

## JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

## TEST-3 EXAMINATION- JUNE -2016

M.Tech 2<sup>nd</sup> Semester

COURSE CODE: 14M11BT212

MAX. MARKS: 35

COURSE NAME: Immunotechnology

COURSE CREDITS: 3

MAX. TIME: 2 HRS

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*Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.*

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- Q1. Give detailed description of MHC-I and MHC-II, with suitable diagrams. [3]
- Q2. What do you understand by cross-presentation of antigen? What the various potential mechanisms are for cross presentation? [3]
- Q3. How would you experimentally demonstrate existence of two antigen processing and presentation pathways? [3]
- Q4. What are Murine MAbs and Chimeric Antibodies? Illustrating their limitations for therapeutics, explain why humanizing of antibodies is essential and advantageous. [3]
- Q5. Describe Immunoassays with rolling circle DNA amplification. Discuss its principle and applications. [3]
- Q6. What is the role of B cell in Immune Response against a potential vaccine candidate? Describe the two phases in preparation of in-vitro immune response against potential vaccine candidates. [3]
- Q7. Explain Immunospot array assay on a chip (ISAAC), how is it better than ELISPOT. [4]
- Q8. Write the importance of electrochemical Immunosensors in early clinical diagnostic. Discuss the merits and demerits of such immunosensors over conventional immunodiagnostic techniques. [4]
- Q9. List and describe important parameters which should be considered for a successful Monoclonal Antibody Therapy? [4]
- Q10. What is the importance of immunologic tolerance? Explain the mechanisms of immunologic tolerance. [5]