

22U412

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Name:

Reg.No:

FOURTH SEMESTER B.Sc./B.C.A. DEGREE EXAMINATION, APRIL 2024

(CBCSS - UG)

(Regular/Supplementary/Improvement)

CC19U BCS4 A14 / CC19U BCA4 A14 - MICROPROCESSORS - ARCHITECTURE AND PROGRAMMING

(Computer Science / Computer Application - Common Course)

(2019 Admission onwards)

Time : 2.5 Hours

Maximum : 80 Marks

Credit : 4

Part A (Short answer questions)

Answer *all* questions. Each question carries 2 marks.

1. What is a micro processor?
2. What is control bus? How it is different from address bus and data bus?
3. What are registers ?
4. Give any four instructions that use direct addressing in 8085?
5. What are the different categories of instruction set in 8085?
6. Explain the DAA instruction of 8085. Illustrate with examples?
7. How many states are there in memory read cycle? Explain.
8. Explain Fetch cycle.
9. Explain the unconditional call instruction of the 8085 microprocessor with suitable example.
10. List the hardware interrupts of 8085 in the decreasing order of their priority.
11. Explain Mode 5 of 8254 counter.
12. What is a DMA controller?
13. Explain the functional components of execution unit (8086 microprocessor)?
14. What is the function of the BIU?
15. What is the function of the 8086 BX register?

(Ceiling: 25 Marks)

Part B (Paragraph questions)

Answer *all* questions. Each question carries 5 marks.

16. Differentiate between micro processor and micro controller.
17. Describe general architecture of micro processor.
18. Explain one byte, 2 byte and 3 byte instructions with example.
19. Explain the subroutine call and return instructions of 8085 microprocessor.
20. Write an assembly program to exchange the contents of memory locations 2000H and 4000H.
21. Explain looping in 8085.
22. Describe 20 bit physical address calculation mechanism in 8086.
23. Describe the addressing modes of 8086.

(Ceiling: 35 Marks)

Part C (Essay questions)

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

24. Explain pin diagram of 8085 with neat diagram.
25. Explain the data transfer instructions of 8085 microprocessor.
26. Describe the logic instructions of 8085.
27. Describe the internal architecture of 8086 microprocessor with diagram.

(2 × 10 = 20 Marks)
