

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**

(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

(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 : $2 \times 4 = 8$

- (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 : $5 \times 3 = 15$

- (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
