Karunya University
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End Semester Examination – November / December 2008

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. A basic power supply contains _____.
2. Transistor has _____PN junctions.
3. Define Electron gun.
4. What are the demerits of multi meter?
5. Write the truth table of XOR.
6. Define combinational circuit.
7. Define Microprocessor.
8. Give one example for indirect Addressing mode.
9. Define EPROM.
10. Define DMA.

PART – B (5 x 3 = 15 MARKS)

11. List out the essentials of Transistor Biasing.
12. Write short notes on piezoelectric crystal.
13. Design a Half Adder Circuit.
14. Write an 8085 Assembly language program for 16 bit Addition.
15. What is the need for interfacing?

PART – C (5 x 15 = 75 MARKS)

16. Derive an expression for the efficiency for a full wave rectifier. What is ripple factor? What is the ripple factor value for Half wave rectifier and full wave rectifier.

(OR)

17. RC coupling gives constant gain over mid frequency range, why? What are the advantages of expressing gain in dB.

18. Discuss the working principles of Multimeter.

(OR)

19. Briefly explain the working of a CRO.

20. Design a counter with the following repeated binary sequence 0, 1, 2, 4, 6 using DFF.

(OR)

21. Design a 3 to 8 Decoder and Discuss.

22. With neat diagram explain the Architecture of 8085.

(OR)

23. With example explain the different Addressing modes of 8085.

24. Write short notes on: (7+8)
    a. CRT Terminal   b. Memory.

(OR)

25. How the Data are transmitted using DMA? Describe it.