SIXTH SEMESTR B.TECH DEGREE EXAMINATION

BIOTECHNOLOGY AND BIOCHEMICAL ENGINEERING

ELECTIVE 1 13.606.4 : IMMUNOLOGY AND IMMUNOTECHNOLOGY

Time : 3hrs Max marks:100

Part A. Answer all questions. Each question carries 2 marks.

1. Define a) epitope b) agretope
2. Differentiate innate and adaptive immunity.
3. How is IHC different from histochemisrty? Why is embedding essential in IHC?
4. Differentiate antiidiotypic and catalytic antibodies.
5. Why is bursa of fabricius important?
6. Explain MHC restriction.
7. Briefly explain the chemiluminescence assay.
8. Differentiate B and T cells
9. What is type 3 hypersensitivity?
10. How is a granuloma formed?

Part B (Answer any one full question from each module)

Module 1.

Explain with diagram the various primary and secondary organs…….(20)

Or

a) Explain on various APC……..(10)

b) What are the properties of immune response?.....(10)

Module 2

13. Explain the structure and function of MHC……..(20)

Or

14. Explain the assembly and expression of immunoglobulin molecule……..(20)

Module 3

15. Explain the classical and alternate pathway of complement activation……(20)

Or

16. Explain the various autoimmune disease……(20)

Module 4

17. Explain the production and application of monoclonal and polyclonal antibodies…….(20)

Or

18. a. Explain the role of genetically engineered antibodies for immunotherapy…….(20)

b. Explain the principle and application of ELISA…….(20)