

R09

Code No: D109115802

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

M.Tech I Semester Regular Examinations March 2010

COMPUTER SYSTEM DESIGN

**(COMMON TO COMPUTER SCIENCE & ENGINEERING, COMPUTER SCIENCE,
INFORMATION TECHNOLOGY)**

Time: 3 hours

Max.Marks:60

**Answer any five questions
All questions carry equal marks**

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- 1.a) What is meant by performance of a machine? Give a reasonable metric for it.
b) Explain various Interface Circuits with examples.
- 2.a) Compare and contrast Hardwired control and Microprogrammed control.
b) Explain about Address Sequencing capabilities in Microprogrammed control unit.
3. Explain various Data Hazards with necessary examples.
4. Illustrate Associative mapping and Set Associative mapping mechanisms in Cache memory.
5. Explain Paging mechanism using Multilevel Page Table.
6. What is a Semaphore? How the Producer Consumer Problem does solved using semaphores?
7. What is a Dead Lock? Explain Banker's algorithm with a numerical example.
8. What is a Directory? Explain the Hierarchical directory systems and Directory operations.
