R09

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, HYDERABAD
B. Tech III Year I Semester Examinations, November/December-2013
COMPUTER ORGANIZATION
(Common to ECE, ETM)

Time: 3 hours   Max. Marks: 75

Answer any five questions
All questions carry equal marks
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1.a)   Explain about different types of bus structures with neat sketches.
  b)   Explain how error is detected and corrected by using hamming codes.   [7+8]

2.a)   Give the comparisons between RISC and CISC architecture.
  b)   Explain about different types of Stack organization.   [7+8]

3.   Explain the sequence of operations needed to perform the following processor functions:
       a) Fetching a word from memory.
       b) Storing a word in memory.
       c) Performing an arithmetic or logical operation.   [15]

4.   Explain the Hardware implementation of Booth's algorithm with an example.   [15]

5.a)   Discuss various levels of RAID.
  b)   Explain cache memory mapping techniques.   [7+8]

6.a)   Draw and explain the block diagram of typical DMA controller.
  b)   Explain the limitations of USB.   [7+8]

7.a)   Explain the various techniques to avoid data conflicts.
  b)   Draw and explain the typical functional structure of SMD array processor.   [7+8]

8.   What are the various structural differences between centralized and distributed shared memory architectures? Explain in brief.   [15]

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