

RAMAKRISHNA MISSION VIDYAMANDIRA

(Residential Autonomous College affiliated to University of Calcutta)

B.A./B.Sc. FIRST SEMESTER EXAMINATION, MARCH 2021

FIRST YEAR [BATCH 2020-23]

ZOOLOGY [HONOURS]

PAPER : I [CC1]

Date : 24/03/2021

Time : 11 am – 1 pm

Full Marks : 50

Answer all the questions :

Group-A

1. a) Mention two new approaches for coral reef restoration. (2)
b) How does sympatric speciation occur? (2)
c) Define 'RNA world hypothesis' with its significance. (1)
2. a) Why ctenophorans are known as the 'Comb Jellies'? Why *Beroe* belongs to class Nuda of phylum Ctenophora? (1+1)
b) How does calcification process occur in corals? (2)
c) Differentiate between metagenesis and alteration of generation. (1)
3. a) What is torsion? Mention its role over the gastropod nervous system. (1+1)
b) Why stone canal is named so? Give two characteristic features of Bipinnaria larva (echinoderm). (1+1)
c) Define bracts. (1)

Group-B

4. a) State the importance of ampulla & vesicles in a protozoan system. (2)
b) Distinguish between spongoceol & spongin in poriferans. (1.5)
c) Mention two major characteristic features of millipedes. (1.5)
5. a) Which components are fused to form an insect head? (1.5)
b) 'Presence of two suckers in the body is an added advantage in leeches' – justify. (2)
c) Mention the major units of a proton-driven bacterial flagellar motor. (1.5)
6. a) Which enzymes are usually found inside the food vacuole of an *Amoeba*? (1)
b) What is metachronal wave? (2)
c) Distinguish between autogamy & isogamy in protists. (2)

Group-C

7. a) Write down the structural difference between male and female *Ascaris*. (2)
b) State the important parasitic adaptation of *Ascaris*. (3)

8. a) What are the scientific names of liver fluke and blood fluke? (1)
- b) Write down four important characteristics of the free living class of Platyhelminthes. (2)
- c) Discuss the characteristic features of Miracidium larva. (2)
9. a) Describe different types of gills in prawn with labelled diagrams. (2+1)
- b) What do you mean by holometabolous and hemimetabolous insects? (2)
10. a) Illustrate the mechanism of excretion in cockroach with a suitable diagram. (3+1)
- b) What is Laurer's canal? (1)

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