D 130140   (Pages : 2)   Name...

Reg. No....................................

FIFTH SEMESTER (CBCSS—UG) DEGREE EXAMINATION NOVEMBER 2025

Computer Science

BCS 5B 07—COMPUTER ORGANIZATION AND ARCHITECTURE

(2019 Syllabus)

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. Define ripple carry adder.

2. Explain T Flip-flop.

3. Explain decade counter.

4. Which are the four phases of an instruction cycle ?

5. What are the uses of an accumulator register ?

6. Define addressing mode.

7. Explain data transfer instructions.

8. Discuss hit / miss ratio.

9. What is the difference between strobe and handshaking ?

10. What are the functions of Timing and control unit ?

11. Differentiate Memory Reference Instructions and Register reference instructions.

12. Explain half adder.

Turn over

Section B (Short Essay Type Questions)

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

13. Write a short note about Cache memory.

14. Explain data manipulation instructions.

15. Explain master slave JK flip-flop.

16. Demonstrate direct and indirect address.

17. Define Interrupt. Explain different classification of Interrupts.

18. Explain relative and indexed addressing modes.

19. With the help of a block diagram explain associative memory.

Section C (Essay Type Questions)

Answer any **one** *question, correct answer carries* 10 *marks.*

20. With the help of logic circuits explain various logic gates.

21. Briefly explain various shift registers.

$(1 \times 10 = 10$ marks$)$