B.Tech. IN COMPUTER SCIENCE AND ENGINEERING (BTCSVI)

01525

Term-End Examination

June, 2012

BICS-013 : COMPUTER ORGANISATIONS

Time : 3 Hours   *Maximum Marks : 70*

Note :   *Attempt any seven questions.*

1. (a) What do you understand by fixed and   **5** floating point number representation ?

 (b) What is parity bit ? How it is used for   **5** detecting errors.

2. Discuss the classification of instructions with   **10** example.

3. (a) Define microinstruction. Give its format.   **5**

 (b) What is flag register ? State the use of   **5** different flags in programming.

4. Explain in details the architecture of the cache   **10** memory and describe various mapping techniques.

5. (a) Discuss various page replacement policies.   **5**

 (b) Give a brief account of strobe based   **5** communication.

6. (a) What is the difference between I/O program controlled transfer and DMA transfer ? **5**

   (b) Compare I/O mapped I/O with memory mapped I/O. **5**

7. (a) What do you understand by Instruction Code ? Draw format of Instruction Code for a basic computer system. **5**

   (b) Discuss binary division algorithm. **5**

8. (a) Explain with diagram the concept of Horizontal and Vertical Micro programming. **5**

   (b) Under what condition would it be more feasible to use hard-wired control unit than a microprogrammed control unit. **5**

9. (a) Explain 2D and 2½ D memory organization with block diagrams. **5**

   (b) Explain stack organization in the CPU. **5**

10. Write short notes (*any two*) : **5x2=10**

    (a) Synchronous and Asynchronous communication.

    (b) Booths Algorithms

    (c) Auxiliary Memory