



'समानो मन्त्रः समितिः समानी'

UNIVERSITY OF NORTH BENGAL
B.Sc. Honours 1st Semester Examination, 2022

GE1-P1-ZOOLOGY

Time Allotted: 2 Hours

Full Marks: 40

The figures in the margin indicate full marks.

The question paper contains 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 excretory organ of earthworm?
 - (b) Give one example of Pseudocoelomate with its scientific name.
 - (c) Give two characters of Amphibia.
 - (d) What is anadromous migration?
 - (e) What is Aristotle's lantern?
 - (f) Give an example of egg laying mammal.
 - (g) What is the scientific name of liver fluke?
 - (h) Define coelom.

2. Answer any **three** questions from the following: 5×3 = 15
 - (a) Write short notes on polymorphism in Cnidaria with its significance.
 - (b) Write the characters of phylum Mollusca.
 - (c) Write a brief account on syconoid water canal system.
 - (d) Write the general characters of Aves with suitable examples.
 - (e) State differences between poisonous and non poisonous snakes.

3. Answer any **two** questions from the following: 10×2 = 20
 - (a) Briefly describe the life cycle of *Plasmodium vivax* with suitable diagram. What is pseudopodia? 8+2
 - (b) Describe the water vascular system in starfish with a proper diagram.
 - (c) State the salient features of Mammals. Give an account of the integumentary glands in mammals. 5+5
 - (d) State the salient features of class Amphibia. Write a note on parental care of amphibians. 3+7

GROUP-B

INSECT VECTOR AND DISEASES

1. Answer any **five** questions from the following: 1×5 = 5
 - (a) Write the name of the vector involved in human plague.
 - (b) How many legs are present in ticks and mites?
 - (c) Name the causative agent of Typhus.
 - (d) Define mechanical vector with example.
 - (e) Which vector and pathogen are associated with Viral Encephalitis?
 - (f) Name any two symptoms of chagas disease.
 - (g) What is Schuffner's dot?
 - (h) Write the characters of Siphonaptera.

2. Answer any **three** questions from the following: 5×3 = 15
 - (a) With an example describe the piercing and sucking type of mouth parts.
 - (b) Differentiate between a carrier and a vector.
 - (c) Write the scientific name and control measures of house fly. 1+4
 - (d) Define reservoir with an appropriate example. Can reservoir be a vector? Explain. 2+3
 - (e) Write the causative agent, vector and symptoms in Chikungunya and Japanese Encephalitis. $2\frac{1}{2} \times 2 = 5$

3. Answer any **two** questions from the following: 10×2 = 20
 - (a) Describe a detailed account of flea borne diseases. Write a short note on the preventive measures of the same. 5+5
 - (b) Describe the different types of antennae found in class Insecta. 10
 - (c) Name the vectors of dengue and malaria. Describe the sexual stages of life cycle of *Plasmodium vivax* with illustrations. Briefly write the measures of mosquitoes. 2+5+3
 - (d) What is Filariasis? Point out the clinical manifestation of Filariasis. Add a note on the preventive measures of Filariasis. 1+5+4

GROUP-C

AQUATIC BIOLOGY

1. Answer any **five** questions from the following: 1×5 = 5
 - (a) What is biomagnification?
 - (b) Define estuary.
 - (c) What is eutrophication?
 - (d) What is bathymetry?
 - (e) What is Burgess shale used for?
 - (f) Define thermocline.
 - (g) What type of aquatic ecosystem has very little primary productivity?
 - (h) What is bioturbation?

2. Answer any **three** questions from the following: 5×3 = 15
- (a) Differentiate between BOD and COD.
 - (b) Write a short note on aquatic biomass.
 - (c) Describe the different types of reefs. Give two reasons why reefs are rich in biodiversity. 3+2
 - (d) Describe various adaptations that makes animal suitable for deep sea life.
 - (e) Write a short note on adaptations in hill stream fishes.
3. Answer any **two** questions from the following: 10×2 =20
- (a) Describe a lake ecosystem. Classify lakes on the basis of primary productivity. 5+5
 - (b) Define nutrient cycle. Explain in detail the nitrogen cycle. 2+8
 - (c) What are mid oceanic ridges? Explain the physical and biological characteristics of various division of sea. 2+4+4
 - (d) Write a short essay on the effect of oil spill in aquatic environment. Write about the management of the aquatic resources. 5+5

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