KN-284

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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