23U570 (Pages: 2) Name: .....

Reg.No: .....

FIFTH SEMESTER B.Sc./B.C.A. DEGREE EXAMINATION, NOVEMBER 2025

(CBCSS - UG)

(Regular/Supplementary/Improvement)

CC19UBCS5B07 / CC19UBCA5B07 - COMPUTER ORGANIZATION AND ARCHITECTURE

(Computer Science / Computer Application - Core Course)

(2019 Admission onwards)

Time : 2.00 Hours Maximum : 60 Marks

Credit : 3

Part A (Short answer questions)

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

1. Define +ve and -ve logic.
2. What is XOR gate? Give its logic symbol and truth table.
3. What is edge triggering?
4. What do you mean by Latch? Give an example.
5. Define the terms AC and OPCODE.
6. What is Instruction set completeness?
7. What is an Interrupt? Define INPR, OUTR.
8. What are the various fields in a micro-instruction format?
9. What are program control instructions? Give an example.
10. What is Content Addressable memory?
11. What do you mean by hit ratio?
12. Define I/O interface.

(Ceiling: 20 Marks)

Part B (Short essay questions - Paragraph)

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

13. What are adder circuits? Explain the logic circuit and truth table of full adder.
14. What is a decoder? Explain BCD to 7 segment decoder with a neat block diagram.
15. Write a short note on Decade counters? Explain with neat diagram.
16. Whar are Memory reference Instructions? Explain any 4 memory reference instructions.

17. Explain Micro-programmed control organization.

18. What are registers? Draw the architecture of register set with ALU and explain.

19. Write a note on Handshaking method of data transfer.

(Ceiling: 30 Marks)

Part C (Essay questions)

Answer any ***one*** question. The question carries 10 marks.

20. Write a detailed note on shift registers.

21. What is DMA ? Write a detailed note on DMA controller.

(1 × 10 = 10 Marks)

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