



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.Sc. DEGREE EXAMINATION – COMPUTER SCIENCE

SECOND SEMESTER – APRIL 2016

PH 2109 - MICROPROCESSOR 8085

Date: 26-04-2016
Time: 01:00-04:00

Dept. No.

Max. : 100 Marks

PART –A

Answer all questions

(10×2=20)

1. What is a microprocessor?
2. What are the operations performed by ALU of 8085
3. What is the size of the address and data bus of 8085?
4. Write an asm program to subtract two 8 bit no in immediate mode of addressing
5. What is the difference between SUB B & CMP B instruction in μp 8085
6. What is an interrupt ?
7. List the features of IC8259
8. Explain the two types of interfacing devices
9. What are the operating modes of port A of 8255
10. Explain a three byte with an example

PART –B

Answer any four questions

(4×7.5=30)

11. Explain the flag structure of 8085.
12. a)Specify the register content after executing the given instructions **(5 marks)**
MVIA , 45_H
ADI , 63_H
MVIB , 5A_H
ORA B
HLT
b)What is the special nature of Accumulator. **(2.5 marks)**
13. Describe hardware polling with a neat diagram
14. Write an asm program to find square root of a given number using direct mode of addressing
15. List out the differences between standard I/O and memory mapping I/O.
16. Explain the functions of the following pins.
a) \overline{RD} b) IO/\overline{M} c) HOLD d) ALE e) \overline{INTA}

PART – C

Answer any four questions

(4×12.5=50)

17. Draw a neat block diagram and explain the internal architecture of μp 8085
18. Write an ASM program to find the smallest of ten 8 bit numbers in an array. The numbers are stored in the memory location starting from 4300H
19. a) Explain PUSH and POP instruction with an example(8 marks)
b) Write a sequence of instruction that will load FF_{H} in C register and transfer the byte to a memory location whose address is 2050_{H} **(4.4 marks)**
20. Answer the following
i. Explain SIM and RIM instructions. **(6 marks)**
ii. Briefly explain how INTR interrupt is handled by μP 8085. **(6.5 marks)**
21. (a) How are the address and data lines are demultiplexed in 8085? Explain with a diagram **(8.5 marks)**
(b) What happens when NOP instruction is executed? What are the uses of NOP instruction. **(4 marks)**
22. Explain the working of the programmable interrupt controller 8259 with a neat block diagram.
