

This question paper contains 3 printed pages]

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S. No. of Question Paper : 5555

Unique Paper Code : 2532013602

Name of the Paper : Advances in Immunology

Name of the Course : B.Sc.(H) Microbiology

Semester : VI, Part-III

Duration : 3 Hours

Maximum Marks : 90

(Write your Roll No. on the top immediately on receipt of this question paper.)

Attempt any five questions.

All questions carry equal marks.

1. (a) Explain the following (any four) : 4×4=16
 - (i) MHC restriction
 - (ii) Hashimoto's thyroiditis
 - (iii) Passive immunisation
 - (iv) Immune surveillance
 - (v) Tumour evasion.
- (b) What do you understand about the Immuno-privileged sites ? 2
2. (a) Differentiate between the following (any three) : 3×5=15
 - (i) Isograft and Xenograft
 - (ii) Hyperacute and acute graft rejection
 - (iii) Type II and III hypersensitivity
 - (iv) TSTA & TATA.
- (b) Why are the boosters required during vaccination ? 3

P.T.O.

3. (a) Define hypersensitivity. Write its types. Discuss the mechanism and manifestations of type I hypersensitivity. 1+3+5=9
- (b) What are co-stimulatory signals ? Why are these important in generation of immune response ? 4
- (c) Discuss the salient features of National Immunization Schedule (NIS). 2
- (d) Outline the main features of primary and secondary immune response. 3
4. Write short notes on the following (any *three*) : 3×6=18
- (i) Cancer immunotherapy
- (ii) DNA and RNA vaccines
- (iii) Pre antigen exposure phase of B cell development
- (iv) T-cell subsets.
5. (a) What is meant by immunodeficiency ? Discuss any *one* animal model used to study immunodeficiency. 5
- (b) Discuss the concept of immunosuppressive therapy. 5

- (c) Write the mechanism involved in the following autoimmune disorders ,
(any two) : 2×4=8

- (i) Rheumatoid arthritis
- (ii) SLE
- (iii) Good pasture's syndrome.

6. (a) Describe the killing mechanisms by CTLs. 4

- (b) Discuss the characteristic features of the following (any two) :

- (i) DiGeorge syndrome
- (ii) Chediak Higashi syndrome
- (iii) LAD. 6

- (c) Briefly explain the micro cytotoxicity test for HLA typing. 4

- (d) Explain the following : 4

LFA, GVHD, CGD, ADCC.

