

D 141072**(Pages : 2)****Name.....****Reg. No.....****FOURTH SEMESTER B.VOC. DEGREE EXAMINATION, APRIL 2026****Common Course****A14—MICROPROCESSORS ARCHITECTURE AND PROGRAMMING****(2021 Syllabus)****Time : Two Hours and a Half****Maximum : 80 Marks****Section A (Short Answer)***Answer the following questions (1-15).**Each question carries 2 marks.*

1. Define Microprocessor.
2. What are the basic components of a computer system ?
3. Differentiate between data bus and address bus.
4. What is memory mapping ?
5. List the special purpose registers of 8085.
6. What is an Opcode ?
7. Define addressing mode.
8. What is a machine cycle ?
9. What is meant by memory read cycle ?
10. Define stack in 8085.
11. What is a Subroutine ?
12. What is an Interrupt ?
13. Mention two features of 8255A.
14. What is segmentation in 8086 ?
15. What is the role of the Bus Interface Unit in 8086 ?

(Ceiling : 25 marks)**Turn over**

Section B (Paragraph)

Answer the following questions (16 - 23).

Each question carries 5 marks.

16. Explain the general architecture of a computer system.
17. Describe the flags of 8085 microprocessor.
18. Describe the classification of instructions of 8085.
19. Describe instruction cycle, machine cycle and T-states.
20. Explain different addressing modes in 8085.
21. Explain the concept of stack and stack operations in 8085.
22. Describe the programmable peripheral interface 8255A.
23. Explain physical address calculation in 8086.

(Ceiling : 35 marks)

Section C (Essay Type)

*Answer any **two** questions (24-27).*

Each question carries 10 marks.

24. Explain the architecture of 8085 microprocessor with a neat block diagram and discuss the functions of each block.
25. Describe the 8085-instruction set in detail with examples.
26. Explain interrupts in 8085. Discuss types of interrupts and explain interrupt driven programs.
27. Explain the internal architecture of 8086 microprocessor, including execution unit, BIU, registers and segmentation.

(2 × 10 = 20 marks)