

Thapar Institute of Engineering & Technology, Patiala
Computer Science & Engineering Department
M.E (S.E), First Semester
Final Exam

Course Code: SE-003

Date: 07/12/06

Course Name: Software architecture

Time Allowed: 3 Hr s

Max Marks: 45

Note: Question no 3 is compulsory

Attempt any 5 questions and explain briefly giving appropriate examples.

Q. No		Marks
1	Software architecture often compared to building architecture? What are the strong points of their comparison? What is their weakness of the comparison?	2,2,1
2.	In the Architectural Business Cycle, how does the architecture affect the goals of the developing organization?	5
3	Differentiate between: a) Reference model and Reference architecture b) Debugging and Testing c) Architectural Styles and Architectural Pattern d) Black-box testing and White-box testing	4*5
4	Consider a TIET course registration system based on the following needs: i) Register for courses ii) Select courses to teach iii) Maintain course information iv) Maintain faculty information v) Maintain student information vi) Create Course Catalog Based on the above information answer the following:	
a)	Describe some of the tactics that should be considered to address performance of the above system.	2.5
b)	Describe some of the tactics that should be considered to address security of the above system	2.5
5	a) Which architectural views are especially useful for testers? Why? b) Which architectural views are especially useful for project managers? Why?	2.5 2.5

6.	<p>Explain briefly the following statements: -</p> <ul style="list-style-type: none">a) A number of business quality goals frequently shape a system's architecture.b) Libraries are distinguished from executablesc) Testing usually takes about half of development resourcesd) Code generator can make your project agile.e) Program analysis tools are extremely important for understanding program behavior.	5*1
7.	<ul style="list-style-type: none">a) Give an example of availability in terms of mean time to failure and mean time to repair. That is, provide numeric values for the mean times and calculate the availability.b) What information is used to create the quality scenario for a system	2.5 2.5