



বিদ্যাসাগর বিশ্ববিদ্যালয়
VIDYASAGAR UNIVERSITY
Question Paper

B.Sc. Honours Examinations 2022

(Under CBCS Pattern)

Semester - IV

Subject: BIOTECHNOLOGY

Paper : C 9-T

(Immunology)

Full Marks : 40

Time : 2 Hours

Candidates are required to give their answer in their own words as far as practicable.

The figures in the margin indicate full marks.

Group - A

Answer any **four** questions from the following.

5×4=20

1. Write a short note on molecular structure of immuno-globulins or antibodies with proper diagram. 5
2. Discuss the difference between humoral and cellular immune responses. What is suppressor T-Cells ? 3+2
3. What are the differences between class I and class II MHC antigens ? 5
4. What do you mean by antibody dependent cellular cytotoxicity (ADCC) ? 5
5. What is an autoimmune disease ? Name four common autoimmune diseases. 5
6. What are recombinant vaccines ? Write a short note on cytokines ? 3+2

Group - B

Answer any *two* questions from the following.

10×2=20

1. What do you mean by DNA vaccines ? What are the biological applications of DNA vaccines ? Mention the advantages of DNA vaccines. 2+4+4=10

 2. (a) Elaborate the functional significance of four intermolecular forces that are involved in Ag-Ab binding. 8

 - (b) What are the two main functions of B lymphocytes ? 2

 3. Write a short note on structure of class I MHC antigen. Describe the process of antigen processing and presentation by class II MHC antigen. 5+5

 4. What is ELISA ? Describe the various types of ELISA. Write a short note on passive and active immunization. 2+5+3
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