19U428 (Pages: 2) Name: .....

Reg.No: .....

FOURTH SEMESTER B.Sc. CS/B.C.A. DEGREE EXAMINATION, APRIL 2021

(CBCSS - UG)

CC19U BCS4 A13/CC19U BCA4 A13 - MICROPROCESSORS ARCHITECTURE AND PROGRAMMING

(Computer Science - Core Course)

(2019 Admission - Regular)

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 controller? How does it different from micro processor?
2. What is meant by address multiplexing in 8085?
3. What is control bus?
4. Give six examples of 8085 three byte instruction
5. What is meant by immediate addressing mode?
6. Explain the RLC and RRC instructions of 8085. Illustrate with examples?
7. How many states are there in memory read cycle?explain?
8. Explain Execution Cycle
9. Explain, with suitable examples, how are subroutine call and return implemented using the 8085 instructions
10. What are software interrupts? How does it differ from the hardware interrupts?
11. Explain Mode 1 of 8254 counter?
12. What is DMA?
13. Explain the functional components of execution unit (8086 microprocessor)?

14. What is the function of the INTA signal in 8086?

15. What are the functional units of the BIU? 7. What is pipelining?

(Ceiling: 25 Marks)

Part B (Paragraph questions)

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

16. Describe general architecture of computer.

17. Explain the pin out diagram 8085 microprocessor.

18. Explain different categories of instructions in 8085 microprocessor.

19. Explain the data transfer instructions of 8085 microprocessor with example.

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. Explain the addressing mode of 8086 with examples.

(Ceiling: 35 Marks)

Part C (Essay questions)

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

24. Explain internal architecture of 8085.

25. Explain the arithmetic instructions of 8085 microproc with suitable examples.

26. Explain the logic instructions of 8085.

27. Explain the functions of different registers in 8086.Explain with examples, various flags of 8086 and their conditions in various instance.

(2 × 10 = 20 Marks)

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