D 110122 **(Pages : 2)** **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.

Turn over

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.

(1 × 10 = 10 marks)