LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

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

FIFTH SEMESTER – **NOVEMBER 2019**

PH 5407 – ELECTRONICS - II

Date: 06-11-2019 Dept. No. Max. : 100 Marks

Time: 01:00-04:00

Part A

Answer all Questions: (10×2=20 marks)

1. What do you mean by Address bus?
2. What is general purpose registers?
3. Give the difference between JZ and JNZ instructions.
4. Write an Asm program to store the data 32H into the memory location 4000H.
5. Draw the circuit of a Logarithmic amplifier.
6. What is meant by resolution and accuracy in a D/A converter?
7. State Thevenin's theorem.
8. Draw the pin configuration of IC 555 timer.
9. What is the function of CALL instruction in µP 8085?
10. What is Phase locked loop?

Part B

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

11. Write an asm program to Multiply two 8-bit numbers 03H and 1B H stored in memory locations 2200H and 2201H by repetitive addition and store the result in memory locations 2300H.
12. Explain the various addressing modes of Mp 8085.
13. With a neat diagram, explain the working of an II order High pass filter using Op-amp.
14. With a neat diagram, explain the working of a 5 bit binary weighted D/A converter.
15. Explain with a neat diagram, the internal architecture and working of 567 PLL.
16. Discuss the functions of different data transfer instructions in the instruction set of µP 8085.

Part C

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

17. With a neat diagram, explain the internal architecture of Microprocessor 8085.
18. Explain with a neat diagram, the working of an R-2R ladder D/A converter.
19. With a neat circuit diagram, explain the working of an op amp as an integrator and differentiator.
20. Write an ASM program for finding (i) square (ii) square root of an 8-bit number.
21. Draw the circuit of astable multivibrator using IC 555 and explain its working.
22. Write an assembly language program

    (a) To find the largest of a 5 numbers in an array. **(8 marks)**

    (b) To Add the contents of memory locations 5000H and 5001H and place the result in the memory location 5002H. **(4.5 marks)**

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