

Total No. of Questions : 12]

SEAT No. :

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[Total No. of Pages : 3

**B.E.(Computer Engineering)
SOFTWARE ARCHITECTURE**

(2008Course) (Semester-I)(Elective-I(d)) (410444)

Time :3Hours]

[Max. Marks : 100

Instructions to the candidates:

- 1) *Answers to the two sections should be written in separate answer books.*
- 2) *From section-I, Answer(Q1 or Q2) and (Q3 or Q4) and (Q5 or Q6)*
- 3) *From section-II, Answer(Q7 or Q8) and (Q9 or Q10) and (Q11 or Q12)*
- 4) *Neat diagrams must be drawn wherever necessary.*
- 5) *Figures to the right indicate full marks.*
- 6) *Assume suitable data if necessary.*

SECTION-I

- Q1) a)** What is a deployment diagram? What kind of architectural decisions/ scenarios does a deployment diagram depict? Show the following two tier web application scenario using a deployment diagram Scenario: Browser based client using HTTP to access static web pages. [9]
- b) What do you understand by following concepts. [9]
- i) connectors and components
 - ii) Architectural structure modules:(decompose,classes)

OR

- Q2) a)** When and why will a software Architect choose following technology choices for any system, justify with examples: [9]
- i) JAVA
 - ii) Visual Basic
- b) “Architectures are influenced by stake holders”, Explain in detail. [9]

P.T.O.

Q3) Explain and illustrate the following concepts (in context of quality attribute/ tactics) with examples, in brief. **[16]**

- a) Authorization versus authentication
- b) UNDO command in Microsoft word
- c) Dynamic, interactive websites
- d) Testability userfriendliness

OR

Q4) a) Explain testability tactics. **[8]**

b) Explain Abstract Factory pattern with intent, structure and example. **[8]**

Q5) a) Define Design pattern. What are the types of design patterns? Explain in brief. **[8]**

b) Give structure of Façade. Explain with real life example. **[8]**

OR

Q6) In context of observer pattern answer the following. **[16]**

- a) How does action listener(event listener) in java work.
- b) What is publish subscribe
- c) What are roles of subject and observer?
- d) Give a non-software example of observer pattern.

SECTION-II

Q7) a) Explain role of middleware in 3-tier architecture. **[6]**

b) Write note on application server. **[6]**

c) What is socket? Enlist and explain different classes used in Java for socket programming. **[6]**

OR

Q8) a) Explain in brief various components of J2EE. **[6]**

b) Explain EJB components and interfaces. **[6]**

c) Write note on XML. **[6]**

- Q9)** a) Explain various technologies available to develop client side. [8]
b) Explain n-tier web architecture. [8]

OR

- Q10)** Briefly describe need, role, use of following technologies. [16]
a) AJAX
b) DOM tree
c) Rich Internet applications
d) DHTML

- Q11)** a) With neat diagram explain MVC. Also explain how it is supported by Java. [8]
b) What is Service Oriented Architecture? [8]

OR

- Q12)** a) How does a web application manage sessions? [6]
b) Consider an online DVD store application, show what concerns/ functionality of the online web based DVD store, will you distribute to presentation, business, data layers in 3 tier architecture. Make suitable assumptions about the features/scope of online DVD store. [6]
c) Explain servlet life cycle. [4]

