C 41177 **(Pages : 2)** **Name.....**

Reg. No.....

FOURTH SEMESTER (CBCSS—UG) DEGREE EXAMINATION
APRIL 2023

Common Course (Language Reduced Pattern)

A14—MICROPROCESSORS–ARCHITECTURE AND PROGRAMMING

(2019 Admission onwards)

Time : Two Hours and a Half Maximum : 80 Marks

Section A

Answer the following questions (1-15) *each carrying* 2 *marks.*

1. List few applications of microprocessor-based system.
2. What is an Assembler ?
3. What is the purpose of HOLD pin in 8085 ?
4. What is the clock frequency of 8085 ?
5. How address de-multiplexing is done in 8085 ?
6. What are the program control instructions available in 8085 ?
7. What is the primary difference between memory read and instruction fetch operations in 8085 ?
8. Predict the accumulator content while executing the following instructions :

   MOV A, M

   XRA A
9. Explain the various machine cycles associated with the execution of the instruction :

   OUT 80H
10. What is a delay program and what are its uses ?
11. List the four instructions which control the interrupt structure of the 8085 microprocessor.
12. What are the applications of 8255A PPI ?
13. What are the modes of operation of 8237 IC ?

Turn over

14. Define Pipelining.

15. What is NMI ?

(Ceiling : 25 Marks)

Section B

Answer the following questions (16-23) *each carrying* 5 *marks.*

16. Draw and explain the pin out of 8085 microprocessor.

17. Explain the role of accumulator in 8085.

18. Discuss the logical instructions in 8085.

19. Write an ALP to add the numbers given numbers stored in a location with starting address 5500H.

20. Draw and explain the timing diagram for executing the instruction : 41FFH STA 526AH

21. Explain the branching instructions in 8085.

22. Explain the various hardware interrupts in 8085. How these interrupts are serviced during a program ?

23. Explain the various modes of operation of 8255A PPI.

(Ceiling : 35 Marks)

Section C

Answer any **two** *questions* (24-27) *each carrying* 10 *marks.*

24. Discuss the register organisation in 8085.

25. Explain the various addressing modes in 8085 with proper examples.

26. Draw and explain the internal architecture of 8254 IC.

27. Explain the internal organisation of registers in 8086.

(2 × 10 = 20 marks)