

5661

M.Sc. (Previous) Examination – 2024

ZOOLOGY

Paper-I

(Biosystematics and Taxonomy)

1781018

Time Allowed: Three Hours

Maximum Marks: 100

Note - In M.Sc. Zoology Previous Examination the theory papers will have the following pattern.

Question paper will have 5(five) questions in all having equal marks.

- (i) Question number 1 will be compulsory and will have 20 very short answer question of 1 mark each.
- (ii) Question numbers 2 and 3 will consist of only short answer type questions with 4 subdivisions of 5 marks each. There will be internal choice in these questions.
- (iii) Question numbers 4 and 5 will be long answer type questions with internal choice.

No supplementary answer book will be given to any candidate. Hence the candidates should write the answer precisely in the main answer book only.

All the parts of one question should be answered at one place in the answer book. One complete question should not be answered at different places in the answer book.

PART-A

(20×1= 20)

1. Give short answers to the following questions

- (a) Define Dendogram.
- (b) What is Cline?
- (c) What are Biological Races?
- (d) Explain the term New Systematics.
- (e) What is Manual?
- (f) What is International Code of Zoological Nomenclature?
- (g) Explain Panmictic.
- (h) What are Catalogues?
- (i) What are Bracket Keys?
- (j) How is DNA hybridization helpful in solving taxonomic problem?
- (k) Define Curating.
- (l) What are the lineage changes?
- (m) What is Association Index?
- (n) Write significance of serological test in taxonomy.
- (o) Define Pictorial key.
- (p) Define Cryptic species.
- (q) What is Allopatry?
- (r) Who proposed Biological Species Concept?
- (s) What is Holotype?
- (t) What is Cladogram?

PART-B

Write short notes on -

[4×5= 20]

- (a) Polytypic species
- (b) Modern theory of classification
- (c) Importance of taxonomic publications
- (d) Ecological characters in classification

OR

- (a) Importance and Applications of Biosystematics
- (b) Cytotaxonomy
- (c) Typification
- (d) Polyphyly Lineages

3. Write short notes on -

[4×5= 20]

- ✓(a) Genetic diversity
- (b) Chemotaxonomy
- ✓(c) Requirement of Scientific Nomenclature
- ✓(d) Difference between Tautonym and Synonym

OR

- (a) Advantages and disadvantages of binomial nomenclature.
- (b) Molecular clock
- (c) Advantages and disadvantages of numerical taxonomy
- (d) Similarity and dissimilarity index

4. What are taxonomic keys? Describe different type of taxonomic keys giving suitable examples.

[20]

OR

Explain in detail, method of identification of systematic collection.

5. ✓ Write a detail note on Molecular taxonomy with its significance.

[20]

OR

Explain the preparation of different kinds of publication.
