D 120519 **(Pages : 2)** **Name.....**

Reg. No.....

FOURTH SEMESTER (CBCSS—UG) DEGREE EXAMINATION, APRIL 2025

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

A14—MICROPROCESSORS—ARCHITECTURE AND PROGRAMMING

(2019—2023 Admissions)

Time : Two Hours and a Half Maximum : 80 Marks

Section A

Answer the following questions (1-15).

Each question carries 2 *marks.*

1. What are the basic components of a computer system ?
2. What is a microprocessor ? Give two applications of microprocessors.
3. What is the difference between RAM and ROM ?
4. What is the size of memory that 8085 can address ? Justify your answer.
5. What is the use of flags in 8085 ? When will the Zero flag set ?
6. What is the function of ALE ?
7. Explain the conditional jump in 8085.
8. Define T-state.
9. Explain I/O mapped I/O.
10. What is stack ? Explain.
11. Explain immediate addressing mode of 8085 with an example.
12. What happens when a CALL instruction is executed ?
13. Which components are included in the EU of 8086 ?

Turn over

14. What is the purpose of the instruction queue in BIU ?

15. How is a physical address calculated in 8086 ?

(Ceiling : 25 marks)

Section B

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

16. What are the general purpose registers of 8085 ? Explain.

17. Explain the bus organization of 8085.

18. Explain the memory read operation.

19. Write a program to add two 8-bit numbers in assembly language.

20. Explain PUSH and POP instructions.

21. What are the different interrupts in 8085 ? Explain.

22. Explain the flag register of 8086.

23. Explain any two addressing modes of 8086 with examples.

(Ceiling : 35 marks)

Section C

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

24. Explain the architecture of the 8085 microprocessor with a neat sketch.

25. Explain different arithmetic instructions of 8085 with examples.

26. Draw the block diagram and explain the modes of operation of 8255 A.

27. What are the different segments and segment registers in 8086 ? Explain in detail.

(2 × 10 = 20 marks)