Code No: 07A4EC13 **R07** **Set No. 4**

II B.TECH II SEM–REGULAR/SUPPLEMENTARY EXAMINATIONS MAY - 2010

COMPUTER ORGANIZATION

Common to IT, ICE, E.COMP.E, CSE, CSSE

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions

All Questions carry equal marks

⋆ ⋆ ⋆ ⋆ ⋆

1. (a) Explain about loosely and tightly coupled multiprocessors. [8]
   (b) Support or oppose the statement "Every efficient serial program is efficient parallel program". [8]
2. Design a circuit which can be used to transfer data from any register to any other register out of four 4-bit registers A,B,C,D which uses RS flip-flops. [16]
3. (a) Draw a circuit for 9's complement of a number. [8]
   (b) Explain sign magnitude and 2's complement representation of numbers. Explain why 2's complement method is in wide use. [8]
4. Write short notes on the following:
   (a) RISC pipeline
   (b) Vector processing
   (c) Array processors. [5+5+6]
5. Explain the following:
   (a) Magnetic Tape Systems
   (b) Optical Disc
   (c) DVD Technology. [5+5+6]
6. (a) Support or oppose the statement. The control unit is a firmware? [8]
   (b) Support or oppose the statement. If we want to add a new machine language instruction to a processors instruction set, simply write a C program and compile and store the resultant code in control memory. [8]
7. (a) Differentiate cycle stealing and Burst transfers of DMA.
   (b) Out of all Interrupt handling methods, which is not efficient? Justify your answer. [8+8]
8. (a) Explain the working of a five dimensional hypercube network with a neat sketch.
   (b) Draw a diagram showing the structure of four-dimensional Hypercube network. List all the paths available from node 7 to node 9 that use a minimum number of intermediate nodes. [8+8]

⋆ ⋆ ⋆ ⋆ ⋆