

[This question paper contains 3 printed pages.]

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Your Roll No.

B.Sc. (Hons.) / III

A

MICROBIOLOGY – Paper XI

(Immunology)

(Admissions of 2004 & onwards)

Time : 3 Hours

Maximum Marks : 60

*(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) Write the characteristic features of the following diseases :-
 - (i) Chediak-Higashi Syndrome
 - (ii) Congenital neutropenia
 - (iii) Rheumatoid arthritis
 - (iv) Hashimoto's thyroiditis

(1×4=4)
- (b) How does cytosolic pathway of antigen processing occur ?

(3)
- (c) Compare an isograft and allograft.

(2)

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(d) Explain the structure of TCR-CD3 complex. (3)

2. Differentiate between the following (any four):-

- (i) First and second set of graft rejection
- (ii) T-cell and B-cell activation
- (iii) Class I MHC and Class II MHC
- (iv) Papain and Pepsin digestion of Antibodies
- (v) Primary and Secondary Immune response

(3×4=12)

3. Write short notes on any three :-

- (i) Inflammation
- (ii) Dendritic cell
- (iii) Allelic exclusion
- (iv) Immunoglobulin superfamily
- (v) ELISPOT

(4×3=12)

4. (a) Write the functions of the following :-

- (i) B7 molecule
- (ii) RSS
- (iii) M cells
- (iv) C5a

(1×4=4)

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- (b) Comment on the use of TIL and LAK cells as therapeutic agents for Cancer. (2)
- (c) Describe the mechanism of destruction of target cells by CTLs. (4)
- (d) Describe the mode of action of adjuvants. (2)
5. (a) Elaborate the following :-
- (i) GVHD
 - (ii) SCID
 - (iii) ARAM
 - (iv) CDRS (1×4=4)
- (b) Explain the alternate pathway of complement activation. (4)
- (c) Draw a well labelled diagram of internal structure of Lymph Nodes. (4)
6. (a) Explain type I hypersensitivity. (4)
- (b) Write the principle of
- (i) MLR
 - (ii) FACS (2×2=4)
- (c) What is self-MHC restriction? (2)
- (d) What are T dependent and T independent Antigens? (2)

(400)****

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