

512500



DCCA201

Reg. No.

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II Semester B.C.A Degree Examination, June/July - 2025

COMPUTER APPLICATIONS

Computer Architecture

(NEP Scheme (R))

Time : 2½ Hours

Maximum Marks : 60

*Instructions to Candidates:*

Answer All the Sections.

**SECTION - A**

Answer any FOUR questions. Each question carries Two marks.

(4×2=8)

1. Define computer Architecture.
2. Convert 111 to gray code.
3. State DeMorgan's theorem.
4. Define op-code and operand.
5. What is MIMD?
6. Define Hit ratio.

**SECTION - B**

Answer any FOUR questions. Each question carries Five marks.

(4×5=20)

7. Simplify  $F(ABCD) = \sum_1^1 m(1,3,7,11,15) + \sum_1^1 d(0,2,5)$ .
8. Explain multiplexer with an example.
9. Differentiate between RISC and CISC.
10. Explain BUN and BSA.
11. Write a note on fine grained multithreading.
12. Explain the characteristics of multiprocessor.

[P.T.O.]



(2)  
SECTION - C

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Answer any FOUR questions. Each question carries Eight marks.

(4×8=32)

13. Explain the working of S-R flip-flop in detail.
14. Explain shift registers with parallel load.
15. Explain the Instruction cycle in brief with all its phases and micro operations.
16. Explain the register-reference instructions.
17. What is DMA? Explain its working with a block diagram.
18. Explain cross-bar switch and multi-stage switching network.