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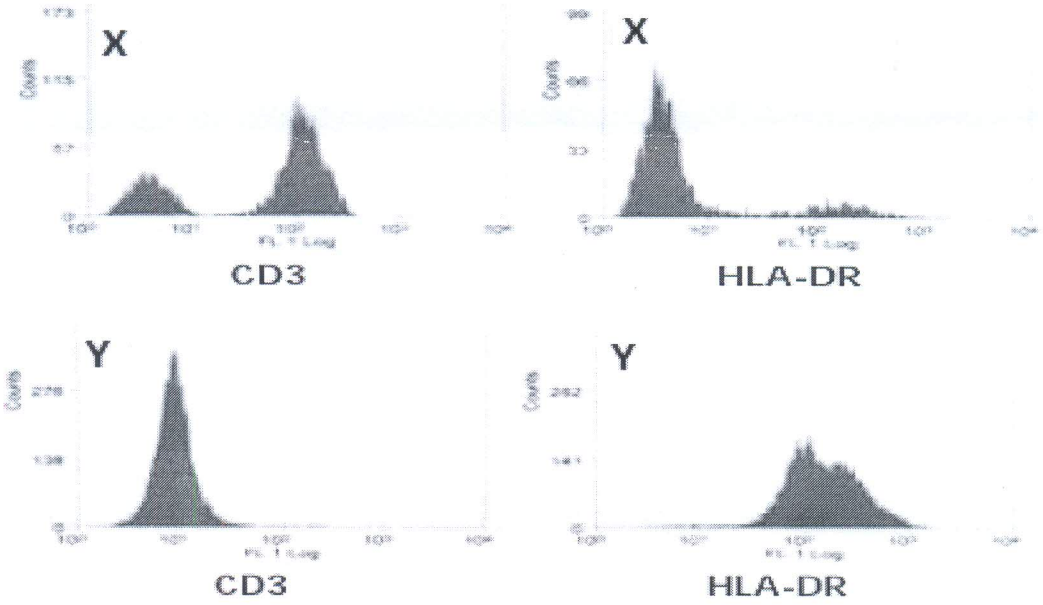
JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT
TEST -2 EXAMINATION- 2016
M.Tech 2nd Semester

COURSE CODE: 14M11BT212 **MAX. MARKS: 25**
COURSE NAME: Immunotechnology
COURSE CREDITS: 3 **MAX. TIME: 1 HR 30 MIN**

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

Q1. Given below is a flow-cytometry data indicating fluorescence obtained using Anti-CD3 and Anti-HLA-DR antibodies from two individuals X and Y. Explain the data obtained in both sets and predict the diseased condition which can be diagnosed using given data sets. **[4]**



Q2. If you have to design a biosensor for detection of a contaminant element in water samples, what basic steps would be required for designing of the biosensors? Discuss in details all such steps and requirement of each component of the biosensor. **[4]**

Q3. Why the detection of foodborne pathogen is still an uphill struggle? Explain nanoparticle based multi-junction biosensors with an appropriate example. **[4]**

Q4. Illustrate an immunotechnique which can be used to dissect early signaling events between cells with example? **[4]**

Q5. In context of Mab production using hybridoma technology answer the following: **[1.5 X 2 = 3]**

a. Requirement of using HGPRT (negative) myeloma cells for monoclonal antibody production.
b. Significance of use of 'Aminopterin' for selection of Hybridoma cells.

Q6. What is Magnetofluroscent liposomes technique? How is it better than individual immunofluroscence and immunomagnetism methods? **[3]**

Q7. Discuss the significance of Immunosignature technique in cancer diagnosis. **[3]**