



# NETAJI SUBHAS OPEN UNIVERSITY

POST-GRADUATE COURSE  
Assignment — June-2020/Dec.-2020

## COMMERCE

Paper - VII : Basic Statistical Concepts & Tools

### QUESTION PAPER CUM ANSWER BOOKLET

(Full Marks : 50)

(Weightage of Marks : 20%)

**Special credit will be given for precise and correct answer. Marks will be deducted for spelling mistakes, untidiness and illegible handwriting. The figures in the margin indicate full marks.**

Name (in Block Letter) : .....

Enrolment No.

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Study Centre Name : ..... Code : .....

To be filled by the Candidate	Serial No. of question answered																				TOTAL	
For Evaluator's only	Marks awarded																					

Q.P. Code : **PA/5/VII**

**PG-COM.-AP-17083**

Signature of Evaluator with Date



# NETAJI SUBHAS OPEN UNIVERSITY

POST-GRADUATE COURSE  
Assignment — June-2020/Dec.-2020

**STUDENT'S COPY**

## COMMERCE

Paper - VII : Basic Statistical Concepts & Tools

Name (in Block Letter) : .....

Enrolment No.

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Study Centre Name : ..... Code : .....

Q.P. Code : **PA/5/VII**

**PG-COM.-AP-17083**

Received Answer Booklet  
Signature with seal by the Study-Centre

**জরুরি নির্দেশ / Important Instruction**

আগামী শিক্ষাবর্ষান্ত পরীক্ষায় (T.E. Exam.) নতুন ব্যবস্থা অর্থাৎ প্রশ্নসহ উত্তর পুস্তিকা (QPAB) প্রবর্তন করা হবে। এই নতুন ব্যবস্থার সঙ্গে পরীক্ষার্থীদের অভ্যস্ত করার জন্য বর্তমান অনুশীলন পত্রে নির্দেশ অনুযায়ী প্রতিটি প্রশ্নের উত্তর নির্দিষ্ট স্থানেই দিতে হবে।

**New system i.e. Question Paper Cum Answer Booklet (QPAB) will be introduced in the coming Term End Examination. To get the candidates acquainted with the new system, assignment answer is to be given in the specified space according to the instructions.**

**Detail schedule for submission of assignment for the  
PG Term End Examination June-2020/Dec.-2020**

1. Date of Publication : 20/06/2020
2. Last date of Submission of answer script by the student to the study centre : 19/07/2020
3. Last date of Submission of marks by the examiner to the study centre : 16/08/2020
4. Date of evaluated answer scripts distribution by the study centre to the students (Students are advised to check their assignment marks on the evaluated answer scripts and marks lists in the study centre notice board. If there is any mismatch / any other problems of marks obtained and marks in the list, the students should report to their study centre Co-ordinator on spot for correction. The study centre is advised to send the corrected marks, if any, to the COE office within five days. No change / correction of assignment marks will be accepted after the said five days.) : 23/08/2020
5. Last date of submission of marks by the study centre to the Department of C.O.E. on or before : 31/08/2020

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এখানে কিছু লিখবেন না

**Do Not Write Anything Here**

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## MODULE - I

Answer any *two* questions.

$$12 \frac{1}{2} \times 2 = 25$$

1. a) State the merits and demerits of arithmetic mean.  
b) Prove that for  $n$  positive and real observations

$$\text{A.M.} \geq \text{G.M.} \geq \text{H.M.}$$

$$6 + 6 \frac{1}{2}$$

2. a) Show that the simple regression coefficients are not affected with the choice of origin but are affected with the choice of scale.

- b) Prove that simple correlation coefficient varies between + 1 and - 1.

$$6 + 6 \frac{1}{2}$$

3. a) Derive Newton's backward interpolation formula.

- b) By applying a suitable interpolation formula estimate  $f(2.5)$  from the following table :

$x :$	1	2	3	4	5
$f(x) :$	5	7	8	10	12

$$6 \frac{1}{2} + 6$$

4. a) Show that  $Q = \frac{2Y}{1+Y^2}$

where  $Q$  = Yule's coefficient of association and

$Y$  = Yule's coefficient of colligation.

- b) 100 cricketers appeared in a trial match and 30 of them were successful. 23 cricketers received special coaching and out of them 12 cricketers were successful. Using Yule's coefficient of association estimate the utility of special coaching.

$$6 + 6 \frac{1}{2}$$

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**First Answer :**



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QP Code : PA/5/VII

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**Second Answer :**



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## MODULE - II

Answer any *two* questions.

$$12\frac{1}{2} \times 2 = 25$$

5. a) Narrate the merits and demerits of chain index.  
b) From the following group index numbers and group weights, compute the cost of living index :

<b>Group :</b>	<b>Food</b>	<b>Clothing</b>	<b>House rent</b>	<b>Fuel</b>	<b>Misc.</b>
<i>Index :</i>	300	250	200	225	150
<i>Weight :</i>	40	20	15	10	15

Also interpret the result.

$$6 + (4 + 2\frac{1}{2})$$

6. Write short notes on the following :

- a) Ratio of moving average method  
b) Ratio to trend method  
c) Components of time series.

$$3\frac{1}{2} + 3\frac{1}{2} + 5\frac{1}{2}$$

7. a) How would you prepare Range Chart ?  
b) State the advantages and limitations of SQC.

$$6 + 6\frac{1}{2}$$

8. Write short notes on the following :

- a) Mode  
b) Standard deviation  
c) Fisher's index  
d) Mean chart.

$$2\frac{1}{2} + 2\frac{1}{2} + 3\frac{1}{2} + 4$$

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**First Answer :**



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**QP Code : PA/5/VII**

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**QP Code : PA/5/VII**

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**Second Answer :**



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**QP Code : PA/5/VII**

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