Reg. No. _____

Karunya University

(Karunya Institute of Technology and Sciences)

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

End Semester Examination – April/May 2011

Subject Title: INTRODUCTION TO AEROSPACE ENGINEERING Time: 3 hours
Subject Code: 09AE201 Maximum Marks: 100

Answer ALL questions

PART – A (10 x 1 = 10 MARKS)

1. What are the advantages of ramjet?
2. What is primary control?
3. Name the aerodynamic forces acting on aircraft.
4. What are the functions of landing gear?
5. What is Rib?
6. Define the Take-off Distance.
7. Write the classification of rocket based on source of energy employed.
8. Write the advantages of solid propellant rocket motor.
9. What is the purpose of Flight Testing?
10. What are the outcomes of proper Airport Layout?

PART – B (5 x 3 = 15 MARKS)

11. What are the functions of Altimeter and its types?
12. Define Aerodynamic Centre and its significance.
13. What are the advantages of Semi-Monocoque Construction?
14. What is Solar Rocket?
15. Write about Research and Development Organizations for aerospace in India.

PART – C (5 x 15 = 75 MARKS)

16. Briefly describe about three primary controls for an aircraft?

(OR)

17. Explain about the Air Speed Indicator and Altimeter Purpose and its Construction Details?

18. Write short notes on : a. Assisted Take-Off b. High Lift Devices. (6+9)

(OR)

19. Briefly describe about the various types of drag acting on aircraft.

20. Briefly describe about the various structural components used for wing structure.

(OR)

21. Explain about the basic components of Piston Engine.

22. Describe about the Solid Propellant Rocket Motor.

(OR)

23. Explain about the launch loads on structure of spacecraft.

24. Describe About the Subsonic Wind Tunnel.

(OR)

25. a. Draw the typical airport Layout. (7)
    b. Write the characteristics of Good Air Field Layout. (8)