## FD-2876

# BCA (Part-III) Examination, 2022 

> Paper - VI

## Computer System Architecture

Time : Three Hours]<br>[Maximum Marks : 80<br>[Minimum Pass Marks : 27

Note : Answer any two parts from each question. All questions carry equal marks.

## Unit-I

1. (a) Solve the following:
(i) $(195)_{10}=(?)_{2}$
(ii) $(2 \mathrm{FA})_{16}=(?)_{2}$
(b) Explain BCD and ASCII Codes.
(c) Discuss about 1's and 2's complement method.

## (2)

## Unit-II

2. (a) Discuss De Morgan's law with suitable example.
(b) What is Flip Flop? Explain JK Flip Flop with circuit diagram.
(c) What is Full Adder? Draw circuit diagram of Full Adder.

## Unit-III

3. (a) Explain the following:
(i) Registers
(ii) System buses
(b) Draw and explain block diagram of micro computer.
(c) Explain interfacing devices.

## Unit-IV

4. (a) Differentiate between synchronous and asynchronous data transfer.
(b) Discuss about I/O Interface.
(c) Explain I/O devices and their controllers.

## Unit-V

5. (a) Explain the following :
(i) Hit Ratio
(ii) Virtual Memory

## (3)

(b) Discuss about semiconductor memory.
(c) Explain memory hierarchy and associative memory.

