P1221　　　　　　　　　　　**[3664]-346**

B.E. (Computer / I.T.) (Common)
SOFTWARE ARCHITECTURE
(2003 Course) (414451) (Elective - II) Sem 2

Time : 3 Hours]　　　　　　　　　　　　　　　　　　*[Max. Marks : 100*

Instructions to the candidates:

　　1)　*Figures to the right indicate full marks.*

　　2)　*Answers to the two sections should be written in separate answer books.*

　　3)　*From Section - I, answer (Q1 or Q2) & (Q3 or Q4) & (Q5 or Q6).*

　　4)　*From Section - II, answer (Q7 or Q8) & (Q9 or Q10) & (Q11 or Q12).*

　　5)　*Make suitable assumptions wherever relevant and appropriate.*

SECTION - I

Q1) a)　Discuss how models, diagrams can be used to characterize and reason about system design/architecture.　　　　　　　　　　　　**[6]**

　　b)　Why has there been recently such excitement about software architecture.　　　　　　　　　　　　　　　　　　　　　**[6]**

　　c)　Write short notes on Architecture styles.　　　　　　　　　**[6]**

OR

Q2) a)　What does engineering mean and what does it mean to bring engineering practices and approach to software development.　　**[6]**

　　b)　Give two definitions of software architecture, explain them.　**[6]**

　　c)　Write short notes on Architecture business cycle.　　　　　　**[6]**

Q3) Give any four quality attributes that apply to software systems, discuss their importance and how to specify them in SRS.　　　　　　　　**[16]**

OR

Q4) Explain the given terms in context of quality :　　　　　　　**[16]**

　　a)　Scenario template elements (source, stimulus, environment, response).

　　b)　Business quality.

　　c)　Tactics.

　　d)　MTTF, MTTR.

Q5) a) Can design patterns be invented, comment. [4]

b) In implementing design patterns often inheritance and composition is used, explain with examples. [6]

c) Explain an example template to document design patterns. [6]

OR

Q6) a) Give two known uses of any two design patterns. [4]

b) Write in brief on command pattern. [4]

c) Explain intent of iterator pattern. [4]

d) What do you by understand by architectural patterns. [4]

SECTION - II

Q7) In brief write about the technology and its need : [16]

a) JXTA.

b) Middleware.

c) Stateless session beans.

d) J2ME.

OR

Q8) a) Compare the java world and microsoft world for their middleware offerings. [8]

b) What is XML, How J2EE supports XML processing? [8]

Q9) a) What is the architecture of World wide web, in terms of hardware, protocols, infrastructure. [8]

b) What is a N Tier application. What is the role of the data Tier, the third tier. How do following technologies play a role in the third tier? ERP systems, flat files. [8]

OR

*Q10)*In brief explain the concept and give good examples to illustrate : [16]

a) XHTML.

b) Well formed XML.

c) Active X controls.

d) JSP page navigation.

*Q11)*a) Write short notes on COM Interfaces. [6]

b) What is the idea behind CLR, explain. [6]

c) Write short notes on integration of systems in context of web services. [6]

OR

*Q12)*a) Write function prototype for release () method of IUnknown interface in Com and write C++ code to show the use of that method and explain its application. [6]

b) What is COM DLL server, how many components can it have, how is it deployed. [6]

c) How is COM used on client side. [6]

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