



'সমানো মন্ত্র: সমিতি: সমানী'

**UNIVERSITY OF NORTH BENGAL**

B.Sc. Honours 5th Semester Examination, 2022

**CC12- ZOOLOGY**

**IMMUNOLOGY**

Time Allotted: 2 Hours

Full Marks: 40

*The figures in the margin indicate full marks.*

**GROUP-A**

1. Answer any **five** questions from the following: 1×5 = 5
- (a) Name two secondary lymphoid organs.
  - (b) What is delayed-type hypersensitivity?
  - (c) Name the most abundant immunoglobulin.
  - (d) Which domains form the peptide-binding cleft of Class II MHC molecules?
  - (e) Give the full form of PALS.
  - (f) What is meant by clonal selection?
  - (g) Name two cells which can perform phagocytosis.
  - (h) What causes chills associated with malaria?

**GROUP-B**

2. Answer any **three** questions from the following: 5×3 = 15
- (a) Describe the characteristics of adaptive immunity.
  - (b) Write a short note on ADCC.
  - (c) What are B-cell and T-cell epitopes? Differentiate between recognition of antigens by B-cells and T-cells. 2+3
  - (d) Compare the structures of MHC class I and MHC class II molecules. 2½+2½
  - (e) Differentiate between inactivated and attenuated vaccines.

**GROUP-C**

3. Answer any **two** questions from the following: 10×2 = 20
- (a) Compare and contrast the different classes of antibodies. Differentiate between (i) affinity and avidity (ii) ELISA and RIA. 6+2+2
  - (b) What is an allergen? Write about DNA vaccine giving its advantages. 2+6+2
  - (c) Comment on the various barriers offered by an organism to evade pathogens. Write a short note on inflammation. 5+5
  - (d) Describe the structure of T-cell receptor complex. Elaborate on T-cell activation. 5+5

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