



‘समानो मन्त्रः समितिः समानी’

**UNIVERSITY OF NORTH BENGAL**

B.Sc. Honours 1st Semester Examination, 2021

**GE1-P1-ZOOLOGY**

Time Allotted: 2 Hours

Full Marks: 40

*The figures in the margin indicate full marks.*

**The question paper contains GE-1 Group-A, B, and C.**

**Candidates are required to answer any *one* from the *three* GROUPS and they should mention it clearly on the Answer Book.**

**GROUP-A**

**ANIMAL DIVERSITY**

1. Answer any *five* questions from the following: 1×5 = 5
  - (a) What is the secondary host of *Plasmodium vivax*?
  - (b) The water vascular system in Echinoderm is \_\_\_\_\_ (Schizocoelic/Entero-coelic) in origin.
  - (c) What is metagenesis in Cnidaria?
  - (d) Name two integumentary glands of mammals.
  - (e) Give one example of a limbless amphibia.
  - (f) Name the causative organism of ‘Taeniasis’.
  - (g) What is antivenom?
  - (h) Give the scientific name of one Protochordate.
  
2. Answer any *three* questions from the following: 5×3 = 15
  - (a) State the salient features of Phylum Porifera.
  - (b) Write down the general characteristics of Phylum Mollusca.
  - (c) Write a brief account on Metamerism in Annelids.
  - (d) Write the general characters of class Mammalia with some examples.
  - (e) Write a short note on poison apparatus of snakes.
  
3. Answer any *two* questions from the following: 10×2 = 20
  - (a) What do you mean by water vascular system? Describe the water vascular system in *Asterias* sp. 2+8
  - (b) State the salient features of Cephalochordata and Urochordata with suitable examples. 5+5

- (c) What do you mean by migration? Describe different types of migration in fishes with suitable examples. 2+8
- (d) State the salient features of Class Reptilia. Describe the different types of venom in snakes. 4+6

### GROUP-B

#### INSECT VECTORS AND DISEASES

1. Answer any *five* questions from the following: 1×5 = 5
- (a) What are carriers?
  - (b) Cite three symptoms associated with disease plague.
  - (c) Name a blood sucking hemipteran vector.
  - (d) Tropical splenomegaly is seen in which disease?
  - (e) What is reservoir?
  - (f) Write the scientific name of head and body lice.
  - (g) Write down names of medications used to prevent malaria.
  - (h) Name a disease which is transmitted by housefly.
2. Answer any *three* questions from the following: 5×3 = 15
- (a) What are the differences between biological and mechanical vectors?
  - (b) Write a short note on reproduction and life span of head louse.
  - (c) Write a short note on order Siphonaptera as a vector.
  - (d) Briefly describe the life cycle of a mosquito emphasising their role in transmission of disease causing virus.
  - (e) Write scientific name and control measures of bed bug.
3. Answer any *two* questions from the following: 10×2 = 20
- (a) Write a brief account on the pathogenecity of *Plasmodium* sp. Why does a person get episodic fever in malaria? Explain. 6+4
  - (b) Briefly discuss the types of antennae and mouth parts of insects. How does these body parts of insects aid in their vector mode of life cycle? 5+5
  - (c) What is Chagas disease? State major symptoms, epidemiology and treatment measure of Chagas disease. 1+(3×3)
  - (d) Write down the name of vectors and causative organism of the following diseases — 2×5 = 10
    - (i) Dengue
    - (ii) Leishmaniasis
    - (iii) Typhus
    - (iv) Myiasis
    - (v) Filariasis.

**GROUP-C**  
**AQUATIC BIOLOGY**

1. Answer any *five* questions from the following: 1×5 = 5
- (a) What is COD?
  - (b) What is bioremediation?
  - (c) What do you mean by lentic ecosystem?
  - (d) Define wetland.
  - (e) What is thermocline?
  - (f) What do you mean by oligotrophic lakes?
  - (g) What is eutrophication?
  - (h) Which sea has the highest salinity?
2. Answer any *three* questions from the following: 5×3 = 15
- (a) Write a short note on thermal aquatic pollution.
  - (b) How does the dissolve oxygen (DO) levels in aquatic ecosystems determine the distribution of aquatic organisms?
  - (c) Differentiate between osmoconformers and osmoregulators.
  - (d) Discuss the significance of decomposers in an ecosystem.
  - (e) Write a short note on coral bleaching.
3. Answer any *two* questions from the following: 10×2 = 20
- (a) Write an essay on zonation of the sea. 10
  - (b) Describe lake ecosystem and write about its morphometry. 5+5
  - (c) Point out the morphological, physiological and behavioural adaptations of deep sea organisms. 3+4+3
  - (d) Write a short essay on the process of municipal waste water treatment. Explain how the treated sewage water may be used for agriculture and aquaculture. 7+3

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