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Total Number of Pages : 01

B.Tech
PBT5J001

5th Semester Regular/Back Examination 2019-20

IMMUNOLOGY & IMMUNOTECHNOLOGY

BRANCH : BIOTECH

Max Marks : 100

Time : 3 Hours

Q.CODE : HRB384

Answer Question No.1 (Part-1) which is compulsory, any EIGHT from Part-II and any TWO from Part-III.

The figures in the right hand margin indicate marks.

Part-I

Q1 Only Short Answer Type Questions (Answer All-10) (2 x 10)

- Differentiate between Immunogenicity and Antigenicity.
- What is humoral immunity?
- What is ELISA? Write one of its application?
- What do you understand by the term clonal selection and clonal expansion?
- What is immunological tolerance?
- What do you mean by immediate hypersensitivity reactions?
- What are memory cells and how do they participate in immune response?
- What is MAC?
- What is passive immunity? Give examples of naturally acquired passive immunity?
- Which of the immunoglobulin subtypes crosses epithelial cells by transcytosis and is found in breast milk?

Part-II

Q2 Only Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve) (6 x 8)

- Explain the different types of Ig. Add notes for their structure and functions.
- With labeled diagram explain how light chain gene synthesis takes place?.
- Explain the T cell subtypes and their function.
- Explain the classical pathway of complement activation?.
- What is cell mediated immunity? How does it defend the body against the invading pathogens and foreign cells?
- Briefly describe the history of immunology?
- Describe the structure of antibody with Diagram?
- What is antigen? Cite the factors that contribute to antigenicity?
- Give detail account of various cells involved in immune system?
- How does affinity of an antibody differ from its avidity?
- Write a brief account of the various types of vaccine currently available for human use?
- What are histocompatibility genes? How are they involved in transplantation and graft survival?

Part-III

Q3 Only Long Answer Type Questions (Answer Any Two out of Four) (16)

Write in detail on the primary and secondary lymphoid organ?

Q4 What are monoclonal antibodies? Discuss the principle utilized and the method followed in preparation of monoclonal antibody? (16)

Q5 Citing appropriate examples, explain the causes for generation of an autoimmune disorder? (16)

Q6 What do you mean by dysfunction of the immune system? How the dysfunction is modulated in human? (16)