LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.Sc. DEGREE EXAMINATION – **PHYSICS**

FIFTH SEMESTER – NOVEMBER 2016

PH 5407 - ELECTRONICS - II

Date: 09-11-2016 Dept. No. Max. : 100 Marks
Time: 09:00-12:00

PART A

Answer all questions: **(10×2=10 marks)**

1. Draw the circuit of second order low pass filters.
2. What is the time period of a square wave generated in an astable multivibrator for which R=10kΩ, C= 0.01μF, R_1 = 20kΩ, R_2 = 10kΩ?
3. Construct a 5 bit binary weighted resistor with op amp.
4. What are resolution and accuracy in D/A converter?
5. Give the bit positions reserved for the flags.
6. Define two byte instruction with one example.
7. Write a program to subtract the contents of memory location 8001H from the memory location 8000 H and place the result in memory location 8002H.
8. Write an asm program to store the data byte 32H into memory location 4000H.
9. Give the pin configuration of IC 555 timer
10. What is PLL?

PART B

Answer any four questions: **(4×7.5=30 marks)**

11. Explain with a neat diagram the working of op amp as an integrator.
12. Draw a block diagram of a counter type A/D converter and explain its working.
13. Explain in detail the working of a monostable multivibrator using 555 timer.
14. Explain the various addressing modes of microprocessor 8085.
15. Write notes on (a) Registers (b) program Counter (c) Stack pointer.
16. Write an asm program to divide two 8 bit numbers in direct mode of addressing.

PART C

Answer any four questions: (4×12.5=50 marks)

17. Explain the working of a op amp as an astable and monostable multivibrators.
18. Explain in detail the working of a 4 bit R-2R ladder D/A converter.
19. Draw the pin diagram of microprocessor 8085 and explain the functions of each pin.
20. Write an asm program to find the smallest of 10 numbers in an array.
21. Explain in detail the architecture and working of IC 555 timer.
22. Explain in detail the internal architecture of Microprocessor 8085.

****