Total No. of Printed Pages—6

1 SEM TDC ZOO M 1 (N/O)

2013

(November)

ZOOLOGY

(Major)

Course : 101

Full Marks : 48
Pass Marks : 19

Time : 2 hours

The figures in the margin indicate full marks for the questions

(New Course)

(Nonchordate, Systematics and Evolution)

1. *(a)* Choose the correct answer : 1×5=5

(i) The inner lining of a flagellated chamber of Porifera is of coanocyte / pinacocyte / podocyte / nematocyte.

(ii) Platyhelminthes are coelomate / acoelomate / pseudocoelomate / diploblastic animal.

(iii) The distinguishing character for the class Insecta is presence of jointed legs/three pairs of legs/gill/compound eye.

(iv) The chemical constituent of molluscan shell is $CaCO_3$/$CaSO_4$/CaO/chitin.

(v) In tenth edition of systema naturae, the number of taxonomic categories used is 7/5/6/4.

(b) Distinguish between the following : 2×5=10

(i) Mesentery and Sclerosepta

(ii) Pharyngeal nephridia and Integumentary nephridia

(iii) Mouth parts of honeybee and bedbug

(iv) Bipinnaria larva and Brachiolaria larva

(v) Systematics and Taxonomy

2. Write a note on different modes of nutrition in Protozoa. 5

Or

Give a description of the canal system in Sycon with a suitable diagram.

3. Classify Platyhelminthes up to order with examples. 7

Or

Classify Annelida up to order with examples.

4. Describe different types of vision found in Arthropoda. 6

Or

Write about the affinities of Peripatus in relevance with its systematic position.

5. What is ctenedia? Write about different modes of respiration found in Pila. 1+6=7

Or

What is water vascular system? Discuss water vascular system of starfish. 1+6=7

6. Distinguish between taxonomic category and taxon. With the help of an example, describe how taxonomic hierarchy can be used in animal classification. 2+6=8

Or

Write short notes on the following : 2×4=8

(a) Cladistic classification

(b) Biological species concept

(c) Type concept

(d) Cytotaxonomy

(Old Course)

(Animal Diversity—I and Systematics)

(Animal Diversity—I)

(*Marks* : 32)

Answer **all** questions

1. Fill in the blanks : 1×4=4

(a) Water testing organ in Pila is ——.

(b) The clitellum of Pheretima is present in segments number ——.

(c) Arthropods have —— type of circulatory system.

(d) Class —— includes parasitic Protozoa in which locomotory organelles are absent.

2. Answer in brief (any *three*) : 4×3=12

(a) Enumerate four distinctive characters of Arachnida.

(b) Describe the skeletal system in Sycon.

(c) Describe the excretory system of Pheretima.

(d) Describe various modes of nutrition in Protozoa.

3. Write the distinguishing characters of Platyhelminthes or Arthropoda and classify up to order. 4+4=8

4. What is polymorphism? Give an account of polymorphism in Coelenteratas. 2+6=8

Or

(a) Describe water vascular system of starfish and write its function. 3+1=4

(b) Describe briefly the digestive organs of Pila with a suitable diagram. 4

(Systematics)

(*Marks* : 16)

5. Fill in the blanks : 1×3=3

(a) Specimen used for original publication by an author is ——.

(b) The third part of a zoological name in trinomial nomenclature is —— name.

(c) Microtaxonomy deals with the identification of ——.

6. Write short notes on any *two* of the following : 2×2=4

(a) Taxonomic hierarchy

(b) Biological species concept

(c) Chemotaxonomy

7. Write the principles of nomenclature of animals. Explain binomial nomenclature with example. 5+4=9

Or

What is taxonomy? Discuss cytotaxonomy and numerical taxonomy with suitable examples. 2+7=9

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