

Code No: B5807

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

M.TECH II SEMESTER EXAMINATIONS, APRIL/MAY 2012

ADVANCED COMPUTER ARCHITECTURE

(COMPUTER SCIENCE & ENGINEERING)

Time: 3hours

Max.Marks:60

Answer any five questions
All questions carry equal marks

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- 1.a) Define Amdahl's law.
b) Explain the task of a computer designer.
- 2.a) Discuss various addressing modes for signal processing.
b) How to encode an instruction set? Discuss suitable examples.
- 3.a) Describe the limitations of instruction level parallelism.
b) Explain branch cost reduction mechanisms.
- 4.a) Make a comparison of hardware and software solutions for ILP.
b) Explain VLIW approach.
- 5.a) What is cache miss penalty? Explain with examples.
b) Write about protection schemes for virtual memory.
- 6.a) What is the necessity of synchronization? Discuss.
b) What is meant by thread level parallelism?
- 7.a) How to design an input/output system?
b) List and explain various RAID levels.
- 8.a) Describe the phases in cluster design process.
b) Explain practical issues in interconnection networks.
