Total number of printed pages–7

3 (Sem–2/CBCS) ZOO HC 1

2023

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ZOOLOGY

(Honours Core)

Paper : ZOO–HC–2016

(Non–Chordates II : Coelomates)

Full Marks : 60

Time : Three hours

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

1. Choose the correct option : 1×7=7

   (a) The animals belonging to phylum Onychophora

   (i) have Arthropoda characteristics and thus also considered as a class of Arthropoda

   (ii) have both annelidan and arthropodan characteristics

   (iii) have both arthropodan and molluscan characteristics

   (iv) serve as a connecting link between Annelida and Mollusca

Contd.

(b) The larva which present only in the members of Gastropods is

(i) glochidium

(ii) bipinnaria

(iii) veliger

(iv) None of the above

(c) The excretory units of Annelids are called

(i) flame cells

(ii) nephrostomes

(iii) nephridia

(iv) uriniferous tubules

(d) Respiration in Arthropoda takes place by

(i) trachea

(ii) gills

(iii) book lungs

(iv) All of the above

(e) Crural glands are a characteristic feature of which group of organisms?

(i) Onychophorans

(ii) Placophorans

(iii) Nematodes

(iv) None of the above

(f) Compound eyes in Arthropods comprise from a few to many distinct photoreceptive units, called

(i) infrared receptors

(ii) ommatidia

(iii) phaosome

(iv) stemmata

(g) Absence of excretory organs, great power of regeneration and exclusively marine animals belong to the phylum

(i) Mollusca

(ii) Echinodermata

(iii) Arthropoda

(iv) Amphibia

2. Very short answer : 2×4=8

(i) Differentiate between Protonephridia and Metanephridia.

(ii) What is swarming behaviour of honey bees ?

(iii) Distinguish between cutaneous respiration and branchial respiration.

(iv) What is detorsion ?

3. Write short notes on ***any three*** of the following : 5×3=15

(i) General characteristics of Arthropoda

(ii) Basic theories pertaining to the evolution of coelom

(iii) Evolutionary significance of Onychophora

(iv) Various modes of respiration in Mollusca

(v) Formation of pearl in natural environment

4. (a) What are the general characteristics of Annelida ? Discuss the process of excretion takes place in Annelids. 4+6=10

Or

(b) Write the distinctive characters of Mollusca. Classify Mollusca up to class mentioning at least three important characters of each class with example. 4+6=10

5. (a) What do you mean by social organization? Discuss the social behaviour in bees explaining how they communicate with each other. 2+8=10

Or

(b) What is metamorphosis? Write on various types of insect metamorphosis. Discuss on the hormonal control of insect metamorphosis. 2+2+6=10

6. (a) Discuss the water vascular system in Asteroidea with suitable diagram. State the function of water vascular system in Echinoderms. 7+3=10

Or

(b) Explain the phenomenon of torsion in Gastropoda with diagram. Write about its significance. 8+2=10
