

R07
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**Code: R7421901**

B.Tech IV Year II Semester (R07) Supplementary Examinations, March/April 2013

**ADVANCED COMPUTER ARCHITECTURE**

(Electronics &amp; Computer Engineering)

Time: 3 hours

Max. Marks: 80

Answer any FIVE questions  
All questions carry equal marks

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- 1 (a) Explain measuring and reporting performance in computer design.  
(b) Briefly discuss technology trends in computer design.
- 2 (a) Explain memory address concept using instruction set design.  
(b) What are the different addressing models used for signal processing?
- 3 (a) What is meant by instruction level parallelism? Explain various techniques to implement ILP.  
(b) Explain various types of dependences in ILP.
- 4 (a) Explain basic compile techniques for software approach.  
(b) Write down VLIW approach to avoid dependences.
- 5 (a) Explain various techniques to reduce the miss rate.  
(b) What is virtual memory? Write techniques for fast address translation.
- 6 (a) Explain shared memory architecture synchronization.  
(b) Briefly discuss distributed shared memory architecture.
- 7 (a) Explain various types of storage devices.  
(b) How storage devices can be interfaced with CPU?
- 8 (a) What are practical issues for commercial interconnection networks?  
(b) What are the performance challenges of clusters?

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