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Name.....

Reg. No.....

FIFTH SEMESTER (CBCSS—UG) DEGREE EXAMINATION NOVEMBER 2024

Computer Science

BCS 5B 07-COMPUTER ORGANIZATION AND ARCHITECTURE

(2019 Admission onwards)

Time : Two Hours

Maximum : 60 Marks

Section A (Short Answer Type Questions)

Answer **all** questions. Each correct answer carries a maximum of 2 marks. Ceiling 20 marks.

- 1. What is an Encoder ?
- 2. List out any four examples of combinational circuit.
- 3. What is a Counter ? List any *two* types.
- 4. Define the function of Program Counter register.
- 5. Explain the format of memory reference instruction?
- 6. Write the polish and reverse polish notation of the expression A + B.
- 7. Give examples of shift instructions.
- 8. Define virtual memory.
- 9. What is priority interrupt?
- 10. What are data manipulation instructions ?
- 11. Draw the symbols of XOR and XNOR gates.
- 12. Explain D Flip-flop.

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Section B (Short Essay Type Questions)

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Answer **all** questions. Each correct answer carries a maximum of 5 marks. Ceiling 30 marks.

- 13. Briefly explain peripheral devices.
- 14. Discuss on general register organization.
- 15. Explain instruction cycle.
- 16. Evaluate $X = (A + B)^*(C + D)$ using One address Instruction.
- 17. Explain subroutine call and return.
- 18. Write short note on page replacement concept.
- 19. Explain Direct Mapping Cache organization.

Section C (Essay Type Questions)

Answer any one question, correct answer carries 10 marks.

- 20. Explain the universal property of NAND and NOR gates.
- 21. Define addressing mode. Briefly explain Different types of addressing modes.

 $(1 \times 10 = 10 \text{ marks})$

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