Total No. of Questions : 12]

SEAT No. :

P3433

[4959]-208

[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 undestand by following concepts. **[9]**

          i)   connectors and components

          ii)   Architectural structure modules:(decompose,classes)

<div align="center">OR</div>

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

<div align="center">OR</div>

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]**

<div align="center">OR</div>

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.

<div align="center">

SECTION-II

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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]**

<div align="center">OR</div>

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]**

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