

POST-GRADUATE COURSE

Term End Examination — June, 2017

ZOOLOGY

Paper - 1B : Taxonomy, Biodiversity and Conservation

Time : 2 Hours

Full Marks : 50

(Weightage of Marks : 80%)

Special credit will be given for accuracy and relevance in the answer. Marks will be deducted for incorrect spelling, untidy work and illegible handwriting. The weightage for each question has been indicated in the margin.

1. Answer *two* questions : $9 \times 2 = 18$
- a) What is taxonomic character ? Elaborate the precautions that are necessary for selecting such characters. Discuss principal techniques for immunotaxonomy.
 $1 + 3 + 5$
- b) Distinguish between primary and secondary types. Name and define three primary and three secondary types.
 $3 + (3 + 3)$

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- c) i) “Anthropogenic factors are responsible for species rarity which is followed by species extinction.” Discuss the phenomenon citing suitable examples. 5
- ii) Write a brief note on the diversity clines in relation to biodiversity conservation. 4
- d) What do you mean by direct and indirect census techniques ? Explain the procedures for Pug marking. Enumerate the main criticisms against the effectiveness of this technique. 2 + 5 + 2
2. Answer *three* questions : $6 \times 3 = 18$
- a) Define Linnaean hierarchy. Name the categories introduced by Linnaeus. Distinguish between identification and classification. 1 + 2 + 3
- b) Distinguish between synonymy and homonymy. Explain these phenomena citing one example for each of them. 3 + 3

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- c) Expand the term 'ICZN'. What are the important requisites of a zoological name? Explain 'Law of priority' citing one example.
1 + 1 $\frac{1}{2}$ + 3 $\frac{1}{2}$
- d) Discuss the impact of prawn culture and sewage disposal practices on the degradation of mangroove ecosystem. 3 + 3
- e) Present a comprehensive faunal make-up of desert biomes. Comment on the adaptations relating to collection and conservation of water of these animals. 2 + (2 + 2)
- f) Enumerate the steps that have been taken in India on National and Regional basis for conservation of terrestrial faunal resources. 3 + 3
3. Answer *two* questions : 4 × 2 = 8
- a) What is 'Taxonomic key'? What are the purposes of constructing taxonomic keys? What is a dicotomous key? 1 + 2 + 1
- b) Elaborate the importance of taxonomy in pest management. 4

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- c) Mention the characteristics of a tropical rain forest. State the distribution of such forest in India. 3 + 1
- d) What is wildlife corridors? State its importance in management and conservation of elephant in India. 1 + 3
4. Answer *two* questions : 3 × 2 = 6
- a) Distinguish between panmictic and apomictic speciation. 3
- b) State the endings of superfamily, family, subfamily and tribal names. What is a toto name? 2 + 1
- c) Distinguish between census and sampling. What is 'Ecological sink'? 2 + 1
- d) Explain why Manipur brow antlered deer should get conservation priority. 2 + 1