JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- 2016

M.Tech 2nd Semester

COURSE CODE: 14M11BT212 **MAX. MARKS: 15**

COURSE NAME: Immunotechnology

COURSE CREDITS: 3 **MAX. TIME: 1 HR**

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

Q1. A secondary antibody was labeled with a fluorescent molecule for binding to an antigen. Compare relative merits and demerits of various techniques/instrumentation by which the interaction can be visualized. [3]

Q2. In a double diffusion experiment, a set of complementary antigen and antibody were added to respective wells. No precipitation band/arc was seen on the slide after incubation time. Give possible reasons for the results obtained. [2]

Q3. You are given a monoclonal antibody raised against an antigen of a pathogenic bacterium. For quantification of the antigen in various samples, development of an ELISA based diagnostic method is required. Illustrate the steps you would take for development of such an assay with proper justifications. Including: [5]

a. Choice of solid support and protocol.

b. Choice of Substrate and enzyme with examples.

c. Determination of optimum dilution of antigen and antibody.

Q4. What is agglutination inhibition? Illustrate with application and example. [3]

Q5. Describe the method and application of crossed-immunoelectrophoresis. [2]