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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.  $2+8=10$

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