23U412

FOURTH SEMESTER B.Sc./B.C.A. DEGREE EXAMINATION, APRIL 2025

(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 meant by word micro processor?

2. Explain the concept of address multiplexing in 8085 micro processor.

3. What is ALE ? What is the function of ALE in 8085?

4. What is opcode?

5. Give any four instructions that use implicit addressing in 8085.

6. List out different categories of instruction set in 8085.

7. Give any six instructions from the data transfer group of 8085.

8. What is a timing diagram?

9. Explain how can you set up conditional loop using the 8085 microprocessor instructions. Illustrate with example.

10. Explain the PUSH operation on a stack with an illustrative example.

11. What is meant by maskable interrupt? Identify the maskable interrupts of 8085.

12. Explain Mode 0 of 8254 counter.

13. What are the two internal functional units of 8086 microprocessor?

14. What is the function of the EU?

15. What are the functions of the 8086 CS, DS. SS and ES registers?

(Ceiling: 25 Marks)

Part B (Paragraph questions)

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

16. Explain general architecture of computer.

17. Describe addressing modes of 8085 with example.

18. Describe the branch instructions of 8085 microprocessor.

19. Explain the I/O write machine cycle with a neat timing diagram.

20. Write an assembly program to add two 16 bit numbers.

21. Explain the process of DMA.

22. Desribe Maximum mode configuration of 8086 micro processor.

23. Draw the bit pattern for 8086 flag register and explain the significance of each bit.

(Ceiling: 35 Marks)

Part C (Essay questions)

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

24. Explain internal architecture of 8085 with a neat block diagram.

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

26. Explain the logic instructions of 8085.

27. Explain the addressing mode of 8086.

(2 × 10 = 20 Marks)

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