

FD-2876

BCA (Part-III) Examination, 2022

Paper - VI

Computer System Architecture

Time	:	Three	Hours]	[Maximum		Marks	:	80
				[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*) $(2FA)_{16} = (?)_2$
 - (b) Explain BCD and ASCII Codes.
 - (c) Discuss about 1's and 2's complement method.

 $DRG_{134}(3)$

(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

 $DRG_{134}(3)$

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