

B.Sc. 5thSemester (Hons.) Examination, 2021 (CBCS)

Subject: Zoology

Paper: DSE-2

(DSE-T3: Parasitology)

Full Marks: 40

Time: 2 Hrs

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

*Answer any **eight** questions of the following:*

$5 \times 8 = 40$

1. Represent the life cycle of urinary blood fluke with suitable diagram.
2. Write in brief the economic impact of a well-known plant parasitic nematode.
3. Justify the inclusion of Hood Mocking bird as parasitic vertebrate.
4. Differentiate between male and female *Ascaris* (on the basis of morphological features) with proper diagram.
5. Differentiate between a parasite and a parasitoid with proper examples. Add a brief note on economic importance of parasitoids.
6. Briefly explain the different modes of biological transmission exhibited by vectors with suitable examples for each. What is transovarian transmission?
7. Write the scientific name of an intestinal flagellate you have studied. Draw and describe its life cycle. What are its common gastrointestinal manifestations?
8. Enumerate the morphological differences between the amastigote and promastigote stages of *Leishmania donovani*. What is PKDL?
9. How can you differentiate between the microfilaria larvae of *Wuchereria bancrofti* and *Brugia malayi*? Describe the phenomenon of periodicity exhibited by the microfilaria larvae of *Wuchereria bancrofti*.
10. State any four differences between hard ticks and soft ticks. Mention the importance of the study of *Ixodes* sp.

(DSE-T4: Biology of Insects)

Full Marks: 40

Time: 2 Hrs

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

*Answer any **eight** questions of the following:*

$5 \times 8 = 40$

1. Write down the characteristic features of the insect orders - Hemiptera and Lepidoptera with examples (Give scientific names).
 2. Discuss briefly the role of hormones in insect metamorphosis.
 3. Briefly describe the different types of castes found in termite colony.
 4. Describe briefly the role of allelochemicals in host-plant mediation.
 5. Describe the structure of ommatidium with suitable diagram.
 6. Differentiate between Uniramous and Biramous antenna with examples. Name the insects having following types of antennae:
(a) Plumose (b) Clavate (c) Aristate (d) Serrate
 7. What is vector? Give example of a mechanical vector. Mention any two pathogens carried by the mechanical vectors.
 8. Name the causative agent of malignant malaria. Briefly discuss the role of insect vector to transmit this disease.
 9. Give a brief account of 'Trophallaxis' with suitable example in ants.
 10. Mention role of spermatheca and its modification in female insects.
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