R09

Code No: D5803

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
M.Tech II - Semester Examinations, March/April 2011
ADVANCED COMPUTER ARCHITECTURE
(COMPUTER SCIENCE AND ENGINEERING)

Time: 3hours **Max. Marks: 60**

Answer any five questions
All questions carry equal marks
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1. a) Define performance. Describe how the five levels of programs are used in evaluating performance.
   b) How Amdahl's law is useful for measurement of improved performance of computer systems? [6+6]

2. a) Explain various operations in the instruction set.
   b) Write notes on addressing modes for control flow instructions. [6+6]

3. a) What are the limitations of dynamically scheduled pipelines and how hardware based speculation can address these limitations?
   b) Briefly explain basic VLIW approach. [6+6]

4. a) Write short notes on RLSC.
   b) Give a brief account on Instruction-level parallelism. [6+6]

5. a) What is meant by dynamic scheduling? Explain.
   b) Explain the cost and performance of a cluster for transaction processing.[6+6]

6. Explain multiprocessor cache coherence. [12]

7. Explain Designing of clusters with example. [12]

8. Write short notes on the following:
   a) Practical issues in interconnecting networks.
   b) Protection of virtual memory. [6+6]

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