

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