

Total number of printed pages-4

1 (Sem-4) ZLG 6

2025

ZOOLOGY

Paper : ZLG0400604

(Parasitology)

Full Marks : 45

Time : Two hours

The figures in the margin indicate full marks for the questions.

1. Multiple choice questions : $1 \times 5 = 5$
- (i) Which of the following is a parasitic relationship where one organism benefits at the expense of other organism ?
- (a) Mutualism
 - (b) Predation
 - (c) Parasitism
 - (d) Commensalism
- (ii) What is the term for an organism that live on or in a host organism and gets its food from or at the expense of the host ?
- (a) Predator
 - (b) Prokaryotes
 - (c) Parasite
 - (d) Prey

(iii) Which of the following is not a vector known to transmit disease in humans?

- (a) *Xenopsylla cheopis*
- (b) *Anopheles* mosquito
- (c) *Aedes* mosquito
- (d) Tsetse fly

(iv) In the context of parasitism, what is the term used for the process of preventing or guarding against parasitic infection?

- (a) Prophylaxis
- (b) Diagnosis
- (c) Pathogenicity
- (d) Epidemiology

(v) Among the listed parasites, which one is responsible for causing sickness in humans?

- (a) *Leishmania donovani*
- (b) *Plasmodium vivax*
- (c) *Trypanosoma gambiense*
- (d) *Schistosoma haematobium*

2. Very short answer type questions : (any five)
2×5=10

- (a) Define Parasitoid.
- (b) Name the primary and secondary host of *Plasmodium vivax*.
- (c) Draw a neat and labelled diagram of *Taenia solium*.
- (d) What is Filariasis?

(e) Write a note on control measures of ticks and mites.

(f) What is Kala-azar?

(g) What are the different types of malaria?

(h) Write down the two most commonly prescribed anthelmintic drugs.

(i) What is sleeping sickness?

(j) What are the most common parasitic diseases in India?

3. Short answer type questions : (any four)
5×4=20

(a) Explain the difference between parasitism parasite and parasitoid.

(b) Discuss the evolution of parasitism and the different types of host-parasite relationship.

(c) Describe the morphology and life cycle of *Plasmodium vivax*, including its prevalence and epidemiology.

(d) Evaluate the pathogenicity of *Schistosoma haematobium* and discuss the method of diagnosis used for this parasite.

(e) Propose effective prophylaxis and treatment strategies for *Trypanosoma gambiense* infection.

(f) Explain the biology importance and control measures of ticks and their impact on human health.

(g) Illustrate the prevalence, epidemiology and pathogenicity of *Taenia solium* infections, emphasizing the risk factor associated with the parasite.

- (h) Discuss the difference, in parasitic strategies between Candiru and Vampire bat, highlighting their unique adaptation to parasitism.

4. Long answer type questions : **(any one)**
10×1=10

- (a) Discuss the morphology life cycle prevalence, epidemiology and pathogenicity of *Ascaris lumbricoides*, *Ancylostoma duodenale*, *Wuchereria bancrofti* and *Trichinella spiralis*. Highlight any significant difference in their life cycle or pathogenic effects.
- (b) Explain the biology, importance and control methods of ticks, mites, *Pediculus humanus* (Head and body louse), *Xenopsylla cheopis*, and *Cimex lectularius*.
- (c) Create a systemic account detailing the parasitic vertebrate Candiru and Vampire bat. Include relevant information such as morphology, life cycle, prevalence and any unique aspects of their parasitic behaviour.
- (d) Analyse the morphology, life cycle, prevalence, epidemiology and pathogenicity of *Schistosoma haematobium*, *Taenia solium* and *Hymenolepsis nana*. Discuss any unique characteristics or mechanism of these parasites.