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# BCA106

B.C.A. Ist Year Examination, 2022

COMPUTER ORGANIZATION

Paper-VI

*Time Allowed : 1½ Hours*

*Maximum Marks : 100*

**Part-A**

**[Marks : 30]**

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

**Part-B**

**[Marks : 70]**

**Note :-** Answer any *two* questions (250 words each). All questions carry equal marks.

**Part-A**

1. Answer the following questions :

- (i) What is a Digital Circuit ?
- (ii) What is the similarity and difference between Transistor-Transistor Logic (TTL) and Emitter-Coupled Logic (ECL) ?

- (iii) How are characters represented in the Computers ?
- (iv) What is a Bit ?
- (v) Describe ALU.
- (vi) What is the purpose of bit shifting ?
- (vii) What are accumulators ?
- (viii) What is the difference between 1's complement and 2's complement ?
- (ix) Convert  $(1024)_{10}$  to hexadecimal.
- (x) Write the function of cache memory.

### **Part-B**

- 2. What are Flip Flops ? Explain their working and applications.
- 3. Compare between Binary and Hexadecimal Numbering System.
- 4. Differentiate between Combinational and Sequential Circuits.
- 5. Discuss the basic I/O design.

- 6. Depict control unit with the help of a block diagram and explain its function.
- 7. Explain the working of a Computer System with the help of a Block Diagram.
- 8. State and explain the jump and shift instruction.
- 9. Explain Indexed Addressing and discuss its advantages.