

**Code No: D2503****JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD  
M.TECH II - SEMESTER EXAMINATIONS, APRIL/MAY 2012  
SOFTWARE ARCHITECTURE AND DESIGN PATTERNS  
(SOFTWARE ENGINEERING)****Time: 3hours****Max. Marks: 60****Answer any five questions  
All questions carry equal marks**

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1. Define the term software architecture. Why is it important? State and explain various architecture activities.
- 2.a) Discuss clearly about Architectural structures of a system.  
b) What is meant by testability? Discuss the testability general scenarios.
- 3.a) Explain the ATAM phases and their characteristics.  
b) What is meant by CBAM? With a neat diagram explain context for the CBAM.
- 4.a) Draw the process flow diagram for the CBAM and explain.  
b) What is meant by software product lines? State and explain the three things that a product line architect needs to consider.
- 5.a) What makes software product lines difficult?  
b) What is meant by architectural mismatch? Discuss the techniques for repairing interface mismatch.
6. What is a design pattern? Explain the catalog of design pattern and also explain about the organizing the catalog.
- 7.a) Discuss about applicability, participants and consequences of prototype pattern.  
b) Compare the structural patterns with behavioral patterns.
8. What are the behavioral patterns? Explain any three of them in detail.

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