D 110075 **(Pages : 2)** **Name.....**

Reg. No.....

FIFTH SEMESTER (CBCSS–UG) DEGREE EXAMINATION, NOVEMBER 2024

BCA

BCA 5B 07—COMPUTER ORGANISATION AND ARCHITECTURE

(2019 Admission onwards)

Time : Two Hours Maximum : 60 Marks

Section A - Short Answer Type Questions

All questions can be answered.
Each correct answer carries a maximum of 2 marks.
(Ceiling 20 Marks).

1. What are logic gates ?
2. What do you mean by combinational circuits ?
3. Compare synchronous and asynchronous counters.
4. What are sequential circuits ?
5. What are the different types of shift registers ?
6. What are the various parts of an instruction ? Explain with an example.
7. Define interrupt.
8. What are addressing modes ?
9. What is meant by locality of reference and how does it help in faster execution of program ?
10. What are I/O processors ?
11. What are priority interrupts ?
12. What are I/0 controllers ?

(Ceiling 20 marks)

Section B - Paragraph/ Problem Type Questions

All questions can be answered.
Each question carries 5 marks.
(Ceiling 30 Marks).

13. Describe half adders and full adders with suitable diagrams.
14. What are flipflops ? Explain SR and JK flipflops.
15. Explain the working of four bit serial in - parallel out shift registers.

Turn over

16. How are computer instructions classified ? Explain briefly.
17. Explain the concepts of general register organization.
18. Differentiate between synchronous and asynchronous modes of data transfer.
19. Explain how data is transferred with help of DMA.

(Ceiling 30 marks)

Section C - Essay Type Questions

Answer any **one** *of the following questions.*

The question carries 10 marks.

20. What are counters ? Describe the working of a four bit binary ripple counter.
21. Explain the basic organization of a micro programmed control unit and the generation of control signals using micro program.

(1 × 10 = 10 marks)