

Roll No.

Total Pages : 2

757301

December 2023

M.Sc.(Zoology)- III SEMESTER

Structure and Functions of Non-Chordates (MZO 301)

Time : 3 Hours]

[Max. Marks : 75

Instructions :

1. *It is compulsory to answer all the questions (1.5 marks each) of Part-A in short.*
2. *Answer any four questions from Part-B in detail.*
3. *Different sub-parts of a question are to be attempted adjacent to each other.*
4. *Draw diagrams wherever required.*

PART-A

1. (a) Define gonocoel theory of origin of coelom. (1.5)
- (b) What are book lungs? (1.5)
- (c) Comment over crustacean larva metanauplius. (1.5)
- (d) Define paurometabolous development. (1.5)
- (e) Write peculiar characteristics of phylum rotifera. (1.5)
- (f) Comment on nervous system of echinoderms. (1.5)
- (g) Comment on respiratory pigments found in insects. (1.5)
- (h) Define sponging type of mouth parts. (1.5)

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- (i) Differentiate between protonephridia and metanephridia. (1.5)
- (j) Write the salient features of zoea larva of crab. (1.5)

PART-B

2. (a) Explain metamerism in context to phylum annelida by giving a detailed structure of a metamere. (10)
- (b) Comment over characteristic features of phylum phoronida with special emphasis over coelom. (5)
3. (a) Explain tracheal respiratory system. (5)
- (b) Describe the nervous system of Nereis along with diagram. (10)
4. Describe various larval forms found in echinoderms. (15)
5. (a) Explain filter feeding mechanism in polychaeta. (5)
- (b) With the help of appropriate example elucidate the hydrostatic movement found in echinoderms. (10)
6. (a) With the help of diagram explain the working of malpighian tubule. (10)
- (b) Describe the role of hormones in insect metamorphosis. (5)
7. (a) Explain the mechanism of flying in dragonfly. (8)
- (b) Comment over economic importance of invertebrates. (7)