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3 (Sem-2/CBCS) ZOO HC 1

2022

ZOOLOGY

(Honours)

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 answer : **(any seven)**
1×7=7
- (a) Metamerism is first seen in the phylum
- (i) arthropoda
 - (ii) nematoda
 - (iii) mollusca
 - (iv) annelida

Contd.

- (b) Trocophore larva is found in
- (i) cnidarians
 - (ii) sponges
 - (iii) annelids
 - (iv) arthropoda
- (c) Royal jelly is secreted by
- (i) drone
 - (ii) nurse bee
 - (iii) queen
 - (iv) scavenger bee
- (d) Chloragogen cell is found in
- (i) prawn
 - (ii) earthworm
 - (iii) starfish
 - (iv) sepia
- (e) Which of the following shows discontinuous distribution ?
- (i) Scorpion
 - (ii) Mantis
 - (iii) Crab
 - (iv) Peripatus

- (f) Radula is found in
- (i) leech
 - (ii) pila
 - (iii) scorpion
 - (iv) octopus
- (g) Peripatus is a connecting link between
- (i) Arthropoda and Mollusca
 - (ii) Annelida and Mollusca
 - (iii) Annelida and Arthropoda
 - (iv) Mollusca and Echinodermata
- (h) Which of the following is a balancing sense organ ?
- (i) Statocyst
 - (ii) Osphradium
 - (iii) Nuchal organ
 - (iv) Antenna
- (i) Tube feet in starfish are used for
- (i) locomotion and digestion
 - (ii) locomotion and excretion
 - (iii) locomotion and food capturing
 - (iv) locomotion and reproduction

(j) Tiedmann's bodies is found in

- (i) mollusca
- (ii) annelida
- (iii) echinodermata
- (iv) arthropoda

2. Distinguish between **any four** of the following : 2×4=8

- (i) Micronephridia and Mega nephridia
- (ii) Coelom and coelomate
- (iii) Blood gill and book gill
- (iv) Torsion and coiling
- (v) Round dance and tail wagging dance
- (vi) Incomplete metamorphosis and complete metamorphosis
- (vii) Radial canal and stone canal
- (viii) Super position eye and apposition eye

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

- (i) Significance of metamerism
- (ii) Swarming of honey bee
- (iii) Role of queen honey bee
- (iv) Evolutionary significance of onychophora
- (v) Distinctive characters of phylum mollusca
- (vi) Water vascular system in asteroidea
- (vii) Pulmonary respiration of arthropoda
- (viii) Significance of trochophore larva

4. Answer **any three** of the following : 10×3=30

- (a) What is metamerism ? Describe briefly the different types of metamerism. 2+8=10

(b) What is Nephridium ? Mention the types of nephridium. Write briefly the physiology of excretion in annelida.

2+3+5=10

(c) What is metamorphosis ? Mention the types of insect metamorphosis. Write the role of hormones during insect metamorphosis.

2+2+6=10

(d) What are the different types of pearl ? Write detail account on natural pearl formation system with suitable diagram.

2+8=10

(e) What are the distinctive characters of phylum annelida ? Classify the phylum upto class mentioning *five* important characters of each class with example.

4+6=10

(f) Describe the larval forms in different classes of echinodermata.

(g) What is torsion ? Describe the mechanism of torsion with diagram in Gastropoda.

2+8=10

(h) What is Aristotle's lantern ? Describe the water vascular system in Asteroidea with suitable diagram. 2+8=10