R7

Code: R7 310201

B.TECH III Year I Semester (R07) Supplementary Examinations, May 2012
COMPUTER SYSTEM ORGANIZATION
(Electrical and Electronics Engineering)

Time: 3 hours   Max Marks: 80

Answer any FIVE questions
All questions carry equal marks
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1 (a)   Explain the functional unit and bus structure of a computer.
  (b)   Explain all the possible ways of integer representations with an example.

2 (a)   Define three-state buffer. Draw a diagram of a bus system, use three-state buffers and a decode.
  (b)   Write about stored program organization of a computer.

3 (a)   List the memory-reference instructions and explain each one with example.
  (b)   Write about reduced instruction set computer.

4 (a)   How the selection of address will be happen in control memory? Explain with diagram.
  (b)   Explain the difference between hardwired control and micro programmed control. Is it possible to have a hardwired control associated with a control memory?

5 (a)   Obtain the Boolean function for the match logic of one word in an associative memory taking into consideration a tag bit that indicates whether the word is active or inactive.
  (b)   With the help of block diagram, explain how multiple matched words can be read out from an associative memory.

6 (a)   What is the difference between isolated I/O and memory-mapped I/O? What are the advantages and disadvantages of each?
  (b)   Why does DMA have priority over the CPU when both request a memory transfer?

7   Define pipeline and write the general consideration. Explain the four segment pipeline with space-time diagrams.

8   What are the physical forms available for establishing an inter connection network? Explain each scheme with diagram.

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