BICS-013

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

Term-End Examination

December, 2011

BICS-013 : COMPUTER ORGANISATIONS

Time : 3 hours   *Maximum Marks : 70*

Note :   *Attempt any seven questions.*

1. (a) Explain floating point representation of   5
   numbers. State its advantages over other
   representations.

   (b) Explain bus arbitration methods briefly.   5

2. Explain various Addressing modes of   10
   Instructions with example.

3. (a) What is an Instruction set ? What are the   5
   elements of an Instruction format.

   (b) Explain stack organization in the CPU. Give   5
   the micro-operations for reading and
   writing stack memory.

4. (a) Explain the difference between Hardwired   5
control and micro-programmed control.

(b) Define micro instruction. Explain different   5
types of micro instruction, with example.

5. (a) What is the difference between Static and   5
Dyanamic RAM.

(b) What is Virtual memory ? State its mapping   5
methods.

6. (a) What is Interrupt ? Discuss their types and   5
uses.

(b) How DMA based data transfer works ?   5
Explain with neat diagram.

7. (a) Compare and contrast the Direct and set   5
associative mapping of cache.

(b) Explain 2D and 2½D memory organization   5
with block diagram.

8. (a) Explain the use of I/O Interrupts for more   5
efficient use of the CPU.

(b) Explain programmed I/O method of data   5
transfer.

9. (a) With neat block diagram, explain the working 5
of micro program sequencer.

(b) Write Advantages and disadvantages of RISC 5
and CISC Architecture.

10. Write Short Notes on following : 5x2=10

(a) Booths Algorithm.

(b) Array multiplier.