

FOURTH SEMESTER (CBCSS—UG) DEGREE EXAMINATION, APRIL 2022

Common Course for L.R.P. (Language Reduced Pattern)

A 14—MICROPROCESSORS - ARCHITECTURE AND PROGRAMMING

Maximum : 80 Marks

Time : Two Hours and a Half

Section A

Answer at least **ten** questions.
Each question carries 3 marks.
All questions can be attended.
Overall Ceiling 30.

1. Name the 16 bit registers available in 8085.
2. What is the function of IO/M signal in the 8085 ?
3. Mention the purpose of SID and SOD lines.
4. What do you mean by memory mapping ?
5. What is the use of ALE signal in 8085 ?
6. Differentiate between Instruction cycle, Machine cycle and T-states.
7. Explain the instruction : DAA.
8. How many address lines are there in a 4096×8 EPROM CHIP ?
9. What do you mean by priority in an interrupt ?
10. What is the importance of IN and OUT instructions ?
11. Explain the difference between a JMP instruction and CALL instruction.
12. What is PSW in 8085 ?
13. What is the purpose of restart instructions in 8085 ?
14. What are the modes of operations of 8254 ?
15. What are the different types of instructions in 8086 ?

(10 × 3 = 30 marks)

Section B

Answer at least **five** questions.
Each question carries 6 marks.
All questions can be attended.
Overall Ceiling 30.

16. Explain how the memory is classified in computer architecture.
17. What are flags ? Explain how flags are accessed in 8085.

Turn over

18. Discuss the various machine cycles involved in 8085.
19. Draw the timing diagram associated with the instruction : A000h MOV M,A
20. Write an assembly program to check the number of 1's in a byte taken into the accumulator from a memory location 4000H.
21. What is stack ? Explain how stack is used in 8085.
22. Draw the internal block diagram showing the various units in 8237 chip.
23. What are the different busses in 8086 ? Explain in brief.

Section C

(5 × 6 = 30 marks)

*Answer any two questions.
Each question carries 10 marks.*

24. Explain the bus organisation in 8085 microprocessor. Describe the flag registers associated with 8085.
25. Discuss the various mathematical and logical instructions used in 8085.
26. Explain the modes of operation in 8255A PPI.
27. Explain the addressing modes in 8086.

(2 × 10 = 20 marks)