



'সমানো মন্ত্র: সমিতি: সমানী'

**UNIVERSITY OF NORTH BENGAL**

B.Sc. Honours 6th Semester Examination, 2022

**DSE-P3-ZOOLOGY**

Time Allotted: 2 Hours

Full Marks: 40

*The figures in the margin indicate full marks.*

**The question paper contains two groups GROUP-A and GROUP-B.  
The candidates are required to answer any *one* from *two* groups and  
candidates should mention it clearly on the Answer Book.**

**GROUP-A**

**MICROBIOLOGY**

1. Answer any *five* of the following: 1×5 = 5
  - (a) What is nucleoid?
  - (b) What is toxin?
  - (c) What do you mean by bacterial transformation?
  - (d) Define episome.
  - (e) What is pilli?
  - (f) Write one feature each of gram-positive and gram-negative bacteria.
  - (g) What is chlorosome?
  - (h) Define epidemic.
  
2. Answer any *three* of the following: 5×3 = 15
  - (a) Describe few important cytoplasmic inclusions of bacteria.
  - (b) With examples, distinguish between communicable and non-communicable diseases.
  - (c) Write a short note on bacterial cell wall structure.
  - (d) Write a short note on bacterial chromosome.
  - (e) Write briefly on the process of gram-staining.
  
3. Answer any *two* of the following: 10×2 = 20
  - (a) Describe the normal flora of skin and intestinal tract. In which places of the body normal flora are found? 8+2
  - (b) Describe, in brief, different types of toxins produced by bacteria mentioning their effect on host. 6+4

- (c) Describe different complex media for culture of bacteria.
- (d) Briefly describe the pathogen, symptoms, pathogenicity and prophylaxis for dengue fever.

### GROUP-B

#### PARASITOLOGY

1. Answer any **five** of the following: 1×5 = 5
- (a) What is meant by definitive host?
  - (b) What are opportunistic parasites?
  - (c) Where is the amastigote form of *Leishmania donovani* found?
  - (d) How does the trophozoite of *Giardia intestinalis* reproduce?
  - (e) What is the parasitophorous vacuole?
  - (f) How many larval stages does *Xenopsylla* sp. have?
  - (g) Where does adult *Schistosoma haematobium* reside in humans?
  - (h) Name the vector/intermediate host of *Wuchereria bancrofti*.
2. Answer any **three** of the following: 5×3 = 15
- (a) Describe the life cycle and pathogenicity of *Giardia intestinalis* giving suitable diagrams.
  - (b) Describe the structure of microfilaria of *Wuchereria bancrofti*.
  - (c) Name and describe the larval forms of *Schistosoma haematobium*.
  - (d) How can head louse and body louse be differentiated? Name the diseases transmitted by them.
  - (e) Describe the morphology of *Cimex* sp. Giving suitable diagrams.
3. Answer any **two** of the following: 10×2 = 20
- (a) Elaborate on the prevalence, life cycle and pathogenicity of *Leishmania donovani*. 2+4+4
  - (b) Describe the morphology and life cycle of *Schistosoma haematobium* giving relevant diagrams. Add a note on its pathogenicity. 3+3+4
  - (c) Differentiate between male and female *Ascaris lumbricoides*. Describe its life cycle and pathogenicity along with suitable diagrams. 1+5+4
  - (d) Describe the biology, medical importance and control measures of *Pediculus* sp. 4+4+2

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