

( 4 )

3 (Sem-1) ZOO M 1

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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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

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- (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'

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- (g) Family is a taxonomic division between
- (i) Genus and Species
  - (ii) Phylum and Order
  - (iii) Class and Order
  - (iv) Order and Genus
2. Distinguish between the following :  $2 \times 4 = 8$
- (a) Sympatric species and Allopatric species
  - (b) Homology and Analogy
  - (c) Synonymy and Homonymy
  - (d) Holotype and Lectotype
3. Write short notes on any *three* of the following :  $5 \times 3 = 15$
- (a) Taxonomist as a curator
  - (b) Sibling species
  - (c) Indented key
  - (d) Trinomial nomenclature
  - (e) Subspecies
4. Discuss the importance of taxonomy in the field of Applied Biology. 10