D 103008 **(Pages : 2)** **Name.....**

Reg. No.....

FOURTH SEMESTER (CBCSS—UG) DEGREE EXAMINATION
APRIL 2024

Common Course—(Language Reduced Pattern)

A14—MICROPROCESSORS – ARCHITECTURE AND PROGRAMMING

(2019 Admission onwards)

Time : Two Hours and a Half Maximum : 80 Marks

Section

Answer the following questions (1-15).
Each question carries 2 *marks.*

1. What is a Microprocessor ?
2. What do you mean by multiplexing of data bus ?
3. What is the size of a register in 8085 ? Name the valid register pairs in 8085.
4. Differentiate between data bus and address bus.
5. What do you mean by maskable interrupts ?
6. What are the software interrupts in 8085.
7. What is stack pointer ?
8. What is the function of POP instruction ?
9. What is the function of ALE signal ?
10. Which logical instruction can be used for clearing the accumulator ?
11. Give two differences between 8086 and 8088.
12. Differentiate between CMP and SUB instruction.
13. What do you mean by mode 0 operation of 8255.
14. What is the function of overflow flag in 8086.
15. What do you mean by maximum mode operation of 8086.

(Ceiling : 25 marks)

Turn over

Section B

Answer the following questions (16-23).
Each question carries 5 *marks.*

16. What are different microprocessor initiated operations of 8085 ?
17. Describe the instruction format of 8085 based on the number of bytes used.
18. Draw the timing diagram of the instruction MVIB, data.
19. Write an 8085 assembly language program for block data transfer (i.e., transferring a set of data from one location to another location.
20. What are the functions of RIM and SIM instruction.
21. Explain how data transfer is performed using 8257 DMA controller.
22. Explain the BSR mode of 8255.
23. Explain the function of segment registers in 8086.

(Ceiling : 35 marks)

Section C

Answer any **two** *questions* (24-27).
Each question carries 10 *marks.*

24. Explain the classification of instructions in 8085.
25. Describe in detail the interrupts of 8085.
26. With block diagram, explain the working of the Programmable Interval timer, 8254.
27. With block diagram, explain the internal architecture of 8086.

(2 × 10 = 20 marks)