

Roll No.

97666

B. C. A. (2nd Semester) (New)
Examination – May, 2013

LOGICAL ORGANIZATION OF COMPUTER – II

Time : Three hours] [Maximum Marks : 80

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Question No. 1 is *compulsory* and shall carry 8 small questions of *two* marks each. Candidate shall attempt remaining *four* questions selecting at least *one* question from each Unit. All questions carry equal marks.

1. (a) What is Latch ?

(b) What is Preset ?

(c) What is Data bus ?

(d) What is address decoder ?

(e) What is Refresh ?

(f) What is IOP ?

(g) What is Binary counter ?

(h) What is Critical race ? $8 \times 2 = 16$

UNIT - I

2. What is flip-flop ? Explain clocked S - R, D type, and T type flip-flop with diagram and truth table.

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3. Explain the following with example : $5 + 5 + 6$

(a) State table,

(b) Flip-Flop excitation table,

(c) State diagram and State equation.

UNIT – II

4. Discuss the following :

5 + 6 + 5

- (a) Serial Input Serial Output,
- (b) Parallel Input Serial Output,
- (c) Shift Register.

5. What is difference between synchronous and asynchronous sequential circuit ? Explain up-down counters.

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UNIT – III

6. Write note on the following :

5 + 6 + 5

- (a) Optical Storage device,
- (b) Magnetic Memory,
- (c) Semiconductor RAM Memories.

7. What are I/O devices ? Discuss I/O controllers and Flash memory.

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(3)

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UNIT - IV

8. What are addressing modes ? What are its various types ? Indicate the significance and suitability of each of these addressing modes along with example of each. 16

9. Explain the following : 5 + 6 + 5

- (a) Interrupt structure,
 - (b) DMA transfer,
 - (c) Instruction cycle.
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