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**GIET UNIVERSITY, GUNUPUR – 765022**  
M. Tech (Second Semester Examinations) – October' 2021  
**MPCBT 2010 – APPLIED IMMUNOLOGY AND IMMUNOTECHNOLOGY**  
**(Biotechnology)**

Time: 2 hrs

Maximum: 50 Marks

**(The figures in the right hand margin indicate marks)**

**PART – A**

Q.1. Answer **ALL** questions

(2 x 10 = 20)

- a. What is immunity? Describe the components of innate immunity.
- b. Write down the properties of an antigen?
- c. What are memory cells and how do they participate in immune response?
- d. Antigen processing and presentation is essential in cell mediated immunity. Justify?
- e. Write the applications of antigen- antibody reaction.
- f. Differentiate between vaccination and immunization.
- g. At which condition antigen and antibody forms precipitation reaction.
- h. What is immediate type of hypersensitivity?
- i. What do you mean by graft acceptance?
- j. How immunity develops with response to parasitic infection?

**PART – B**

(6 x 5 = 30 Marks)

Answer **ANY FIVE** questions

Marks

2. Which lymphoid organs are associated with acquired immunity? Briefly describe the structure and function of lymph node. (6)
3. What is the role of MHC? Illustrate the structure of MHC-I and MHC-II. (6)
4. Why antigen processing is important? Describe cytosolic pathway of antigen presentation. (6)
5. What is an immunoglobulin? Articulate the structure of an antibody with neat and labelled diagram. (6)
6. Define ELISA? Explain sandwich Elisa with applications (6)
7. What is immunodeficiency? Describe different types of immunodeficiency disorders. (6)
8. What is blotting? Explain the principle, procedure and applications of Wester blotting. (6)

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