

Roll No.

Total Pages : 02

BCA/M-20

1888

LOGICAL ORGANIZATION OF
COMPUTER-II
BCA-122

Time : Three Hours]

[Maximum Marks : 80

Note : Attempt *Five* questions in all, selecting *one* question from each Unit. Q. No. **1** is compulsory.

1. (a) Define Sequential Circuit and write its properties. **3**
- (b) Prove that NAND and NOR are universal gates. **3**
- (c) What is Primary Memory ? Write its types. **3**
- (d) Write a note on Optical Storage. **3**
- (e) Discuss Non-impact Printer. **3**
- (f) How many FF are needed in Mod-10 Counter ? **1**

Unit I

2. (a) Explain JK FF working and its problem. **10**
- (b) Write working of TFF. **6**
3. (a) Explain Master-Slave JK FF. **10**
- (b) Write Excitation Table of JK and T-FF. **6**

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Unit II

4. Explain Register as a Storage Unit. Make shift register to store 1010. Convert it into parallel in parallel out. **16**
5. Make Mod-10 Counter using T-FF. **16**

Unit III

6. Define Memory and its types. Explain difference between ROM and RAM. Also write types of ROM and RAM. **16**
7. (a) Write a note on Hard-Copy Output Devices.
(b) Write storage using Flash-Memory. **16**

Unit IV

8. (a) Explain addressing modes.
(b) Discuss Instruction format and solve :
$$X = (C + D) * (A - B)$$
using 2's addressing. **16**
9. (a) Explain speed mismatch between I/O and CPU using program controlled data transfer.
(b) Discuss the working of DMA. **16**