

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

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ZOOLOGY

(Major)

Paper : 1.1

Full Marks : 60

Time : 3 hours

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

1. Choose and write the correct answer : 1×7=7

(a) Systematics deals with

- (i) classification and nomenclature**
- (ii) taxonomy and evolution**
- (iii) identification and classification**
- (iv) identification and preservation**

(b) Who is known as the Father of Taxonomy?

- (i) Mendel**
- (ii) Linnaeus**
- (iii) Cronquist**
- (iv) Hubbs**

(2)

- (c) Biological nomenclature was mentioned for the first time in the book
- (i) *Systema Naturae*
 - (ii) *Genera Animalium*
 - (iii) *Historia Plantarum*
 - (iv) *Genera Plantarum*
- (d) *Systema Naturae* was written by
- (i) Lamarck
 - (ii) Huxley
 - (iii) John Ray
 - (iv) Linnaeus
- (e) Homologies are the features that have
- (i) similar function
 - (ii) different structures
 - (iii) common ancestors
 - (iv) All of the above
- (f) The purpose of fixation of species is
- (i) to prevent autolysis
 - (ii) to prevent degradation of tissues
 - (iii) to coagulate and stabilize protein
 - (iv) All of the above

(3)

- (g) Which of the following have been used in chemotaxonomy?
- (i) Pheromones
 - (ii) Isozymes
 - (iii) Colour pigments
 - (iv) All of the above
2. Distinguish between the following : 2×4=8
- (a) Homologies and Analogies
 - (b) Race and Cline
 - (c) Syntype and Lectotype
 - (d) Alpha taxonomy and Beta taxonomy
3. Write short notes on any three of the following : 5×3=15
- (a) Biological species concept
 - (b) Sibling species
 - (c) Chemotaxonomy
 - (d) Linnaean hierarchy
 - (e) Homonymy
4. Why is classification necessary in the study of Biology? Write the basic concept and demerits of the theory of 'essentialism' in classification. 2+5+3=10

(4)

Or

What is binomial nomenclature? Mention the rules followed in this type of nomenclature. Write its advantages and disadvantages.

2+6+2=10

5. What do you mean by biosystematics? Write down the theories of biological classification.

2+8=10

Or

What is taxonomic key? State the utility in taxonomic work. Add a note on simple bracket key.

2+3+5=10

6. Enumerate the value of biological collections and their importance to society.

5+5=10

Or

What is preservation and curating of animals? Give an account of the methods of collection of invertebrates.

3+7=10
