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**B.C.A. 2nd Semester (Full & Re-appear)
Examination, May-2023
LOGICAL ORGANIZATION OF COMPUTER
Paper- BCA-107**

Time allowed : 3 hours] [Maximum marks : 80

Note: Question No.1 is compulsory. Attempt four questions by selecting one question from each unit. All questions carry equal marks.

1. (a) What do you mean by flip-flop?
(b) What is a Register?
(c) What is a flash memory?
(d) Define Access time.
(e) What is Race-around problem?
(f) Define cache memory.
(g) What is MICR?
(h) Define DMA. 8×2=16

Unit-I

2. Explain the following : 8+8
(a) Master-slave flip-flops.
(b) JK flip-flop
3. (a) What do you mean by sequential circuits? Write the characteristics of sequential circuits. 8+8
(b) What is the difference between combinational and sequential circuit? Explain.

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Unit-II

4. Explain various types of Registers in detail. 16
5. Explain the following: 8+8=16
(a) Synchronous counters
(b) Asynchronous counters

Unit-III

6. Differentiate between the following: 4×4=16
(a) Static RAM and Dynamic RAM
(b) Magnetic Core and Semi Conductor memories
(c) RAM and ROM
(d) Primary storage and Secondary storage
7. Explain the following: 8+8
(a) Flash memory and its benefits
(b) Optical disks

Unit-IV

8. Explain various addressing modes. 16
9. Explain the following:
(a) Instruction Cycle
(b) Instruction format (with suitable examples) 8+8=16

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