

2016

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) Taxonomy deals with

- (i) classification and nomenclature
- (ii) systematics and evolution
- (iii) collection and preservation
- (iv) classification and evolution

(b) Which one of the following is not involved in biochemical approach of modern taxonomy?

- (i) Chromatography
- (ii) Electrophoresis
- (iii) Infrared spectrophotometry
- (iv) Scanning electron microscope

(c) Biological species concept was introduced by

- (i) Grant
- (ii) Mayer
- (iii) Paterson
- (iv) Cuvier

(d) The term 'phenon' is applied for

- (i) a taxonomic group of any rank
- (ii) phenotypically similar samples
- (iii) genetically similar samples
- (iv) reproductively isolated samples

(e) Alpha taxonomy is concerned with

- (i) arrangement of species
- (ii) evolutionary study of species
- (iii) characterization and naming of species
- (iv) None of the above

(f) A. P. Candolle is known

- (i) for coining the term Taxonomy
- (ii) as Father of Genetics
- (iii) as author of 'Systema Naturae'
- (iv) as author of 'Origin of Species'

(g) Family is a taxonomic

- (i) Genus and Species
- (ii) Phylum and Order
- (iii) Class and Order
- (iv) Order and Genus

2. Distinguish between the following

- (a) Sympatric species
- (b) Homology and Analogy
- (c) Synonymy and Homonymy
- (d) Holotype and Lectotype

3. Write short notes on any two of the following :

- (a) Taxonomist as a curator
- (b) Sibling species
- (c) Indented key
- (d) Trinomial nomenclature
- (e) Subspecies

4. Discuss the importance of the field of Applied Biology.

Or

What do you mean by International Code of Zoological Nomenclature? Write briefly the rules of nomenclature. 2+8=10

5. Why is classification important in Biological Science? Write about cladistic Classification. 4+6=10

Or

Discuss briefly the Biological Species Concept. Write its demerits. 6+4=10

6. Write about the cytological techniques applied in modern taxonomy. 10

Or

Describe the methods of collection and preservation of insects. 5+5=10

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(Sem-1) ZOO M I

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ZOOLOGY

( Major )

Paper : 1·2

[ Animal Diversity (Invertebrates) ]

Full Marks : 60

Time : 3 hours

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

1. Answer the following questions :  $1 \times 7 = 7$

- (a) Write the name of a shelled Protozoa.
- (b) Give the function of choanocytes in Porifera.
- (c) In Prawn, where is statocyst present?
- (d) Write the scientific name of a monogenetic parasite.
- (e) Which class of Mollusca shows tendency towards a closed circulatory system?

- (f) Give one function of coelomic fluid of Annelida.
- (g) How many segments are present in walking legs of a typical insect?
2. Answer the following questions :  $2 \times 4 = 8$
- (a) Write the significance of tube feet in Echinodermata.
- (b) Write a note on Glochidium larva.
- (c) Give the function and structural peculiarities of a hexacanth larva.
- (d) Mention the role of gonangium in Coelenterata.
3. Answer any three questions :  $5 \times 3 = 15$
- (a) Write on the alternation of generation in Coelenterata with example.
- (b) Discuss the holozoic nutrition in Protozoa.
- (c) State the economic importance of Mollusca.
- (d) Discuss the structure of Fasciola.
- (e) Define parasitism and write on the parasitic adaptation of tapeworm.

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( Continued )

4. (a) Define canal system. canal system in Porifera.  
Or
- (b) Write on the modes of reproduction in Protozoa with examples.
- (c) What is coral reef? Give the formation of coral reefs.  
Or
- (d) Give details of the pathogenicity and measures of Wuchereria.
- (e) Classify the phylum Mandibulata up to order. special reference to Mandibulata up to order.  
Or
- (f) Write the distinct features of the phylum Echinodermata. the larval forms of Echinodermata.

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