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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)

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.