

**3 (Sem-1) ZOO M 1**

**2 0 1 8**

**ZOOLOGY**

**( Major )**

**Paper : 1·1**

**( Biosystematics and Taxonomy )**

*Full Marks : 60*

*Time : 3 hours*

*The figures in the margin indicate full marks  
for the questions*

1. Choose the correct answer : 1×7=7
- (a) The term 'Taxonomy' was coined by
- (i) G. G. Simpson
  - (ii) A. P. de Candolle
  - (iii) Christofferson
  - (iv) Blackwelder
- (b) Which of the following have been used in chemotaxonomy?
- (i) Pheromones
  - (ii) Isozymes
  - (iii) Colour pigments
  - (iv) All of the above

- (c) Gamma taxonomy concerns with
- (i) analysis of intraspecific variation and evolutionary studies
  - (ii) defining the boundaries between species
  - (iii) arrangement of species into a natural system of classification
  - (iv) description of new species
- (d) Binomial nomenclature was mentioned for the first time in the book
- (i) *Systema Naturae*
  - (ii) *Genera Animalium*
  - (iii) *Historia Plantarum*
  - (iv) *Genera Plantarum*
- (e) Biological species concept as proposed by Mayr applies to
- (i) sexually reproducing species
  - (ii) paleospecies
  - (iii) species which form hybrids
  - (iv) All of the above

- (f) The main purpose of identification key is
- (i) to distinguish one organism from the other
  - (ii) to facilitate identification
  - (iii) Both (i) and (ii)
  - (iv) Neither (i) nor (ii)
- (g) According to current code of zoological nomenclature, the names of family must end with
- (i) oidea
  - (ii) ini
  - (iii) idae
  - (iv) inae

2. Distinguish between the following : 2×4=8

- (a) Phenon and Taxon
- (b) Homologies and Analogies
- (c) Syntype and Paratype
- (d) Monotypic species and Polytypic species

3. Write short notes on any *three* of the following : 5×3=15

- (a) Chemotaxonomy
- (b) Essentialism
- (c) Sibling species
- (d) Branching type key
- (e) Law of priority

4. What do you mean by biosystematics? Give an account of importance and application of biosystematics in the study of Zoology. 3+7=10

Or

What is species? Give an account of biological concept of species with its demerits. 2+6+2=10

5. Discuss the salient features of cladistic classification. 10

Or

What is the purpose of classification? Write the differences between natural and artificial classification. 3+7=10

6. What is binomial nomenclature? Mention the rules followed in this type of nomenclature. Write its advantages and disadvantages. 2+6+2=10

Or

What is preservation and curating of animals? Write the techniques used in preservation of invertebrates. 3+7=10

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