U.G. 6th Semester Examination-2026

ZOOLOGY

[MAJOR-IX]

Course Code : ZOO-MJ-T-602

(Parasitology and Vector Biology)

[NEP-2020]

Full Marks : 40 Time : $2\frac{1}{2}$ Hours

The figures in the right-hand margin indicate marks.

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

1. Answer any **five** of the following: 2×5=10

   a) What is parasitism and hyperparasitism?

   b) What is host specificity? Give one example.

   c) What is sleeping sickness? Name its transmitting agent.

   d) What is cutaneous leishmaniasis? Name its vector.

   e) What are EIP and EIR?

   f) Distinguish between obligate mutualism and facultative mutualism.

   g) What is bilharziasis?

   h) Why is IVM preferred over single-method control strategies?

2. Answer any **two** of the following: 5×2=10

a) Describe the morphology of Adult *Schistosoma haematobium*. Mention the diagnosis of bilharzia disease. 3+2

b) Describe the ultrastructure of the trophozoite of *Giardia intestinalis*. Why is giardiasis commonly known as the "backpacker's disease"? 4+1

c) Describe the structure of microfilaria larva of *Wuchereria bancrofti*. What is treatment of sleeping sickness? 3+2

d) Mention the pathogenic effects casued by Ancylostome larvae. Distinguish between Orthozonosis and Cyclozonosis. 3+2

3. Answer any **two** of the following: 10×2=20

a) Describe the role of mosquitoes in transmission of dengue. Discuss integrated vector management strategies for control of mosquito-borne diseases. 5+5

b) Give a comparative account of the four polymorphic forms of *Trypanosoma* with suitable diagrams and mention their biological significance. Critically discuss the role of the tsetse fly in the transmission and development of *Trypanosoma gambiense*. Predict the consequences if kinetoplast DNA replication is experimentally inhibited. 4+4+2

c) Describe the morphology of the male worm of *Schistosoma haematobium* with special emphasis on the reproductive organs. Distinguish between miracidium and cercaria larva of *Schistosoma haematobium*. Discuss the pathogenicity of *Wuchereria bancrofti*. 4+3+3

d) Write a short note on (any **two**): 5+5

i) Rhabditiform larva

ii) Role of rats in disease transmission

iii) Periodicity of *Wuchereria bancrofti*

iv) Chikungunya and its vector

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