

**B.Tech. - VIEP - COMPUTER SCIENCE AND
ENGINEERING (BTCSVI)**

00096

Term-End Examination

December 2014

BICS-013 : COMPUTER ORGANISATIONS

Time : 3 hours

Maximum Marks : 70

Note : Answer any *seven* questions.

1. (a) Explain bus arbitration method briefly. 5
(b) What is Interrupt ? Discuss their types and uses. 5
2. (a) Discuss the classification of instructions with example. 5
(b) Explain stack organisation in the CPU. 5
3. (a) Write advantages and disadvantages of RISC and CISC Architecture. 5
(b) Define microinstruction. Give its format. 5

4. Explain in detail the architecture of cache memory and describe the various mapping techniques. 10
5. (a) Explain 2 D and $2\frac{1}{2}$ D memory organisation with block diagram. 5
- (b) What is parity bit ? How is it used for detecting errors ? 5
6. (a) What is flag register ? State the uses of different flags in programming. 5
- (b) How does DMA based data transfer work ? Explain with neat diagram. 5
7. (a) Explain the working of microprogram sequencer, with neat block diagram. 5
- (b) What do you understand by fixed and floating point number representation ? 5
8. (a) What is virtual memory ? State its mapping methods. 5
- (b) What is the difference between 'static' and 'dynamic' RAM ? 5

9. (a) Compare and contrast the Direct and Set associative mapping of cache. 5
- (b) What do you understand by Instruction codes ? Draw the format of Instruction code for a basic computer system. 5
10. Explain any *two* of the following : 2×5=10
- (a) Synchronous and Asynchronous communication
- (b) Booth's Algorithm
- (c) Auxiliary Memory
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