



'समानो मन्त्रः समितिः समानी'

UNIVERSITY OF NORTH BENGAL

B.Sc. Honours 5th Semester Examination, 2021

CC12-MICROBIOLOGY

IMMUNOLOGY

Time Allotted: 2 Hours

Full Marks: 40

The figures in the margin indicate full marks.

1. Answer any **five** questions from the following: 1×5 = 5
 - (a) What are follicular dendritic cells?
 - (b) What is the difference between necrosis and apoptosis?
 - (c) What is the function of hinge region in Ig?
 - (d) What are nurse cells?
 - (e) What are abzymes?
 - (f) What is GALT?
 - (g) What is the basic difference between active and passive immunity?
 - (h) What are chimeric Abs?

2. Answer any **three** questions from the following: 5×3 = 15
 - (a) Differentiate between primary and secondary immune response. How opsonisation increases the efficiency of phagocytosis? 3+2
 - (b) Write a note on ELISPOT assay. 5
 - (c) Write briefly about chronic granulomatous disease (CGD). 5
 - (d) Describe the process of monoclonal antibody production. 5
 - (e) Discuss about VDJ rearrangement. 5

3. Answer any **two** questions from the following: 10×2 = 20
 - (a) Describe the structure and functions of class I and class II MHC molecules. 5+5
 - (b) Explain the role of IgE, mast cells and basophils in type I hypersensitivity. Explain Arthus reaction. 6+4
 - (c) Write short notes on: 5+5
 - (i) SCID Mice
 - (ii) Killing mechanism of CTL.
 - (d) Describe the process of maturation of T-cells and B-cells. 5+5

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