencing.

Functions of the INFLIBNET

For the wider dissemination of human knowledge in the academic, especially university and research libraries, of India the role played by the INFLIBNET is very significant as is evident through its sundry functions which are enumerated below :

(1) The primary function of the INFLIBNET is the automation of academic libraries, since automation is a pre-requisite for networking of libraries and resources sharing under the INFLIBNET programme which requires compulsory computerization for automating library operations. Therefore, the INFLIBNET Centre provides grants to the academic institutions identified under this programme for enabling the libraries to build infrastructure for computerization to enter under the networking programme. Also the identified academic libraries are provided with recurring grant including expenditure relating to salary of the information scientists and to charges for the maintenance and the like.

(2) Another function of the INFLIBNET is the software development. To facilitate the functioning of automation in the participating libraries the management of software is essential. Hence an Integrated Library Management Software (ILMS) has been

developed jointly by the INFLIBNET and DESIDOC. Initially it has been provided to more than 50 institutions to examine the versatility in their environment. A new version called software For University Libraries (SOUL) of ILMS has been brought out on the basis of feedback received from those fifty institutions. It should be noted that SOUL works in client/server mode in windows environment using MS-SQL server as back end tool. It supports the multilingual data base creation and web access-and consists of five major modules, viz. a acquisition, cataloguing, circulation and serial control. Further, the SOUL has developed using CCF format but has interfaces for importing and exporting data from and to MARC-21.

(3) The INFLIBNET has further played a key role in human resource development which is of primary need for handling the automation and networking process. Thus it has introduced various training programmes like (a) Computer -Application to Library and Information Services (CALIS), (b) Workshop on Automation and Networking of University Libraries under INFLIBNET Programme (WANULIP) ,

(c)INFLIBNET Regional Training Programme in Library Automation (IRTPLA), and

(d) Onsite training. The INFLIBNET is also organising workshops and training programmes in collaboration with NASSDOC,A11 India Radio etc. Apart from such programmes,soine specially designed programmes to highlight the quality in data network operation, and Internet use are also being taken up by the INFLIBNET.

(4) For the development of the Union Databases the INFLIB NET i s also engaged in creating the following databases which require regular updating : (a) Books Database, (b)Theses Database, (c) Back Issues of Primary Serials Database, (d) Current Issues of Primary Serials Database, (e) Issues of secondary Serials Database, (f) Experts Database, (g) Research Projects Database, and (h) CD-ROM Database.

It should be noted that the Databases developed through INFLIBNET can be accessed at INFLIBNET web site only.

In order to avoid duplication and to maintain quality as well as consistency in the creation of databases the INFLIBNET has commenced a project on *Retrospective conversion of major library catalogues* initially/the libraries of the (a) University Bombay, Mumbai, (b) Banaras Hindu University Varanasi, (c) Indian Institute of Science, Bangalore (d) Jawaharial Nehru University, New Delhi, and (e)University of Madras, Chennai, with the additional financial grants from the U.G.C, for converting their catalogues into machine readable form.

(5) Through the constitution of a Task Force, the INFLIBNET has assured to maintain consistency and quality in databases created by the participating libraries. The said Task Force has prepared a document on *INFLIBNET Standards and Guidelines for Data Capturing* which is distributed among the participating libraries

for acceptance and practice recommending to follow the (i) Anglo American Cataloguing Rules (Revised-2) and (ii) subject-Headings prepared by the library of Congress, U.S.A., in order to maintain uniformity in 'Bibliographic standards'.

The bibliographical information services rendered by the INFLIBNET may help to fill the gap in the information available in India and keep the teachers, students and researchers of the academic institutions abreast of the latest development in their respective disciplines. Also the world famous OCLC, the network of libraries, is being subscribed to supplement the existing bibliographical information services.

(6) In order to have a Wide Area Network (WAN) connecting all the participating institutions and provide complete solution to the needs of universities, a captive network called UGCNET to ERNET India has been planned, since the existing network facilities through various ISPs cannot meet the requirements of the Indian Universities. Hence the U.G.C. has given responsibility to the participating academic libraries for introducing this network so that all the libraries, individual faculty members and students would be able to communicate across the world.

(7) Another function of the INFLIBNET for maintaining University Information System (UIS), is to provide up-to-date information about at the courses conducted, tuition fees, hostel charges, and other facilities available in the Indian universities. To render this function individual web sites of the universities are being created.

(8) In order to facilitate interactions among the university library staff, computer professionals and persons interested in library automation and networking, the Convention For Automation of Libraries in Education and Research Institutes (CALIBER) set up by the INFLIBNET in 1994 has become an effective platform for the individuals who are involved in the nationwide academic library network programme which needs to be assessed at such a Convention to be organised at least once in a year at the national level.

(9) Through its publications and services the INFLIBNET translates another important function to create awareness of the activities of the INFLIBNET among the professionals, staff working in the academic institutions, and students of Library and Information Science, the quarterly INFLIBNET NEWSLETTER since 1995, annual Proceedings of the CALIBER, and the Union Catalogue of Secondary serials (1999) are being published.

(10) The INFLIBNET also functions through the Document Delivery Service (DOS) to provide the full-texts of serial articles available in the collections of Indian university and research libraries. To implement such a service initially six Document Delivery Centres (DDC) have been established in the libraries of (a) Banaras Hindu University, (b) Indian Institute of science, (c) Jawaharlal Nehru University, (d) Punjab University,

Chandigarh, (e) Tata Institute of Social Sciences, Mumbai, and (f) University of Hyderabad.

Levels of Operation

Although the INFLIBNET is an integrated national programme, it operates also at the regional, sectorial and local levels in the following directions :

(i) a national centre for managing, overseeing, and coordinating the affairs of the network;

(ii) four regional centres to maintain union catalogue of holdings of libraries in the region and database of projects, institutions, and specialists;

(iii) forty or more sectorial centres including the U.G.C. Information Centres to work along with the present and proposed NISSAT sectorial centres and others performing national level services and functions in specific subjects/disciplines/mission, acquire and access retrospective and current bibliographic databases and offer variety of modern information services, while some universities and R & D institutional libraries are to be designated as resource centres for rendering the service of document delivery;

(iv) four hundred nodes comprising one hundred seventy university libraries, thirty autonomous colleges and advanced centres of learning, and two hundred R & D institutional libraries and information centres have been initially set up at the local level ;

(v) in the university system in the catalogues of libraries are aggregated bottom-upwards, i.e. from the college/department to university library and then to the concerned regional centre;

(vi) the sectorial information centre is to discharge the secondary information/database services; and

(vii) at the local level mainly the college/department/ university/ R & D institution is to serve the end users.

Areas of Standardization

In order to serve the end users in an effective manner and for the complete success of the functioning of the INFLIBNET, the uniform standards should strictly be maintained by the participating libraries in the following areas:

(a) methods, procedures and techniques;

(b) accessioning, classification, cataloguing, subject headings, information processing, exchange as well as input format, and physical format;

(c) library and information transfer practices;

(d) computerization of operations and services, software as well as hardware systems and associated infra-structure for the sectoral information centre as well as college libraries at the regional and national levels;

(e) consistent multiple functions, system hierarchy, connectivity requirements, traffic characteristics, volume of traffic flow, communication architecture, hybrid version of satellite as well as terrestrial networking, inter -connecting nodes in a communication system;

(f) unified common catalogue base by converting catalogues of retrospective records of unique nature of about one hundred seventy university libraries by attempting to match these records with those available from external tape-catalogues such as LC-MARC , OCLC and WLN as also a unified catalogue in a machine readable form obtained through a mechanism for imputing as well as processing on-going catalogue data of all university libraries to ensure the benefits of cooperative acquisition, shared cataloguing, resource snaring for the lowering expenditure of the individual library; and

(g) staff requirements for units, levels and network as a whole and manpower development considering the advancement in computer and communication technologies through long term as well short term and regular as well as continuing education programmes.

Current Activities of the INFLIBNET

The national centre of INFLIBNET is situated on the campus of the Gujarat University, Ahmedabad. Presently the INFLIBNET aims at computerising and networking of the selected college and university libraries. The INFLIBNET Programme identifies every year a number of university libraries to be taken up for automation depending on the budgetary provision. The participating libraries are provided with funds for procuring computer systems, retroconversion and networking and software application for data entry along with other library functions, library standards as well as formats, manpower development, training courses for staff engaged in computerising the library operations since 1992-1993.

The libraries of eleven Universities, viz. (a) Anna University, Chennai, (b) Ravishankar University, (c) University of Jammu, Jammu, (d) Gulbarga University, Gulbarga, (e) Manipur University, Imphal, (f) Jadavpur University, Kolkata (g) Osmania University, Hyderabad, (h) Jawaharlal Nehru University, New Delhi, (i) Jai Narain Vyas University, Jodhpur, (j) Banaras Hindu University, Varanasi and (k) University of Bombay, Mumbai, have been identified for automation at the first phase

commencing in April 1993. Also during the first phase have been envisaged the development of suitable software, standards for various library operations and communication based services like E-mail and Bulletin Board, designing suitable network architecture, preparation of union catalogues of serials, books and non-book materials, and cooperation with other networking establishments like NISSAT, NICNET.

The INFLIBNET has organised the First National Convention (CALIBER-94) on *Automation of Libraries in Higher Education and Research Institutes* at Ahmedabad from February 19 to 20, 1994. This Convention has discussed in details the issues relating to inability of the Indian libraries to cope with the present age of information explosion because of financial stringency and rapidly changing cultural economic scientific and social scenario. It has also considered various methodologies for better services to the end users introducing developed information Technology (IT), training for using computers, need for automation of libraries, uniformity in standards and formats and other related issues. During the convention some resolutions have been elaborately discussed and ultimately adopted to magnify the role and significance of the INFLIBNET programme enjoining upon it about fifteen responsibilities.

Problems and their Solutions

Although theoretically the INFLIBNET assures sundry benefits to the users of the academic libraries, especially in colleges, universities and centres for higher / professional studies, it has not been yet able to develop a system for the dissemination of information about the library resources under this programme precisely and speedily and to offer ready access to international information systems. Also unfortunately through this programme the growth of information infrastructure in India has not been possible. Some lapses in the implementation of the INFLIBNET programme are glaringly visible. For the effective, efficient and quick functioning as well as service of this programme the following *problems* should immediately be considered and solved accordingly: "The grants of INFLIBNET provided to the identified academic libraries to acquire infra-structure for active participation in its programme are being spent for the items not related to this programme.

The allotted grants to some of the libraries are insufficient to arrange the infra-structural facilities.

There is no continuous monitoring on the requirements of participating libraries and also thorough check on the grants released to the participating libraries.

Improper planning to computerize the library services by some of the participating libraries due to lack of continuous supervision by the INFLIBNET (is visible).

Insufficient on-site training by the INFLIBNET to develop required Human Resources makes the staff of participating libraries to participate ineffectively in the programme” (IASLIC Bulletin, Vol.50, No. 2, June 2005, p. 114).

All such and other similar problems may be solved for the implementation and proper functioning of the INFLINIET programme. But at the present moment are urgently needed the properly qualified and trained professionals who would not only be quite conversant with the importance of the INFLIBNET for information sharing both nationally and internationally, but also should be prudent, resolute and sincere (PRS) with puritan professionalism.

COPSET Service

The COPSET service introduced in 1993 by a joint venture of the INFLIBNET programme, Ahmedabad, and National Centre for science Information, Indian Institute of Science, Bangalore, provides contents of periodicals along with the abstracts, if available, of articles for specified number of journals in the disciplines of applied sciences, engineering, life sciences and technology. It has been noted that sixty per cent of articles contain abstracts. The COPSET service is available both on print and floppy diskett. However, for promoting the application of computers in the libraries better communication is preferred the service on diskett which is available in the following two forms :

(i) ASCII Form : This data may be read using Wordstar of any text processing software and print data; and (ii) ISC 2709 Format: Using CDS/ISIS library may create their own database in COPSET output.

CALIBNET

The Calcutta Library Network (CALIBNET) is a metropolitan network: which initially is thought to link about thirty-eight libraries in the region under Calcutta Metropolitan Development Authority.

Aims and Objectives

The CALIBNET stands for significantly improving resources utilisation and service levels to patrons at the individual libraries by providing automation facilities in (i) Acquisition and fund accounting, (ii) Serials control, (iii) Cataloguing, (iv) Circulation, and (v) User services.

Implementation

The implementation of CALIBNET programme is divided into two phases. At its first phase, of which the target date for full operation has been envisaged <,s March 1990, all the institutions within the Jadavpur University cluster and some nodes of

Rajabazar Cluster of the University of Calcutta, such as, the Department of Radio Physics, and Bose Institute as well as Saha Institute of Nuclear Physics have been included. At the second phase, other libraries located in the Ballygunge Science College of the University of Calcutta, Medical Colleges libraries, National Library and Indian Statistical Institute, Kolkata would gradually be brought hi.

Operation

Under this Programme each participating library would collect, process and hold information on local computers, connected with one another through X. 25 packet - switched network. One of the network participants would host global user service and also act as the network control centre. The envisaged standardization is based on UNIX Operating System.

Applications

The applications to the supported are (a) electronic mail, (b) file transfer, (c) remote log-on database, and (d) document access.

Functions

The functions to be automated among the participating individual libraries are (i) cataloguing, (ii) serials control, (iii) acquisition and fund accounting, (iv) circulation, (v) local user services of current awareness, (vi) SDI, (vii) union catalogues, (viii) partial databases, and (ix) access to national and international networks.

DELNET

The National information System For Science and echnology (NI SS AT, DSIR, India) , has sponsored and National Informatics Centre (NIC, Planning Commission, India) as well as India International Centre (IIC), New Delhi, have promoted Delhi Library Network (DELNET) with its Headquarters at the India International Centre. The CMC Ltd. had been asked by the NISSAT hi *February* 1989 to prepare a *Feasibility Study Report on DELNET*, which was accordingly submitted hi 1990. For finalisation of *tins Report* thirty -five libraries were surveyed and later on steps were taken to set up DELNET at various phases. Subsequently '0 Phase' was added to it for facilitating the e-mail.

Aims and Objectives

The DELNET was registered in Delhi in June 1992 as a society under The Societies Registration Act of 1860 with its aims and objectives to (a) arrange resource sharing among the libraries in Delhi through the development of a network of libraries by collecting/ storing and disseminating information and by offering computerised services to the end users;

(b) guide the participating libraries in acquisition, sat classification, circulation, editing, database services, serials control, online services, selection of hardware and software and the like;

(c) line up efforts for suitable collection development and reduce unnecessary duplication;

(d) set up a referral centre, monitor, and/or facilitate catalogue search and maintain a central online union catalogue of books, serials and non-book materials of all the participating libraries under the DELNET Programme;

(e) promote and facilitate delivery of documents mechanically and manually;

(f) organise specialist bibliographic database of books, serials and non-book material collections;

(g) prepare a database of projects, institutions, and specialists;

(h) maintain and possess electronic and mechanical equipments for quick dissemination of information and render the electronic mail service;

(i) coordinate with other regional, national and international networks for exchange of documents and information, and

(j) facilitate, undertake and provide for the publication of newsletter, and /or periodical devoted to networking and resources sharing of resource among the libraries.

Functions

Certain functions of DELNET have been contemplated in its *Feasibility Study Report*. Those functions are broadly grouped under the five following categories :

A. Acquisition and Fund Accounting to

- i) monitor funds;
- ii) add, delete and modify the orders placed;
- iii) avoid repetitive work of bibliographic description of a document;
- iv) update library database when decision regarding disposal of document/weeding out/change of location is taken;
- v) prepare the reports on activities ;
- vi) submit orders to suppliers;
- vii) prepare list of publishers and suppliers;
- viii) enter accessions;

- ix) prepare the list of books received on gratis;
- x) send reminders;
- xi) meet outstanding orders/bills; and
- xii) facilitate online enquiry on current/pre-orders research.

B. Processing and maintenance to

- xiii) update the catalogue by matching it with the holdings;
- xiv) update the union catalogue;
- xv) update availability of funds when holdings are permanently transferred to other departments/centres;
- xvi) maintain class Index entries for a specific field of knowledge, xvii) maintain subjectwise, authorwise, titlewise bibliographies;
- xviii) provide the library management with timely summaries about the stage of processing of newly acquired holdings ; and
- xix) provide the list of the latest additions.

C. Serials Control to

- xx) update list of journals on subscription;
- xxi) register new journals; xxii) renew subscriptions;
- xxiii) produce reports on reminders to the suppliers for non-receipt of issues;
- xxiv) prepare the list of latest additions,

D. Circulation to

- xxv) maintain information on patrons;
- xxvi) prepare issue/reservation records;
- xxvii) maintain inter-library loan records;
- xxviii) prepare reports on outstanding books, outstanding requests, overdue notices; and
- xxix) facilitate online enquiry regarding issue/reservation.

E. User Service - Current Awareness to

- xxx) meet the queries on the holdings available.

F. Manpower to

- xxxix) conduct training programme for the librarians in the use of CDS/ISIS software;
- xxxii) promote database creation among the librarians of the participating libraries; and
- xxxiii) advise the librarians of libraries on the selection of the necessary software.

Services

To render the effective as well as efficient services to the end users and also to widen the scope of services, the DELNET envisages for the provision of automation facilities in the areas of

- a) acquisition and fund accounting,
- b) serials control,
- c) books and journals maintenance,
- d) circulation,
- e) user services,
- f) creation and maintenance of a bibliographic database,
- g) inter-library user services,
- h) document copy and transfer facilities,
- i) access to national and international databases,
- j) union catalogue,
- k) current awareness and SDI,
- l) authority data,
- m) subject profiles, and
- n) abstracts.

The DELNET has commenced its operation with the help of e-mail which is now being used by about thirty libraries with the establishment of twenty-two e-mail nodes and use of the new software having the following facilities, viz. (a) mail could be sent internationally as it has access to ERNET or NICNET users and also particularly to the British Library databases, (b) it has provision for usage statistics; and (c) folder could be created.

The participating libraries under the DELNET are now being offered access to NICMAIL, and NIC databases for bringing information resources available with NIC closer to the libraries in Delhi.

The DELNET Online Union Catalogue of books on all subjects was formally introduced on February 21, 1994 with also the creation in machine readable form by the libraries in Delhi of about 14,07,686 records of monographs, periodical articles, standards.

As regards the retroconversion, the DELNET has negotiated with the library of the Institute of Defence Studies and Analysis (IDSA).

Under this Programme it has been possible to serve remote users through the use of LIBRIS with the development of the union catalogue of books and of the online access,

EDUSAT

The University Grants Commission has recently introduced programme called EDUSAT for imparting teaching through satellite. Initially this programme would cover 35 colleges throughout the country with the Presidency College, Kolkata, as the nodal institution. The U.G.C. has already installed the 'Satellite Interactive Terminals' in 100 centres in India enabling the students and teachers of the Indian colleges where such terminals are available to have class-room lessons and to know about new researches done or undertaken by other institutions. Since the 'distance learning' is becoming more and more popular in India, it is expected that through this 'Satellite Interactive Terminal' (SIT) System class-room lectures would be available to a greater number of students in the country. In West Bengal the Presidency College has been selected as the only institution from where the lectures of the eminent teachers of different branches of learning belonging to that particular College would be transmitted through the satellite to other selected institutions having networking facilities. (Ananda Bazar Patrika, Kolkata, October, 21,2005, p. 4).

Sample Questions

I. Long Answer Type

- I. Enumerate the functions of the INFLIBNETOCLC.

II. Short Answer Type

1. Discuss briefly the aims and objectives of the INFLIBNET or C ALB NET.
2. Identify the problems in the implementation of the INFLIBNET Programme or the DELNET Programme.

III. Objective Type (Mark the *one* right answer out of the following four alternatives with the tick sign ✓).

1. The INFLIBNET stands for
 - A. Information and Library Network.
 - B. “Indian National Federation of Library Network.
 - C. Indian Federation of Library Network.
 - D. Informative Library Net. Answer is ‘A’
2. The INFLIBNET was established in
 - A. 1988
 - B. 1991
 - C. 1990
 - D. 1995 Answer is ‘A’,

Select Readings

1. *Deesidoc. Bulletin of Information Technology*, 16, II, 1996, pp. 11-18 (Kumar, Pramod & Arora, O.P. *Information and Library Network: INFLIBNET*),
2. *Proceedings of CALIBER -2000 : Information Services in a Networked Environment in India*, ed. R. Vengan & Ors. Ahmedabad, INFLIBNBT Centre, 2000 (Raju, Soma P. *INFLBNET: Problems and Prospects*).
3. *Library Herald*, 34, III-IV, 1996-1997, PP. 83-99 (Vashishth, C.P. *Information and Library Network-INFLIBNET*)
4. *IASLIC Bulletin*, 50, H, June 2005, pp.nO-U5(Satymarayana,M.*INFLIBNET: Its Activities in Library Automation*).
5. Beeker, Joseph & Hayls, Robert M. A. *Proposed Library Network for Washington State*.
6. Jefferson, G.*Library Cooperation.London, Andre,1966*

NETWORKING SYSTEMS IN UK, USA, CANADA

In the UNITED KINGDOM several networking programmes and database services have been working, some of them are the following :

B L C M P

The Birmingham Libraries Cooperative Mechanisation Project (BLCMP) at Birmingham possesses about thirteen million bibliographic records like books, serials, music discs, AV maps in its database and its catalogues get a hit rate of above 90% with more than sixty participants consisting of the public libraries, college libraries, university libraries and national as well as special libraries. The BLCMP has arranged EDI clearing house service in about twenty-five libraries. A new software TALIS of it has a Z 39.50 interface that enables its members to download free of charge data from INTERNET databases which are available in the public sector. On the movie can also be found the BLCMP.

LASER

Further, London and South Eastern Library Region (LASER), an independent company under the University of London, promotes library cooperations among eighty libraries in London as well as in south East of England and possesses more than three million records in its databases. But it does not allow online cataloguing, although its participating libraries can add their location codes in the union catalogue. Having used a system called Bookmark these libraries have developed a good authority file system. Also for the Indian languages materials they have developed the Cooperative of Indie Language Literature Authorities (CILLA). The subject approach to its database is being introduced on the CDs . The LASER does not process iuterlending requests, but indirectly supports it. This programme also supports file transfers on Janet and Kermit.

BLAISELINE

On the other hand, the British Library, London, though not a network, possesses nearly twenty-one databases(including BNB) holding 15 million bibliographic records. The British Library Automated Information Service Line (BLAISELINE) offers search services to its users,

PIN

The British Library also possesses one of the largest patents databases in its Patent Information Network(PIN). Thus about thirty-five million patents are held and the database is growing at the rate of one million patents every year. Called the Patents Express and Patents online(PEPO) the services have become much popular around the world.

BIN & BIDS

The British library has also developed the Business Information Network (BIN) that is rapidly growing. The Bath Information & Data Services (BIDS) offering services in the areas of Public Health and Medicine also provides access to the British Library databases. As regards medicine BIDS alone covers 3,300 journals from 110 countries and includes abstracts for 70% of its records. Every one its inside information database is growing at the rate of one million articles.

Turning to the UNITED STATES OF AMERICA, it is found that the US Department of Education, apart from allotting regular federal grants annually to the academic and public libraries, provides networking grants, supports inter-library loan projects, promotes automation and retroconversion projects and resource sharing schemes.

Through library networking the libraries in each State of U.S.A. are networked to local, regional or national networks.

The major library networks in the U.S.A. are AMIGOS, Dallas; Bibliographic Center For Research (BCR), Aurora; CAPCON, Washington; FEDLINK, Washington; ILLNET, Springfield, 21; Indian Library Cooperative Services Authority (INCOLS A), Indianapolis; MINITEX Library Information Network, Minneapolis; Michigan Library Consortium (MLC), Lansing; Missouri Library Network Corporation (MLNC), St. Louis; Nebraska Library Commission (NEBASE), Lincoln, Ne; NELINET, Newton, Ma; OLLC, Rancho Cucamonga, Ca; OHIONET, Columbus, Oh; PALINET, Philadelphia; and PRLC, Pittsburgh, Pa.

OCLC

The Online Computer Library Center (OCLC) which has made significant progress, is rather a counterpart of INTERNET through e-mail network on the library part. The OCLC possesses more than thirty million bibliographic reports with five hundred twenty million collections locations in its union catalogue. Every month the database is increased at the rate of 4,00,000 records. Astonishingly the retrieval time required through this system for any enquiry is not more than a few seconds. The whole task of retroconversion of the Bodleian Library, Oxford, was entrusted on the OCLC. Several options are provided by the OCLC for libraries like Retrocon, Online Retrospective Conversion, Fullmarc and Tapecon. It should be noted that the Library of Congress is an important national library but not a network and does not create a union catalogue of books like the National Library of Canada. Hence the users of the LC (Library of Congress) can utilise its resources without its network functions. But the OCLC that is not a national library functions in general as the major national resources for the libraries in the U.S.A.

VALNET

The Veterans Affairs Library Network (VALNET), US, which is a network system of one hundred sixty three libraries in the Veterans Affairs and Health Care facilities depends on its creation of data on the OCLC through a contingency agency that creates its union catalogue on the CDs which are updated twice a year and distributed to the libraries. There are about 700,000 books, 60,000 periodicals and 1,04,000 audiovisual programmes in its databases.

FEDLINK-FNO

The FEDLINK Network operations (FNO) work as a regional library network for 825 federal libraries which are the participant-members of the OCLC. Being set up in 1978 this network to the federal libraries of U.S.A. facilitates cost-effective access to information. The FEDLINK with its Office at the Library of Congress liberally utilises the OCLC data and does not envisage to create another network database in order to avoid duplication of activities. Further the FEDLINK organizes training programmes and offers also the procurement and accounting services. But the FEDLINK, in the strict sense, may be considered as a regional network apart from supporting federal libraries promotes to the maximum the uses of OCLC Programmes.

LIMS

The Library Management Information System (LIMS) situated at Maryland adjoining Washington D.C, operates at the University of Maryland, U.S.A. Apart from INTERNET connections it maintains the union catalogue of its thirteen participating libraries that is known as VICTOR. These participating libraries are also the members of the OCLC. They download the bibliographic data and hold their own catalogues. The software of LIMS supports both the in-house operations of libraries as well as the union catalogue and ILL operations. With the Online Public Access Catalog (OPAC) access to national and international databases, gopher LMS provides unique services to about 3,500 students and faculty members of the University of Maryland.

SAILOR

The second network programme of Maryland is the one which being conducted by the Maryland State Department of Education is quite different. This allows INTERNET access to the users free of charge through non-commercial service named SAILOR and by it the citizens of Maryland can access information on all subjects covering arts, entertainments, history, issues relating to the nation, health, medicine, law, federal government. The SAILOR with about two hundred in-coming lines has been providing free INTERNET services including ITELNET and USENET of the

Maryland State Library. It should be noted that Maryland State Library Network Coordinating Council (MSLNCC) electronically connects the libraries of Maryland and provides services to the users without creating any union catalogue. They depend mainly on the manipulations of the developing software. The SAILOR Telecommunication Network is an extension of the one established by the University of Maryland.

WR LC

Washington Research Libraries Consortium (WRLC) with eight participating university libraries works like the University of Maryland Network. The WRLC which creates its union catalogue with 2.4 million records, provides services to the undergraduate as well as graduate students and faculty members of the participating libraries. The WRLC services include accesses to INTERNET and to the library catalogues which provide journal citations and abstracts.

But the library network system is somewhat different in CANADA from that of the prevalent in India, U.K. and U.S.A.

CISTI

The Canadian Institute For Scientific and Technical Information (CISTI) possesses millions of books and conference proceedings, more than 50,000 serials and millions of technical reports from the whole world. It provides sundry services including Canadian Online Enquiry Service (CAN/OLE) and document delivery. Every day more than 2,500 users utilise the services of the CAN/OLE. Further the CISTI maintains a union catalogue of about 50,000 serial titles with more than 20,000 current issues of serials.

DOBIS & UTLAS

Although there is no union catalogue of books prepared by the CISTI, the DOBIS and University of Toronto Library Automation System (UTLAS) are the two main union catalogues of books with location details. The DOBIS is mostly handled by the National Library of Canada, while the UTLAS is a commercial library network.

OS I

But the National Library of Canada promotes decentralised networking through the use of protocols conforming to the Open System Interconnection (OSI) reference model. This network has more than nine million bibliographic records in its online database and adds more than 800,000 to 1,200, 000 every year to its database holding above one million authority records. Apart from its more than 275 concurrent users, it includes six hundred external institutions across Canada, which utilise its union catalogue. Its response time is two seconds to twenty seconds depending upon the nature of the enquiry. It also provides an in-depth ILL service to non-Canadians

who require Canadian publications. The CISTI also provides Canadian Scientific Numeric Database Service (CAN-SAD) Online at a very cheap rate to the users outside Canada on several scientific disciplines with SDI facility.

In the interest of the academic libraries in Canada automation of libraries is encouraged even among the public libraries there. Thus Ottawa Public Library which maintains an online database of more than million volumes offers meaningful services to the academics as well as general public.

Unit 34 □ Comparative Librarianship in The Academic Library System

INTRODUCTION

Generally the library professional literature lacks of sufficient number of (i) definitive text-books outlining the methodological comparison of numerous academic library systems, and (ii) manuals to die sources about academic librarianship in various countries of the world.

Hence below a discussion has been supplied with an outline of comparative librarianship and theoretical basis of its methodology against the wider background of other comparative sciences and scientific methods to be applied in the academic library system. This discussion is followed by the mention of issues concerned with purely practical aspects of comparative academic library system.

The term 'Comparative Librarianship' and its various uses.

The use of the term 'Comparative Librarianship' dates from 1954 when C. Dane published his two articles titled *Comparative Librarianship* (*Librarian*, 43, VIII, August 1954, pp. 141 -144) and *The Benefits of Comparative Librarianship* (*Australian Lib. /.*, 3, III, July 1954, pp.89-91). Just after ten years C.H. White published a Chapter on *Comparative Study of Library Systems* (*Bases of Modern Librarianship*, ed. C.H.White Pargamon, 1964) D.J.Foskett in w.w. Bishop's Memorial Lecture 1964 at the University of Michigan USA, of which the summary titled *Comparative Librarianship* (*Lib. W*(66,780,June 1965,pp. 295-298) and the full-text with the same title (*Progress in Library Science*, 1965, pp. 125-146) were published. Subsequently, were published the following articles on the same topic with the titles *First Institute on the International Comparative Librarianship* (*PLA Bulletin*, 21,11, November 1965, pp. 73-80) by N. Sharify and R.R. Piggford; *Why Comparative Librarianship* (*Wilson Lib. Bull*, 41, II, October 1966, pp.200-206) as well as *Around the Library World in 76 Days. An Essay in Comparative Librianship* (Peaefcck 1967) by L. Shores; and *Comparative Studies and the Development of Public Libraries*. *UNESCO Bull. Lib.*, January -February 1968, pp. 13-19) by J. Hassenforder.

In the same period at least three periodicals began to devote to the topic of international and comparative librarianship, namely, *Libraries Abroad* Section (1966) in the *Journal of Library History*, *Focus on Inter national and comparative Librarianahip* (1967), *International Library Review* (1969); and an irregular column on the international as well as comparative aspects of librariansliip (1970) in the *Library Associa tion Recor d* .

Simultaneously *A Handbook of Comparative Librarianship* (London, Gove Bingley, first ed. in 1970 audits second re revised enlarged ed. in 1975) authored by S.Simsova and M. Mackee was published. Again in 1970 *Comparative and International Librarianship* (Greenwood, 1970) by M.M. Jackson Jr. with an article in it on *Comparative Librarianship: A Theoretical Approach* (Chapter - I, pp. 3-24) by L. Shores was published. Another article *Librarian, know thy self* by L. Shores was also included in the *Canadian Lib.J.* (27, VI, Nov. -Dec. 1970, pp. 450-454). Some other articles on Comparative Librarianship are: *Methods and Evidence in Comparative Studies* by R.L.Koehl in W.L. Williainson's *Assistance to Libraries in Developing Nations : Papers on comparative Studies* (University of Wisconsin Library School, 1971, pp. 5-14) *International Librarianship* by P. Harvard-Williams in *UNESCO Bull Lib.*, 26, II, March-April 1972, pp. 63-70); an eleven page entry on *Comparative Librarianship* by D.G. Collings in the *Encyclopaedia of Libranship and Information Science* (Dekker, 1972, Vol. V, pp. 492-502); and a collection of three essays written by A.D. Bumett, R.K. Gupta and S.Simsova have been published *Studies in Comparative Librarianship* (American Library Association, 1973).

Besides, J.P.Danton's book titled *The Dimensions of Comparative Librarianship* (American Library Association, 1973) and G.E. de Figueirodo's *Comparative Librarianship: Theory and Practice* (M.A. Dissertation, University of College London, 1972) reveal an increasing interest of the professional librarians in this newly introduced topic which is entering a fresh stage of evolution.

Definitions of 'Comparative Libraianship'

Various definitions of this term may be found in some articles and books. Chron'ologically they are mentioned as follows :

(1) Chase Dane defines 'Comparative Librarianship' as: "It is a study of library development in many centuries to discover what developments have been successful and can be copied elsewhere. It is an examination of the philosophies and policies of librarianship on an international scale to determine long-range trends, to appriase short-comings, and to uncover contradictions and inconsistencies between practice and theory. Above all it is the study of the cause and effect of library development throughout the world. Like comparative anthropology and comparative religion, comparative librarianship seeks to broaden our tolerance and deepen our understanding. It is one of the first steps toward international library cooperation" (*Comparative Librarianship* in *Librarian*, 43, VIII, Aug 1954, p. 141).

(2) D.J. Foskett opines : "... a great deal of information is already available; improved facilities for travel mean that first-hand research is open to more than a privileged few. It is time to apply systematic methods to our studies, so that we can

arrive at decisions based on confirmable hypothesis and not simply on the opinions of learned men... (the comparative method is) the collection of data, the observation (as objectively as possible) of existing systems, and their measuring by means of some hypothetical or actual situation that we have set up as our point of reference” (Compton *Library World*, 66, 780, June 1965, pp. 295, 298).

(3) C.M. White briefly notes : “Comparative Librarianship is a subject which deals with material on theory and practice found in different geographical and political areas, but it is a method of study as well as subject” (Compton *Library World*, 57, 13-26).

(4) According to M.M. Jackson, Comparative Librarianship is “that field of study that deals with the comparison of the theory and practice of librarianship in different countries, for the purpose of deepening and broadening understanding of problems beyond national boundaries” (In *Library World*, 77, 133).

(5) Justifying this topic L. Shores writes : “Why comparative librarianship? Because it can uncover, in our professional discipline, neglected and hidden approaches to important technical library problems ; but even more important, comparative librarianship suggests a new and critical role for librarianship. Patently, political and industrial leaders of nations have been unsuccessful in promoting world understanding. It is just possible that the quiet force of libraries can succeed where governments have failed !” (Wright *Library World*, 41, II, October 1966, p.206) and hence defining the term the same author notes that comparative librarianship is “the study and comparison of library theory and practice in all the different countries of the world for the purpose of broadening and deepening our understanding of professional problems and solutions” (Wright *Library World*, p.204). Later on L. Shores further comments : “We must begin by comparing ourselves with each other, individually as librarians, collectively as librarians, in our own community, in our state, region, nation, world— and who knows, as space opens to us, in the universe— on equal footing. This is the basic approach in all comparative study. It is the essence of comparative librarianship and its theoretical approach” (Wright *Library World*, p. 4 in *Comparative Librarianship*, M. M. Jackson Jr. Greenwood, 1970) and has also enlarged it as: “An amplification of the definition that has been implied, but not adequately stressed, is that comparisons within a country may be just as significant as comparisons with other countries” (Wright *Library World*, 27, VI, Nov.-Dec. 1970, p.451).

(6) In the same spirit of international library cooperation The Institute on Internationalism in the Curricula of Library Education defines it: “Comparative

librarianship consists of study of one or more aspects of library theory, practice or influence in two or more societies or geographical areas” (*Internationalism in US library school curricula* by H.C. Campbell in *Int.Lib.Rev.*, 2,11, 1970,p, 184) and is a “subdiscipline of the general subject of international librarianship, and as also related to the study of library history”. So ‘International Librarianship 1’ may be defined according to P.Harvard-Williams as: “... Cooperative librarianship, and as also related to the study of library history” (*International librarianship* in *UNESCO Bull.Lib.*, 26, II, March-April 1972,p.70).

(7) Lastly, its definition as supplied by D.G.Collings is as follows : “Comparative librarianship may be defined as the systematic analysis of library development, practices, or problems as they occur under different circumstances (most usually in different countries), considered in the context of the relevant historical, geographic, political, economic, social, cultural, and other determinant background factors found in the situation under study. Essentially, it constitutes an important approach to the search for cause and effect in library development, and to the understanding of library problems” (*Encyclopaedia of Librarianship and Information Science*, Vol., Dekker, 1972, p.492). Through this definition D.G. Collings has clearly demarcated the boundary (i) between comparative librarianship and library history as follows : “Comparative librarianship frequently uses historical data, but it differs from library history in that it is concerned primarily with providing a clearer view of current library problems and the process of library development”, and (ii) between comparative and international librarianship as “Comparative librarianship is also closely related to efforts aimed at international understanding and cooperation in librarianship, but its lively concern with and usefulness to these activities grows out of its basic preoccupation with the systematic search for accurate understanding and interpreting of library practices and results in differing cultural contexts”.

All these seven definitions emphasize one or other aspects of librarianship. Thus (i) one of them at the first instance reveals the practical usefulness of comparative librarianship as a tool for cultural borrowing being reminiscent of the early comparative education; (ii) while some hint on the comparative method as a tool for bringing order into material and thinking about librarianship, which remind the scholars of modern comparative education; and (iii) some highlight the elements of internationalism.

Although the term ‘Comparative Librarianship’ due to frequent uses appears to be the “most appropriate”, yet through the review of those definitions an alternative term such as ‘International Librarianship’ which also includes the study of library history may be coined for the discipline of library and information science because of the following reasons :

(1) 'International Librarian ship' is a more comprehensive term than any one else, as already observed.

(2) Being primarily the study of library history of different countries of the world, without embarrassingly comparing the library activities of a country with those of other 'International Librarianship' may conveniently be used describing the theoretical and practical aspects of librarianship prevalent throughout the world, which consists of the (i) Data Collection through study tours and field work; (ii) Bibliographical activities, such as, literature surveys, documentation and translations; (iii) Researches including publications; (iv) International activities like cooperation, professional guidance to other countries and international understanding; and (v) Development of International librarianship including subject-study and research methodology in other parts of the world.

(3) Considering the above-mentioned five activities it is better to use the term 'International Librarianship', provided (i) it is carried out as an academic discipline, (ii) it uses the methods of systematic enquiries, and (iii) it encourage study tours of libraries of other countries aiming at promoting international understanding.

(4) International Librarianship connotes various kinds of relationships, viz. intellectual, cultural and educational, among persons and groups of persons from two or more nations, and also analyses various library systems and problems in two or more national environments in terms of socio-political, economic and ideological contexts.

(5) And the last but not the least point is that in the word 'Comparative' there always remains a possibility of comparison between the library systems of two countries and this comparison may not always be "on equal footing", as sometimes such a case happens in using the term like 'Comparative Religion' through which an element of biasness, inspite of broad mindedness, may act quite, unconsciously. That is why the term like 'Religious Studies' is being used presently.

Under these circumstances, it is better to use the International Librarianship instead of 'Comparative Librarianship'. However, the second term has now been widely accepted, it has been discussed here elaborately.

Attitudes to Scientific Methods in Comparative Librarianship

Different attitudes to Scientific Methods of various writers on Comparative Librarianship are summarized below :

(1) D.G. Collings identifies comparative librarianship as a "scholarly method of investigation" and emphasizes on the necessity for "utmost care, judgement, and objectivity possible".

(2) Also D.J. Foskett observes the main value of comparative librarianship in its method which is primarily scientific urging that the comparative method is more efficient than intuition. He writes : “What we are trying to do, in comparative studies, is to unravel the strands that go to make up a certain pattern, to assess these strands against those that make up other, different patterns, and to try to form estimates of the relative value of each “ (*Comparative Librarianship* in R.L. Collison’s *Progress of Library Science*, Butterworth, 1965,p.126).

(3) On the other hand, J.Hassentbrder detects a lack of analytical approach in comparative studies. As per his observations : “Today ... we can draw on a relative abundance of information and notably on detailed descriptions. However, what is still needed is a fuller analysis of the connexions between the political, economic, social and cultural factors operative in the evolution of societies and the development of public libraries... I therefore selected a number of variables and then analysed their effects on the development of public libraries in each country” (*Comparative studies and the Development of Public-libraries in UNESCO Bull.Lib.*, 22,1, Jan-Feb. 1968, pp. 15,17). J .Hassenforder has explicitly mentioned here his attitudes to scientific method emphasizing the “development of public libraries” only and has not commented on the development of academic libraries from the perspective of comparative librarianship,

(4) But L.Shores is very critical of such attitudes to scientific method having remarked: “What should be disconcerting is that we, who base our practice on what is essentially a humanistic discipline, should so completely have accepted the folklore of the scientific method without ever indicating any doubts” (*Comparative Libararianship : A Theoretical Approach* in M.M. Jackson Jr’s *Comparative and International Librarianship*. Greenwood, 1970, p. 21).

Comparative/International Librarianship in Academic Library System

It is experienced that Comparative/International Librarianship is generally applied to the public library system. But if properly examined and explored, it would be evident that it is equally applicable and useful to the academic library system.

As already observed, comparative librarianship is suitable for advanced studies which would be prerequisite for undertaking the depth-analysis as required in the colleges and universities.

Further, the international aspect of comparative librarianship can be considered in a wider context of professional education in academic library system for internationalism. It is, in fact, a multi-cultural approach to academic libraries.

Again the increasing popularity of ‘area studies’ as a topic has created a necessity

for suitably qualified academic librarians with an ability to handle foreign materials.

Hence it is needless to mention the significance of comparative librarianship in the academic library system because of the following points :

(1) Comparative librarianship promotes international cultural cooperation and world understanding among the colleges, universities and other academic institutions among various countries.

(2) It assures inter-library cooperation at the international level among the educational institutions on the earth.

(3) Through comparative Librarianship academic institutions of different nations can be benefitted in the areas of (a) Collection— both books and data, (b) classification, (c) cataloguing, (d) readers' services/ (e) reference work, (f) research guidance, (g) abstracting and indexing of articles published in the internationally famed learned journals and serials, and (h) sharing common professional technical academic library problems and their solutions.

(4) Comparative Librarianship enhances the quality and enriches quantity of the bibliographical services of the academic to libraries of the world through information transfer.

(5) Because of exchange of library concepts, ideas and personnels among the academic institutions comparative librarianship insures mutual respect and harmony.

(6) Comparative Librarianship compels to study the history of the origin and development of the academic libraries of different nations, and thereby helps to upgrade themselves.

(7) It also assists an academic library of a country to assess its existing system and services in comparison with those of that of a foreign country.

Conclusion

Thus it is evident that Comparative Librarianship promotes the advancement of learning through broadening and deepening mutual understanding of academic library issues also beyond national boundaries. So far academic library system in India is concerned, Comparative/International Librarianship has enough scope here for the development of academic libraries in all their segments.

Sample Questions

I. Long Answer Type

I. What do you mean by the term 'Comparative Librarianship'? Enumerate the attitudes of writers to scientific methods in Comparative Librarianship.

II. Short Answer Type

1. Narrate the similarities and dissimilarities between 'Comparative Librarianship' and 'International Librarianship' and express your preference to one of these two terms.

III. Objective Type

(Mark the *one* right answer out of the following four alternatives with the tick-sign ✓).

1. The term 'Comparative Librarianship' dates from
 - A. 1953.
 - B. 1954.
 - C. 1965.
 - D. 1970.

Answer is 'B'.

Select Readings

1. Simsova, S. & Mackee, M. *Handbook of Comparative Librarianship*. London, Clive Bingley, 1970 and revised & enlarged edition in 1975.
2. Jackson Jr., M.M. *Comparative and International Librarianship*. Greenwood, 1970.
3. Danton, J.P. *The Dimensions of Comparative Librarianship*. American Library Association, 1973.

SELECT ACROMYMS

2. A.D.P./a.d.p.	= Automatic Data Processing
4. A.M.T./a.m.t	= Air Mail Transfer
5. ART/art.	= Article
6. AS	= (The)Asiatic Society,Kolkata
1. B.A.R.C.	= Bhaba Atomic Research Centre,
4. BK/bk	= Book
5. C.L. R.	= Computer Language Recorder
6. C.L.T.	= Computer Language Translator
9. C.R.E.D.O. (Now CE.D.O.)	= Curriculum Research and Educational Development Overseas
10. C.S.I.R.	= Council of Scientific and Industrial Research, India
1. DESIRE	= Distance Education Special Interest Group, Australia
DESIG	= Development of a European Service For Information on Research and Education
1. Ed	= Editor
EEA	= Engineering Education Australia.
1. F.A.S.	= Fellow of The Asiatic Society, Kolkata
3. F. L. A,	= Fellow of Library Association
4. I.C.H.R.	= Indian Council of Historical Research
5. I.C.P.R.	= Indian Council of Philosophical Research
6. I.C.S. S.R.	= Indian Council of Social Science Research
3. I.C.C.R.	= Indian Council For Cultural Relations
2. I.C.A.R.	= Indian Council of Agricultural Research
MEU	= Mind Extension University, USA
IUC	= International University College, USA
4. MS/MSS	= Manuscript/Manuscripts

2. N.D.P.S.	= National Data Processing Service
NTU	= National Technological University, USA
1. Pa.	= Pali
3. P.E.N.	= Poets, Playwrights, Editors, Essayists, and Novelists
2. Per cent	= Per centum (- by the hundred)
5. Pkt	= Paket
4. P.L.480	= Public Law 480
6. PR. S.	= Premchand Roychand Student (Scholar) or Studentship (Scholarship)
1. R.A.S.	= Royal Asiatic Society, London
5. R.V.	= Revised Version
1. Skt.	= Sanskrit
2. S.Q.C.	= Statistical Quality Control
3. U.K./UK	= United Kingdom
4. U. N. E. S. C. 0/UNSECO	= United Nations Educational Scientific and Cultural Organization
5. U.N. I.CE.F./UNICEF	= United Nations International Children's Emergency Fund
7. U.N.O./UNO)	= United Nations Organisation
9. UNRRA/U.N.R.R.A.	= United Nations Relief and Rehabilitation Administration
10. U. P. S. C./UPSC	= Union Public Service Commission, India
12. U.S. A./USA	= United States of America
1. V.E.R.A.	= Vision Electronic Recording Apparatus
WGU	= Western Governor University, USA.
4. W.H.O./WHO	= World Health organisation

5. W.M.O./WMO	= World Meteorological Organisation
3. N U C	= National Union Catalogue of the Library of Congress
2. UBC	= Universal Bibliographic Control
1. UAP	= Universal Availability of Publications
3. NATIS	= National Information System
5. UNISIST	= United Nations (World) Information System in Science and Technology
4. NISSAT	= National Information System in Science and Technology, India.
3. MOU	= Memorandum of Understanding
7. CCD	= Cooperative Collection Development
8. CCM	= Cooperative Collection Management
4. RS	= Resource Sharing
2. LC	= Library of Congress, USA/ Library Cooperation
3. LN	= Library Network/National Library, Kolkata.
3. UGC	= University Grants Commission, India/University Grants Committee, U.K.
2. CD - ROM	= Compact Disc Disk Read ONLY-Memory
3. WWW	= World Wide Web
1. LAN	= Local Area Network
3. C D-R	= Compact Disc Recorder
4. CD - RW	= Compact Disc Rewritable
3. DVD	= Digital Video Disc/Digital Versatile Disc.
3. ROADS	= Resource Organisation and Discovery in Subject-based Services
2. EEA	= Engineering Education Australia
1. OLA	= Open Learning Australia / Open Learning Agency, Canada.

- 2. FID = International Federation For Information and Documentation, The Hague, The Netherlands
- 1. C MI L = Center For Media and Independent Learning, U.S.A.
- 7. N T U = National Technological University, U.S.A.
- 3. MEU = Mind Extension University, U.S.A.
- 7. IUC = International University College, U.S.A.
- 8. UP = University of Phoenix, U.S.A.
- 9. UPO = University of Phoenix Online Campus in San Francisco, U.S.A.
- 3. WGU = Western Governors University, U.S.A.
- 1. WCET = Western Cooperative For Educational Telecommunications, U.S.A.
- 2. WICHE = Western Interstate Commission For Higher Education, U.S.A.
- 3. ELN = Electronic Library Network, Canada
- 3. OU = Open University
- 2. VU = Virtual University
- 3. BLCMP = Birmingham Libraries Copperative Mechanisation Project, U.K.
- 2. OCLC = Online Computer Library Center, U.S.A.
- 13. UTLAS = University of Toronto Library Automation System
- 5. NCLIS = National Commission on Libraries and Information Science
- 1. MAN = Metropolitan Area Network
- WAN = Wide Area Network
- 1. AACR2 = Anglo American Cataloguing Rules, 2nd Ed.
- 3. OPAC = Online Public Access Catalog
- 2. MARC = Machine Readable Cataloging

3	ALA	=	American Library Association, U.S.A
2.	B.L.A.	=	Bengal Librai Association, Kolkata
7.	I LA	=	Indian Library Association
1.	IASLIC	=	Indian Association of Special Libraries and Information Centres, Kolkata
2.	RLG	=	Research Libraries Group, U.S.A.
3.	RLIN	=	Research Library Information Network, U.S.A.
5.	WLN	=	Washington Librai Network.U. S. A.
6.	NELINET	=	New England Library Information Network
11.	URL	=	Universal Resource Locator
	ISBN	=	International Standard Book Number
	CALIBNET	=	Calcutta Library Network
	INFLIBNET	=	Information and Library Network, India
	ISSN	=	International Standard Serial Number