

**B.Tech. COMPUTER SCIENCE AND
ENGINEERING (BTCSVI)****Term-End Examination****June, 2014****BICS-013 : COMPUTER ORGANISATIONS***Time : 3 hours**Maximum Marks : 70*

Note : Attempt any **seven** questions. All questions carry equal marks.

1. (a) Discuss the fixed and floating point number representation. 5
- (b) How are error detection and correction codes used ? 5

2. (a) Define bus organisation for CPU registers. Explain how information is transferred from register to other register. 5
- (b) What do you mean by bus arbitration ? Discuss the dynamic arbitration techniques. 5

3. Discuss the classification of instructions with the help of examples. 10

4. Explain various instruction formats and instruction cycles for a control unit with the help of a block diagram. 10
5. (a) Explain micro-instruction format. Describe Horizontal and Vertical microprogramming. 6
(b) What is stack ? Explain memory stack. 4
6. (a) RISC processor tends to have a large number of registers compared to CISC processors. Explain why. 5
(b) Give brief account of strobe based communication. 5
7. (a) How are direct access memories different from random access memories ? 5
(b) Discuss construction and working of magnetic disk. 5
8. (a) Explain the need for auxiliary memory devices. How are they different from main memory ? 5
(b) What are the main advantages of using Input/Output Interface ? 5

9. (a) Why does DMA have priority over the CPU when both request a memory transfer operation? 5
- (b) What are the basic advantages of priority interrupt over a non-priority system? 5
10. Write short notes on any *two* of the following : $2 \times 5 = 10$
- (a) Page Replacement Policies
- (b) Booth's Algorithm
- (c) Addressing Modes
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