

ET 1335

B.E./B.Tech. DEGREE EXAMINATION, MAY/JUNE 2006.

Sixth Semester

Industrial Bio-Technology

IB 343 --- IMMUNOLOGY

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A --- (10 × 2 = 20 marks)

1. What is an innate immune response?
2. What is a primary lymphoid organ?
3. Name the factors that govern the immunogenicity of an antigen.
4. How will you identify a human B cell?
5. What is meant by HLA polymorphism?
6. Describe Double Diffusion technique.
7. What are cytokines?
8. What are NK cells?
9. What are anaphylatoxins?
10. What is an autoimmune response?

PART B --- (5 × 16 = 80 marks)

11. (i) Describe the structure of an IgG molecule. (10)
- (ii) Describe the biological functions of IgA. (6)

12. (a) How does a human host elicit an cytotoxic T cell response? Explain the mechanisms.

Or

- (b) (i) Describe the structure of a human T cell receptor. (8)
(ii) How will you quantify human T cells? (8)
13. (a) (i) Discuss the mechanisms of Type IV hypersensitivity reaction. (10)
(ii) Can DTH response be a good correlate of protective immunity? (6)

Or

- (b) (i) Discuss the mechanisms of macrophage activation. (10)
(ii) What are the products released by the activated macrophages. (6)
14. (a) Write in detail on Transplantation immunity.

Or

- (b) Discuss the immune mechanisms that leads to AIDS infection.
15. Write notes on any TWO :
- (a) Complement system
(b) Lymphoproliferation assay
(c) Monoclonal antibodies.