

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

2019

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
