

4
[This question paper contains 4 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 5875

E

Unique Paper Code : 42237904

Name of the Paper : Immunology

Name of the Course : **B.Sc. (P) Life Sciences
(LOCF)**

Semester : VI

Duration : 3 Hours

Maximum Marks : 75

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Attempt **five** questions in all. Question **1** is compulsory.
3. Draw well labelled diagrams wherever required.

1. (a) Define : (5)

(i) Cross-reactivity

(ii) Haplotype

(iii) Immunotolerance

P.T.O.

(iv) Epitope

(v) Hapten

(b) Differentiate between the following : (8)

(i) Active Immunization & Passive Immunization

(ii) Primary & Secondary Immune response

(iii) Primary Lymphoid Organs & Secondary Lymphoid Organs

(iv) Innate Immunity & Acquired Immunity

(c) Expand the following : (3)

(i) PALS (ii) ADCC

(iii) GAL γ (iv) TLR

(v) TCR (vi) IFN γ

(d) Write the contribution of the following scientists : (4)

(i) Cesar Milstein and Georges E. Kohler

(ii) Emil Von Behring

(iii) Lady Mary Wortley Montagu

(iv) Rodney R. Porter

(e) Match the following :

(3)

- | | |
|--------------------------|--------------------------|
| (i) Anaphylatoxins | (a) Tc cells |
| (ii) Neurophils | (b) C3a |
| (iii) MHC I | (c) Lungs |
| (iv) CD 4 | (d) Antibodies |
| (v) Alveolar macrophages | (e) Granulocytes |
| (vi) Plasma cells | (f) T _H cells |

(f) Give reasons :

(4)

- (i) Self antigens do not produce immune response in normal persons.
- (ii) Children are immunized with a single dose of BCG.
- (iii) Rh incompatibility can be fatal in second pregnancy.
- (iv) Certain sites of human body are called immune privilege sites.

2. (a) Explain the various experiments conducted to deduce the structure of immunoglobulin.

(b) Describe the structure and functions Class I and Class II MHC molecules.

(8,4)

P.T.O.

3. (a) Give an account of the cells of innate and adaptive immunity.
- (b) Differentiate between B cell and T cell epitopes. (8,4)
4. (a) Discuss the production of monoclonal antibody by hybridoma technology.
- (b) Describe the initiation and activation of the classical complement pathway. (6,6)
5. (a) Explain the properties of cytokines.
- (b) Give an account of different types of vaccines. (8,4)
6. (a) Explain the different types of hypersensitivities on the basis of Gell and Coomb's classification.
- (b) Discuss various antibody-mediated effector functions. (8,4)
7. Write short notes on any **three** : (4,4,4)
- (a) Clonal Selection Theory
- (b) Properties of antigen
- (c) Thymus
- (d) ELISA

(1300)