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.

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