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BCA (Part-III) Examination, 2022

COMPUTER SYSTEM ARCHITECTURE

(Theoretical Foundation of Computer Science)

[Paper : Third]

Time Allowed : Three Hours

Maximum Marks : 50

Minimum Passing Marks : 17

Note : Attempt **all the five** questions. **One** question from each unit is **compulsory**. All questions carry **equal** marks.

Unit-I

1. Explain the following : [10]

   (a) EBCDIC Codes

   (b) Overflow and Underflow

OR

(a) Excess-3 Codes

(b) Error detection and Correcting codes

Unit-II

2. Explain the following : [10]

(a) AND Gate

(b) NOR Gate

(c) RS Flip Flop

(d) JK and T Flip Flop

OR

(a) Sum of Product

(b) Product of Sum

(c) Doorman's theorem

(d) Boolean algebra

Unit-III

3. Explain block diagram of a Macro Computer System in detail. [10]

OR

Explain the introduction to microprocessor and their architecture.

Unit-IV

4. Briefly explain the Isolated Vs. memory mapped I/O and Synchronous and Asynchronous data transfer. [10]

OR

Write short notes on :

(a) Handshaking

(b) I/O processor

Unit-V

5. What is page replacement? Discuss about FIFO algorithms with example. [10]

OR

Explain these terms :

(a) Magnetic disk and tapes

(b) Virtual memory

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