LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.Sc. DEGREE EXAMINATION – **COMPUTER SCIENCE**

SECOND SEMESTER – **APRIL 2015**

PH 2109 - MICROPROCESSOR 8085

Date : 20/04/2015 Dept. No. Max. : 100 Marks

Time : 01:00-04:00

Part A

Answer **all** the questions **10 x 2 =20**

1. Explain the function of ALU in 8085 microprocessor.
2. Explain how address and data lines are demultiplexed in 8085
3. Mention the difference between SUBB and CMPB instructions.
4. What is the role of MOV A, M instruction?
5. Write an instruction to move the content of accumulator to the address 4200.
6. Write an instruction to add the contents of registers A and C.
7. List out the types of interfacing devices for a microprocessor.
8. What are the ports available in 8255 peripheral device?
9. Explain the function of RIM and SIM instructions.
10. Write down the subroutine address that corresponds to the interrupt RST 7.5.

Part B

Answer any **Four** questions. **4 x 7.5 = 30**

11. Mention the registers and flags available in 8085 and explain the role of each of them.
12. Explain the function of following pins of 8085: $\overline{RD}$, $\overline{WR}$, IO/$\overline{M}$, SID, SOD, HOLD, HLDA.
13. Explain the following instructions: JMP, CALL, IN, OUT.
14. Write a program to multiply the data available in address 4200 and 4210 and place the answer in address 4220.
15. With a block diagram, explain how address decoding is done for I/O ports.
16. Explain the hardware and software interrupts of 8085.

Part C

Answer any**Four** questions **4 x 12.5 = 50**

17. With a block diagram, explain the architecture of 8085 microprocessor.
18. Explain the different types of addressing modes available in 8085 with an example for each.
19. Write an assembly language program for a) Division and b) Square root of single byte data.
20. Using 8085 mnemonics, write a program for sorting an array of data in ascending order and descending order.
21. With a block diagram, explain the features of 8255 peripheral device.
22. Explain software polling and hardware polling of interrupt devices.