

BCA / M-19
LOGICAL ORGANIZATION OF
COMPUTERS-II
Paper-BCA-122

Time allowed : 3 hours]

[Maximum marks : 80

Note:- *Student will be required to attempt five questions in all. Question number 'I' is compulsory. In addition to compulsory question, student will have to attempt four more questions selecting one question from each unit. All questions carry equal marks.*

Compulsory Question

1. (a) What is internal & external interrupt? 4
- (b) What is address instruction & l-address instruction? 4
- (c) What is Race-Around condition? 4
- (d) What is cache memory? How it is useful? 4

Unit-I

2. (a) What is JK flip flop? What is the disadvantage of JK flip flop? 8
- (b) Elaborate the following: 8
 - D type Flip Flop
 - T type Flip Flop

3. Explain Master-Slave flip flop in detail with example. 16

Unit-II

4. (a) Write down the design procedure of synchronous counter. Design synchronous MOD-5 counter. 8

(2)

(b) Differentiate between Synchronous & Asynchronous counter. 8

5. What is register? State different type of registers and also define various modes of operation performed on registers. 16

Unit-III

6. (a) Explain the different types of optical scanners. 8

(b) What is Random Access Memory (RAM)? Explain various types of RAM. 8

7. (a) Explain the concept of flash memory and digitizers with their advantages. 8

(b) Differentiate between emissive displays & non-emissive displays. 8

Unit-IV

8. What are different modes of data transfer between memory and I/O device? Explain in detail. 16

9. (a) Explain basic structure of CPU. 8

(b) Explain the following arithmetic statement using various instruction formats:- 8

$$A = (B * C) - (D + E)$$