

LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.Sc. DEGREE EXAMINATION – PHYSICS

FIFTH SEMESTER – NOVEMBER 2007

PH 5401 - ELECTRONICS - II

AC 10

Date : 01/11/2007
Time : 9:00 - 12:00

Dept. No.

Max. : 100 Marks

PART A

Answer all the questions

(10x2=20 marks)

1. Give the expression for voltage gain of non-inverting amplifier with feedback
2. What is the disadvantage in parallel A/D converter?
3. What is the advantage of R-2R ladder over weighted resistor D/A converter?
4. What is virtual ground?
5. What is linear and non-linear IC?
6. What is the difference between thick and thin films?
7. In IC terminology what is the meaning of etching
8. When will the parity flag be set?
9. What is the function of the pin ALE?
10. Distinguish between machine language and assembly language

PART B

Answer any four questions

(4X7.5=30 marks)

- 11 Explain second order high pass and low pass filter
- 12 With a neat diagram explain R-2R ladder D/A converter
13. Explain the fabrication of integrated components like resistor, capacitor and transistor
14. Write an assembly language program for multiplying two 8-bit numbers
15. Explain memory read with bus timing diagram

PART C

Answer any four questions

(4x12.5=50 marks)

16. Explain the construction and theory of astable multivibrator using op-amp
17. Explain a) parallel A/D converter (6)
b) A/D conversion using voltage to frequency converter (6.5)
18. a) Compare bipolar and MOS technology (6.5)
b) Explain the fabrication of monolithic IC (6)
19. Write the assembly language program for
a. Picking largest number in an array
b. Finding square root of a perfect square
20. Explain the architecture of 8085 microprocessor
