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: ELECTRONICS AND MICROPROCESSORS   **Time: 3 hours**
Subject Code: EC213   **Maximum Marks: 100**

Answer ALL questions
PART – A (10 x 1 = 10 MARKS)

1. Distinguish power amplifier and pre amplifier.
2. What is the condition for generating sustained oscillations?
3. Write an application of piezo electric sensor.
4. What is a photo transistor?
5. Convert -121_d into signed magnitude binary format.
6. What are all the formats used to represent signed numbers?
7. What is an assembler directive?
8. What is the meaning of RIM?
9. How one can erase the contents of EPROM?
10. What do you mean by polling of an I/O device?

PART – B (5 x 3 = 15 MARKS)

11. Compare CB, CE and CC configuration.
12. Write the use of strain gauge in various fields.
13. Distinguish multiplexer and encoder.
14. Name the addressing methods of 8085. Give one example.
15. Distinguish synchronous and Asynchronous communication.

PART – C (5 x 15 = 75 MARKS)

16. a. Explain the application of an operational amplifier as comparator. (8)
    b. Draw and explain working of class B push pull amplifier. (7)
                      (OR)
17. Derive and distinguish the efficiency of HW and FW rectifiers.

18. a. Discuss the working principle of strain gauge. (7)
    b. Design a simple circuit to detect the light with photo sensitive semiconductors. (8)
                      (OR)
19. a. Explain the principle of digital voltmeter with neat sketch. (7)
    b. Draw the schematic of CRO and explain. (8)

20. Design a 4 bit carry look ahead adder.
                      (OR)
21. a. Design a 3 bit up/down counter with JK flipflops. (8)
    b. Draw a Full Adder circuit. Give the truth table. (7)

22. Discuss all arithmetic and logical instructions supported by 8085.
                      (OR)
23. Write an assembly level program for sorting of an array of numbers in descending order.

24. Discuss the importance of synchronous and asynchronous serial communications.
                      (OR)
25. Explain the concept behind RAM, ROM and EPROM.