FOURTH SEMESTER (CBCSS—UG) DEGREE EXAMINATION APRIL 2021

Common Course

A14—MICROPROCESSORS—ARCHITECTURE AND PROGRAMMING

Time : Two Hours and a Half   Maximum : 80 Marks

Section A

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

1. What is the importance of accumulator in 8085 ?

2. What are the various microprocessor initiated operations in 8085 ?

3. How many control signals are used in 8085 microprocessor ?

4. What are the important memory classifications ?

5. What is an op-code ?

6. How 8085 microprocessor distinguishes between data and address ?

7. What do you mean by machine cycle ?

8. What is peripheral mapped I/O ?

9. What are the instructions related while stack is used in 8085 ?

10. What are machine control instructions in 8085 ?

11. What is masking in interrupts? How can interrupt be masked using instructions ?

12. What is the need for a subroutine ?

13. Calculate the time taken to execute the following set of instructions :

    LXI H:4050H

    MOV A, M

    XRA A

    ADD M

    Assume a 2 MHz clock is used in 8085.

14. What are the applications of 8254 chip ?

15. Name the flags associated with 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 the bus organization in 8085.

17. Write a note on special purpose registers in 8085.

18. Explain the rotate instructions in 8085.

19. Write an ALP to find largest among a set of data stored in location with starting address 4000 H.

20. Explain the instructions with proper examples :

    (a) LHLD 4500H.

    (b) PUSH PSW.

21. Write a subroutine to check the number taken in accumulator is odd or even.

22. What are delay programs and what are they used for ?

23. Explain how pipelining is used in 8086.

(5 × 6 = 30 marks)

Section C

*Answer any **two** questions.*

Each question carries 10 marks.

24. Explain how the various registers are organised in 8085.

25. Define addressing modes. With suitable examples explain 8085 addressing modes in detail.

26. Explain the various hardware and software interrupts in 8085. Explain the various instructions associated to handle interrupts.

27. Explain the internal architecture of 8086 microprocessor.

(2 × 10 = 20 marks)