SET FOR DEPT.

2018

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

(Continued)

(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

(Turn Over)

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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