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 2010

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. What is Q-point?
2. Define Ripple factor.
3. What is a signal generator?
4. Define accuracy.
5. Write the output expression for 3 input NAND gate.
6. What is a Ring counter?
7. What is stack pointer?
8. Define Opcode.
9. Name any two I/O device.
10. List the types of memory.

PART – B (5 x 3 = 15 MARKS)

11. What do you understand by push pull configuration? Compare the advantages of Class B push pull amplifier over Class A amplifier.
12. Explain the working principle of photo diode.
13. Realize a full adder using half adders.
14. Give the format of assembly language instruction and enumerate the significance of each field.
15. Distinguish between asynchronous and synchronous data transfer schemes.

PART – C (5 x 15 = 75 MARKS)

16. Draw the circuit diagram of a RC coupled amplifier and explain its working principle with necessary wave forms.

(OR)

17. Explain in detail about the following:
    a. Wein bridge oscillator (8)
    b. Zener Regulator (7)

18. Explain the working principle of the following:
    a. Potentiometer. (7)
    b. Loud Speaker. (8)

(OR)

19. Describe the working of digital multimeter with a neat diagram.

20. With neat logic diagram and timing diagrams, explain 3 bit asynchronous up counter.

(OR)

21. Write a short note on the following:
    a. Master Slave JK Flip Flop.
    b. 2 to 4 Decoder.

[P.T.O]

22. Explain different types of 8085 instructions with examples.

(OR)

23. a. Write an assembly language program to add two 16 bit numbers.
    b. Write an assembly language program to add 20 numbers each of 8 bit.

24. Explain in detail about microprocessor based DC motor controller with a neat block diagram.

(OR)

25. Explain memory interfacing circuit to interface 16k EPROM – 1 No. and 8k RAM – 2 Nos.