

RAMAKRISHNA MISSION VIDYAMANDIRA

(Residential Autonomous College affiliated to University of Calcutta)

B.A./B.Sc. FIRST SEMESTER EXAMINATION, MARCH 2022

FIRST YEAR [BATCH 2021-24]

ZOOLOGY (HONOURS)

PAPER : I [CC1]

Date : 08/03/2022

Time : 11 am – 1 pm

Full Marks : 50

Answer all the questions:

Group A

1. a) Write down the difference between Phasmda and Aphasmda worms.
b) What is the significance of Cercaria larva in the life history of *Fasciola*?
c) What is Löeffler's syndrome? (2+1.5+1.5)
2. a) Can you consider *Planaria* as a platyhelminth? –Explain with proper reason.
b) What are the parasitic adaptations of an adult liver fluke?
c) What is Rhabditiform larva? (2+2+1)
3. a) Write down the role of PTTH in metamorphosis of insect.
b) Illustrate the mechanism of respiration in prawn. (2+3)
4. How does excretion take place in cockroach? –describe with proper diagram. (3+2)

Group B

5. a) Comment on the evolutionary significance of metamerism.
b) What are the differences between protonephridia and metanephridia?
c) Write two distinguishing features of leeches. (2+2+1)
6. a) Draw a neat and clean diagram of water vascular system of *Asterias* sp. and describe its components.
b) Comment on the body symmetry of larval and adult echinoderms. (4+1)

Group C

7. a) Why the life cycle of *Obelia* is an example of metagenesis and not alteration of generation?
b) Write two differences between Sympatric Speciation and Allopatric Speciation.
c) What do you mean by coral bleaching? (2+2+1)
8. a) Write two significant advantages of lipid world hypothesis over RNA world hypothesis as the most ancestral molecule.
b) With flowchart, explain the role of Zooxanthellae in calcification and reef formation.
c) Differentiate between somersaulting and looping in *Hydra*. (2+2+1)

Group D

9. a) Name the different types of contractile vacuoles found in protozoans.
- b) “Amoebocytes are instrumental in performing multiple functions in a sponge’s body” – explain.
- c) State the functions of MS Ring in the bacterial flagellar motor. (1+2+2)
10. a) Distinguish between Hologamy and Autogamy in protozoan reproduction.
- b) “Prosopyle and apopyle differ in functions in Syconoid sponges” – elaborate with a diagram. [2+(2+1)]

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