

U.G. 1st Semester Examination - 2018**ZOOLOGY****(HONOURS)****Course Code : ZOOH/CC-T-II**

Full Marks : 40

Time : 2½ Hours

*The figures in the right-hand margin indicate marks.**Candidates are required to give their answers in their own words as far as practicable.***Answer all the questions.**

1. Answer any **five** questions : 2×5=10
- a) State the Schizocoel theory of coelom formation.
Name a phylum having this kind of coelom. 1+1
- b) State the contrasting features of metamerism and pseudometamerism. 2
- c) Define metamorphosis. Give an example of holometabolous insect. 1+1
- d) Name the aerial respiratory organ of insects. State the role of spiracle in insect respiration. 1+1
- e) State the salient features of phylum Onychophora. 2

[Turn over]

- (f) Compare Class Gastropoda and Cephalopoda with respect to shell and foot. 2
- (g) What are the significance of Bipinnaria larva? 2
- (h) Mention the true chordate characters in Hemichordata. 2

2. Answer any two questions : $5 \times 2 = 10$

- a) Discuss any two theories regarding evolution of metamerism. Mention the advantages of metamerism in annelids. 3+2
- (b) State the salient features of phylum Arthropoda. Differentiate Class Crustacea and Insecta with examples. 3+2
- c) State the important characters of the phylum where adults show radial symmetry but larvae show bilateral symmetry. Write the name of the larval form of Class Ophiuroidea. State the characters of the larva. 2+1+2
- (d) Discuss the Affinity of Balanoglossus with related non-chordates and chordates to comment on its systematic position. 5

Brachiopodellida
 Orchiocheata
 Polychaeta
 Heterodina

3. Answer any two questions :

10×2=20

a) i) Name the different types of nephridia and their location in earthworm. Describe the structure of a Nephridium with labelled diagram.

2+4

ii) Describe the evolutionary significance of phylum Onychophora.

4

b) i) Define eusociality. Name the different castes of termites colony with their respective roles.

1+2

ii) Define ecdysis. Which hormone play major role during ecdysis in insects? Differentiate between holometabolous and hemimetabolous development.

1+1+2

iii) Mention Schematically the outline classification of phylum Annelida upto classes with examples and at least one distinguishing features of each taxon.

3

c) i) Define torsion. How torsion occurs in Gastropods? What are the advantages of displacement of mantle cavity in Gastropods?

1+3+2

ii) List down the ganglia and body parts innervated by them in Gastropoda. 4

(d) i) State the components and function of water vascular system in Asteroidea. 2+2

ii) Discuss the affinities of Echinodermata with Chordata. 4

iii) What is Aristotle's lantern? In which class it is found? 1+1

