



'সমানো মন্ত্র: সমিতি: সমানী'

UNIVERSITY OF NORTH BENGAL

B.Sc. Honours 5th Semester Examination, 2023

DSE-P2-PHYSIOLOGY

MICROBIOLOGY AND 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) What do you mean by the term Syngraft?
 - (b) Define Opsonisation.
 - (c) What are interleukins? Give examples.
 - (d) What are anaphylatoxins?
 - (e) Define KARs and KIRs.
 - (f) What do you mean by the term “Positive Selection” of T-Cell?
 - (g) What is a “prophage”?
 - (h) Define what are “Toll-receptors”.
 - (i) Define “PRRs”.
 - (j) What are Haptens?

GROUP-B

Answer any three questions from the following

5×3 = 15

2. (a) Write short note on ADCC. 3
- (b) What are monoclonal antibodies? 2
3. (a) State the morphological classification of bacteria on the basis of their flagella. 4
- (b) Define what do you understand by the term “vat pasteurization”. 1
4. Describe the process of bacterial transduction. Name two bacteriostatic agents. 4+1
5. Write short note on the immunology of allogeneic transplantation. Define the term GVHD. 4+1

6. (a) Describe in brief the structure of Cell wall of Gram positive bacteria. 4
(b) Write down the role of rapamycin in immunosuppression. 1

GROUP-C

Answer any two questions from the following

10×2 = 20

7. (a) Describe the mechanism for induction of autoimmunity. 7
(b) Write short note on the immunological detection of pregnancy. 3
8. (a) Illustrate the classical and alternative pathway of Complement Activation. 3+3
(b) Describe the stages of life-cycle of a virus. 4
9. (a) Describe the process of B-Cell activation. 5
(b) Give a brief account of the structure of antibody. 5
- 10.(a) Describe the Cytosolic pathway of antigen processing. 6
(b) Define Cytokines. Give examples. 2
(c) Write down the mechanism of action of Antibiotics. 2

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