**Reg. No. \_\_\_\_\_\_\_\_**

**Karunya University**

**(Karunya Institute of Technology and Sciences)**

(Declared as Deemed to be University under Sec.3 of the UGC Act, 1956)

**Supplementary Examination - June 2011**

**Subject Title: ADVANCED IMMUNOTECHNOLOGY Time: 3 hours**

**Subject Code: 10BT305 Maximum Marks: 100**

**Answer ALL questions (5 x 20 = 100 Marks)**

1. **Compulsory:**

What do you mean by immunotherapy? Review the types of immunotherapy used to boost the functions of T cells in humans during cancer immunotherapy.

2. What are adjuvants? Explain how viral proteins act as recombinant adjuvants and add a note on their mode action.

(OR)

3. Give the general structure of antigen. Mention its types with an example and demonstrate the method of preparing peptide antigens for antibody raising.

4. Explain the procedure used for detection of proteins in Western blotting analysis. Describe the methodology used for making monoclonal antibodies and how they are classified.

(OR)

5. Elaborate the merits and demerits of immunodiagnosis. Explain the ELISA technique used for the detection of HIV infection. Why does ELISA test give false positive result sometimes?

6. Demonstrate the methodology used to detect lymphocytes and their subsets in blood. Briefly explain the method used for estimation of cytokines with an example.

(OR)

7. State the procedure used in characterizing different cell types at the inflammatory site in the infected tissues.

8. Prove the uses of immunohistochemistry, immunoenzymatic and immunoferritin techniques for disease diagnosis.

(OR)

9. What are recombinant vaccines? Give an example. Explain how recombinant DNA technology is used for the study of immune system.