B.Sc. DEGREE EXAMINATION,APRIL 2020
III Year VI Semester
Microprocessor Interfacing and Applications

Time : 3 Hours **Max.marks :75**

Section A $(10 \times 2 = 20)$ Marks

Answer any **TEN** questions

1. Define instruction cycle & machine cycle.
2. Mention the operation performed during first T-state of every machine cycle in 8085.
3. What is meant by Memory mapping?
4. Write the control signals involved in RAM interfacing.
5. Draw a simple circuit to generate read and write signals from 8085.
6. List any three I/O devices.
7. State whether HOLD has higher priority than TRAP or not.
8. How can the interrupt of 8085 be expanded?
9. What is a programmable peripheral device?
10. List the functions performed by port-C of 8255.
11. What is the disadvantage in 7-segment LED interfacing using ports?
12. Write a program to enable RST 6.5 interrupt in 8085.

Section B $(5 \times 5 = 25)$ Marks

Answer any **FIVE** questions

13. Explain the memory write operation of 8085 with a neat diagram.
14. Explain how AD_0 - AD_7 bus is demultiplexed using the latch 74LS373.
15. Distinguish between I/O mapped I/O and Memory mapped I/O.
16. What is an interrupt? What do you understand by the term Masking, priority and interrupt vector?
17. Describe how four 7-segment displays can be interfaced to 8085?
18. What is a microcontroller and how does it work?
19. Explain RIM and SIM instructions.

Section C $(3 \times 10 = 30)$ Marks

Answer any **THREE** questions

20. Draw and explain the timing diagram for the instruction MVI A, 25_H.
21. A 8085 system has to be interfaced to two RAMs of 2K bytes each. Show how will you prepare the memory map and design the memory interfacing.
22. Draw the timing diagram for the OUT instruction and explain.
23. List the various interrupts available in 8085 and their priorities. What are the actions taken by the microprocessor in response to an interrupt request?
24. Draw the block diagram of 8255 programmable peripheral interface indicating different ports. Explain its various operating modes.

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