

B.Sc. 1st Semester (Honours) Examination, 2019 (CBCS)

Subject : Zoology

Paper : CC-I

Time: 2 Hours

Full Marks: 40

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words
as far as practicable.

Group-A

1. Answer any five questions from the following:

2×5=10

- (a) What are bladder worm and measly pork?
- (b) Define lectotype and topotype.
- (c) State the significance of classification.
- (d) Compare cnidoblast with colloblast cell.
- (e) Identify me:
 - (i) I am a larval form
 - (ii) My body is covered with cilia
 - (iii) I have apical gland, short retractile head papilla
 - (iv) After hatching, I search my host snail *Lymnaea*.
- (f) Give two differences between autogamy and endomixis.
- (g) Explain two important features of Rhabditiform larva of *Ascaris* sp.
- (h) After entry into human blood, sporozoite of *Plasmodium vivax* entered only in hepatic cells although it is exposed to blood cells first. Explain the specificity.

Group-B

Answer any two questions from the following:

5×2=10

2. Mention the names of different types of spicules that occur in sponges. Describe any two of the spicules. 2+3=5
3. Describe the structure of microfilariae of *Wuchereria bancrofti*. How would you account for its periodicity? Write the points of differentiation between male and female *Wuchereria* sp. 3+1+1=5
4. Write the names of five kingdom proposed by Whittaker. Mention two characters of any three kingdoms. Specify two major mistakes of Whittaker's five kingdom concept. 1+3+1=5
5. How does metagenesis differ from alternation of generation? Describe metagenesis process in *Obelia*. 1+4=5

Group-C

Answer any two questions from the following:

 $10 \times 2 = 20$

6. Determine the systematic position of the following taxon with characters at each stage as per syllabus (any five) : $2 \times 5 = 10$

- (a) *Dugasia* (upto class)
- (b) *Ancylostoma* (upto class)
- (c) *Velella* (upto order)
- (d) *Spongilla* (upto order)
- (e) *Polystomella* (upto phylum)
- (f) *Monocystis* (upto phylum)
- (g) *Hydra* (upto order)

7. Discuss the process of conjugation in *Paramoecium* sp. with diagram. What are the factors and conditions governing conjugation? Mention the significance of conjugation. $4+2+2=10$

8. Discuss the erythrocytic schizogony with diagram. Under which condition, the schizont undergoes gamogony instead of erythrocytic schizogony? What is exflagellation? $(6+1)+2+1=10$

9. With a labelled diagram, describe the ultrastructure of a flagellum. Discuss with a flow diagram, molecular mechanism of pseudopodial locomotion. $(1+1+4)+4=10$

Group-D