

Roll No. : 351998

Total No. of Pages : 4

# BCA-106

B.C.A. (First Year) Examination, 2023

## COMPUTER ORGANIZATION

### Paper- VI

Time Allowed : Three hours

Maximum Marks : 100

#### Part-A

[Marks : 20]

**Note:** Answer all questions (50 words each). All questions carry equal marks.

#### Part-B

[Marks : 50]

**Note:** Answer any five questions (250 words each). Selecting one from each Unit. All questions carry equal marks.

#### Part-C

[Marks : 30]

**Note:** Answer any two questions (300 words each). All questions carry equal marks.

#### Part-A

1. (i) Define Gates.
- (ii) Convert  $99_{(10)}$  to  $_{(8)}$ ?
- (iii) Define ALU.

- (iv) What do you understand by "word"?
- (v) Describe relative addressing technique.
- (vi) What are accumulators?
- (vii) What is RAM?
- (viii) Define EEPROM.
- (ix) What is Bus?
- (x) What is microcontroller?

### **Part-B**

#### **Unit-I**

- 2. What is Boolean algebra? Explain in detail.
- 3. Describing integrated circuits explain the levels of integration.

#### **Unit-II**

- 4. Depict the working of the computer with the help of block diagram.
- 5. Explain the operation of control registers.

#### **Unit-III**

- 6. What is indirect addressing? How is it different from direct addressing?

7. Explain Indexed addressing and paging.

#### Unit-IV

8. Define RAM? How static RAM is different from Dynamic RAM? Explain.
9. How main Memory differs from secondary memory? Describe various types of ROM.

#### Unit-V

10. Explain the types of buses.
11. Make a comparison between microprocessor and microcontroller.

#### Part-C

12. Explain complement (2's complement and 1's complement) arithmetic with the help of suitable examples. Demonstrate the binary arithmetic operations.
13. Explain in detail Control unit and its functions. Depict instruction and execution cycle.
14. What is the difference between Special Purpose and General Purpose registers? Discuss the working of stack pointer.

15. What is virtual memory? What are its advantages and limitations? How is it different from cache memory?
16. Illustrate 8085 microprocessor.

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