

Sl. No. 1799A

Unique Paper code : 2232011201
Name of the paper : DSC: Non-Chordata: Coelomates
Name of the course : B. Sc. (H) Zoology – UGCF
Semester : II
Duration: 2 h

Maximum marks: 60

Instruction for Candidates

1. Write your Roll no. on the top immediately on receipt of this question paper.
2. Answer any **FOUR** questions in all.
3. Question no. 1 is compulsory
4. Attempt various parts of question at one place only.
4. Draw well labelled diagrams wherever is necessary.

Q. 1 (i) Define the following (any **three**) (3 marks)

- (a) Trocophore
- (b) Deuterostome
- (c) Trophallaxis
- (d) Chiasstoneury

(ii) Differentiate between the following (any **three**) (6 marks)

- (a) Hemimetabolous and Holometabolous metamorphosis
- (b) Enteronephric and Exonephric nephridia.
- (c) Diptera and Lepidoptera
- (d) True metamerism and Pseudometamerism

(iii) Name the phylum in which the following structures are present and give one function of each: (any **three**) (3 marks)

- (a) Radula
- (b) Parapodia
- (c) Botyroidal tissues
- (d) Cuvierian tubules

(iv) Give the generic name of the following and classify up to classes (any **three**) (3 marks)

- (a) Water flea
- (b) Devil fish
- (c) Sea lemon
- (d) Cake urchin

Q.2 (a) Explain the different polymorphic forms and social life of termites. Add a note on their economic importance. (9)

(b) Write a note on theories explaining the evolution of metamerism. (6)

Q.3 Describe the structure and function of compound eyes in arthropoda with the help of well labelled diagram. Add a note on the apposition and superposition image formation. (15)

Q4. (a) Enumerate types of metamorphosis in insects and discuss its hormonal control. (9)

(b) Explain the Tracheal system of respiration in Arthropods (6)

Q5 (a) Explain the water vascular system in starfishes and enumerate its significance. (9)

(b) Briefly explain the mechanism of torsion and detorsion in Gastropoda. (6)

Q. 6 Write a short note on the following (any three) (5 × 3 = 15)

(a) Excretion in Oligochaetes

(b) Pearl formation in Bivalves.

(c) Evolutionary significance of Peripatus

(d) Ctenidial Respiration in Mollusca.