



# LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

## B.Sc. DEGREE EXAMINATION – COMPUTER SCIENCE

SECOND SEMESTER – NOVEMBER 2016

### PH 2109 - MICROPROCESSOR 8085

Date: 16-11-2016  
Time: 01:00-04:00

Dept. No.

Max. : 100 Marks

#### PART A

ANSWER ALL QUESTIONS

10×2=20

1. What are the basic units of a microprocessor?
2. Why data bus is bidirectional?
3. List the various flags in 8085.
4. What is program counter?
5. What is the difference between conditional and unconditional branching instructions?
6. Differentiate between hardware and software interrupts.
7. What are the operating modes of port A of 8255.
8. Mention the three types of data transfer between microcomputer and I/O device.
9. What is the role of interrupt service routine?
10. Write a program to add two 8 bit numbers in immediate addressing mode.

#### PART B

ANSWER ANY FOUR QUESTIONS

4×7.5=30

11. Discuss the addressing modes of 8085 and give example for each
12. Explain the function of following pins: (i)INT $\bar{R}$  (ii) RD (iii) SID (iv) TRAP
13. Discuss the different logic instructions in the instruction set of 8085.
14. List out five differences between memory mapped I/O and standard I/O.
15. Write a program to multiply two 8 bit numbers in direct addressing mode.
16. Explain software polling with a neat block diagram.

#### PART C

ANSWER ANY FOUR QUESTIONS

4×12.5=50

17. Explain the internal architecture of 8085 with a functional block diagram.
18. (a) Explain the PUSH and POP instructions with examples (8 marks).  
(b)What is the similarity and difference between subtract and compare instructions. (4.5 marks)
19. Write a program to search the smallest data in an array of data stored in memory starting from 4250<sub>H</sub>.
20. Explain the internal block diagram of the programmable peripheral interface 8255 with diagram.
21. (a)How are the address and data lines demultiplexed in 8085 processor? (6 marks)  
b)Specify the register content after executing the given instructions (4.5marks)  
MVI A, C3<sub>H</sub>  
ADI, 22<sub>H</sub>  
MVI C, 6A<sub>H</sub>  
ORA C  
HLT
22. (a) List the features of PIC 8259 (6 marks)  
(b)Explain the working 8259 with 8085 processor. (6.5 marks)

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