

This question paper contains 4 printed pages]

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S. No. of Question Paper : 7895

Unique Paper Code : 2231101

F-1

Name of the Paper : Diversity and Evolution of Non-chordata—I [DC-1.1]  
(Protista to Pseudocoelomates)

Name of the Course : B.Sc. (Hons.) Zoology

Semester : I

Duration : 3 Hours

Maximum Marks : 75

(Write your Roll No. on the top immediately on receipt of this question paper.)

Attempt Five questions in all including

Question No. 1 which is compulsory.

Attempt various parts of a question at one place only.

Draw well-labelled diagrams wherever possible.

1. (a) Differentiate between any *three* pairs of terms :

8

(i) Acute amoebic dysentery and chronic amoebic dysentery

(ii) Polyp and Medusa

(iii) Intermediate Host and Definitive Host

(iv) Plasmotomy and Plasmogamy

(v) Radiata and Bilateria.

P.T.O.

(b) Give the scientific names of each of the following and classify them up to classes. Write identifying features of the Phylum and Class in each case : 9

- (i) Jelly fish
- (ii) Venus's flower basket
- (iii) Sea fan.

(c) Write functions of any *three* of the following : 6

- (i) Trichocyst
- (ii) Comb plates
- (iii) Phasmids
- (iv) Gynaecophoric canal.

(d) State whether the following statements are True or False : 4

- (i) All cnidarians are sessile marine forms.
- (ii) *Paramecium* is a true filter feeder.
- (iii) Binucleated cysts are the infective stage of *Entamoeba histolytica*.
- (iv) All helminths are not parasites.

2. (a) Describe locomotion in Ciliates and compare it with locomotion in flagellates. 7
- (b) Explain the different types of coelom found in organisms. Support your answer with suitable examples and diagrams. 5
3. Explain the different types of canal system found in Poriferans. Draw suitable diagrams and add a note on the importance of canal system in the life of sponges. 12
4. (a) Describe the process of conjugation in *Paramecium* with the help of neat labelled diagrams. Write a short note on its significance. 8
- (b) Discuss the affinities between Phylum Cnidaria and Phylum Ctenophora. 4
5. (a) Describe the different types of coral reefs giving suitable diagrams. 6
- (b) Give a brief account of the parasitic adaptations in cestodes. 6
6. Name any two digenetic protozoan pathogens and their vectors. Describe the life cycle of any one of these in detail. Add a brief note on its pathogenicity and prophylaxis. 12
7. Name any monogenetic nematode. Discuss its life cycle, pathogenicity and prophylaxis with suitable diagrams. 12

8. Write short notes on any *three* of the following :

4,4,4

- (a) Polymorphism in *Obelia*
- (b) Nocturnal periodicity of microfilariae
- (c) Ciliated larva of *Schistosoma haematobium*
- (d) Reproduction in protista by binary fission
- (e) Osmoregulation in *Paramecium*.