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



**UNIVERSITY**

(Karunya Institute of Technology & Sciences)

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

**End Semester Examination – Nov/Dec - 2016**

**Subject Title: IMMUNOLOGY AND IMMUNOTECHNOLOGY Time: 3 hours**

**Subject Code: 09BT216/12 BT217/BT240 Maximum Marks: 100**

#### **Answer ALL questions**

**PART – A (10 x 1 = 10 MARKS)**

1. What is innate and acquired immunity?

2. What are commensals and native flora?

3. What are primary lymphoid organs?

4. Define Phagocytosis.

5. What are the subtypes of T cells?

6. Explain the role of natural Killer cells in immunity.

7. Mention the uses of cytokines.

8. Elaborate HMC.

9. What is Allograft and Autograft?

10. What are the rheumatoid factors?

**PART – B (5 x 3 = 15 MARKS)**

11. Write short notes on innate immunity.

12. What is Antigen Presenting cell? Explain its function.

13. What are adjuvants? Mention the properties of an Antigen.

14. Draw the structure of Immunoglobulin G (IgG) and label the parts.

15. Differentiate monoclonal and Polyclonal antibodies.

**PART – C (5 x 15 = 75 MARKS)**

16. Describe the various primary and secondary lymphoid organs in human being.

(OR)

17. What is acquired immunity? Mention the various types of immunity and discuss in detail.

18. What are lymphokines? Explain the role of cytokines and lymphokines in T cell activation.

(OR)

19. Describe in detail about the structure, function and properties of various Immunoglobulins.

20. Give an account on the Classical and alternate pathways of complement activation.

(OR)

21. Explain in detail the Class IV hypersensitivity reactions with neat illustrations.

22. What are autoimmuno diseases? Elaborate the various therapies for auto immune diseases.

(OR)

23. Describe the applications of Tumour antigens.

24. Explain in detail the hybridoma technology used for the production of monoclonal antibodies and add a note on the various applications of monoclonal antibodies.

(OR)

25. Explain the mechanism of ELISA and mention its uses in immunodiagnostics.