

B.TECH. DEGREE EXAMINATIONS: NOV/DEC 2012

Seventh Semester

BIO TECHNOLOGY

BTY123: Basic Immunology

Time: Three Hours

Maximum Marks: 100

Answer All Questions:-

PART A (10 x 1 = 10 Marks)

1. The following are true with regard to NK cells except one.
 - a) NK cells kill the virally infected host cell by releasing their granular contents
 - b) NK cells induce apoptosis
 - c) NK cells do not induce apoptosis
 - d) NK cells are protected from autolysis by the presence of chondroitin sulphate
2. B-Cells are distinguished from T- cells by the presence of
 - a) CD 5
 - b) CD8
 - c) Surface Ig
 - d) CD4
3. Which situation below describes an example of innate immunity?
 - a) antibody production by plasma cells.
 - b) complement activation by antibody bound to the surface of a bacterium.
 - c) memory response to influenza virus
 - d) recognition and killing of virus-infected cells by cytotoxic T cells.
4. IgA appears in
 - a) Saliva, tears and nasal fluids
 - b) Colostrum
 - c) Genitourinary and Gastrointestinal tract.
 - d) All of the above
5. Isoantigens are important
 - a) In blood transfusion
 - b) In isoimmunisation during pregnancy
 - c) Antigens present in some but not all members of a species
 - d) Closely related antigens that occur in different biological species.
6. Avidity
 - a) is a pathogenic agent, causing a very serious disease.
 - b) occurs when the ratio of antibody to antigen is optimal.
 - c) refers to the strength of interactions between a multivalent antibody and a

- (ii) Brief on the structure and function of MALT and GALT. (10)
- (OR)**
- b) (i) Narrate on hematopoiesis (7)
- (ii) Describe the structure and function of various immune cells. (7)
22. a) (i) Differentiate adjuvant and haptan. (4)
- (ii) Describe various types of antibodies and mention its function. (10)
- (OR)**
- b) (i) What is the characteristic function of T-Dependent and T-Independent Ag (5)
- (ii) Explain antigenic death minants on antibodies. Write down its properties. (9)
23. a) (i) Write a brief note on significance of cross reactivity. (4)
- (ii) Highlight types of ELISA and its applications. (10)
- (OR)**
- b) (i) Justify the significance of HAT medium and explain the mechanism of Monoclonal Antibodies production.
24. a) Describe the structure and distribution of HLA antigens
- (OR)**
- b) Describe classical alternate pathway of complement system.
25. a) (i) Illustrate Type I Hypersensitivity reactions. (10)
- (ii) Differentiate TSTA and TATA. (4)
- (OR)**
- b) (i) What are the types of grafts? (2)
- (ii) Narrate the mechanism of graft rejection. (12)
