Code No: R5221901

R5

II B.Tech II Semester(R05) Supplementary Examinations, December 2010
COMPUTER ORGANIZATION
(Common to Electronics & Computer Engineering and Instrumentation & Control Engineering)

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

Answer any FIVE Questions
All Questions carry equal marks
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1. (a) What is meant by normalization in floating point representation?. Why do need it? What is bias? What normalization is used in IEEE 754 standard?

    [10]

   (b) Explain about NaN and denormalised numbers in IEEE 754 standards.   [6]

2. Design register selection circuit to select one of the four 4-bit registers content on to bus. Give fuller explanation.   [16]

3. (a) Hardwired control unit is faster than microprogammed control unit. Justify this statement.   [8]

   (b) Explain the terms control word, control memory, control address register and control buffer register.   [8]

4. (a) Draw a flowchart to explain how addition and subtraction of two fixed point numbers can be done. Also, draw a circuit using full adders for the same.   [8]

   (b) Explain Booth's logorithm with its theoretical basis.   [8]

5. Explain the following:

   (a) Optical Disc

   (b) Cache Memory

   (c) RAID technology.   [5+5+6]

6. What are the different kinds of I/O Communication techniques? What are the relative advantages and disadvantages? Compare and contrast all techniques.   [16]

7. (a) What is pipelining? Explain.   [8]

   (b) Show space-time diagram for pipeline. Explain with an example.   [8]

8. (a) Explain the working of 8 x 8 Omega Switching network.

   (b) Explain the functioning of Binary Tree network with 2 x 2 Switches. Show a neat sketch   [8+8]

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