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Seat No:

414450 - Software Architecture (Ele- III)

B. E. Information Technology

2008 Pattern (Semester-II)

Duration: - 3 Hours.

Max. Marks: - 100

Instructions to the candidates

1. Answer Question 1 or 2, 3 or 4, and 5 or 6 from section - I and Question 7 or 8, 9 or 10, and 11 or 12 from section - II.
2. Answers to the two sections should be written in separate answer books.
3. Neat diagrams must be drawn wherever necessary.
4. Figures to the right indicate full marks.
5. Assume suitable data if necessary.

SECTION – I

Q1. A Define the given term/concept and give examples

- (a) Software architecture (6)
- (b) Stakeholders in architecture.

B Write short note on documenting software architecture (4)

C Explain Architectural Business Cycle (ABC) in detail. (8)

OR

Q2. A How Architectures are influenced by stakeholders? (6)

B What do you understand by components and connectors? (4)

C How the collaboration can be used to model the system of components and connectors. (8)

Q3. A Explain Templates for documenting interfaces. (8)

B Draw a neat diagram to depict any one-security scenario. In brief write about the security terms integrity of data, access control. Also, write about security tactics Intrusion (8)

detection and Authentication.

OR

- Q4. A What is Availability? Discuss availability tactics for Fault detection. (8)
- B What is Quality Attributes? Explain quality attributes of web application? (8)
- Q5. A What are design patterns, why do we need them, give an example design pattern? (8)
- B Describe Abstract Factory pattern with respect to intent, application and solution. (8)

OR

- Q6. A Write a short note on Model View Controller (MVC) and its application? (8)
- B How observer pattern can be used to design a digital and an analog clock. Explain with the structure and behavior? (8)

SECTION – II

- Q7. A Explain three-tier architecture with reference to presentation, business and persistence layers. (10)
- B Explain the concept of (8)
- (a) Loose Coupling.
- (b) Addressing Quality attributes through multi tier architecture.

OR

- Q8. A Compare different architecture styles (10)
- B Write short note on
- (a) Coupling in XML (8)
- (b) Structure of XML
- Q9. A What do you understand by the three types of EJB beans, Explain with Examples
- (a) Entity Beans
- (b) Message Beans (8)
- (c) Session Bean
- (d) Use of EJB in three-tier architecture.
- B Compare and contrast EJB 2.0 and EJB 3.0 (8)

OR

- Q10. A Draw a neat J2EE architecture diagram showing different technologies from SUN like (JDBC, JMS) What is the advantage of J2EE architecture? (8)
- B Explain with example and Advantages of
- (a) Web Server (8)
- (b) Application Server
- Q11. A What is .NET? Explain .NET architecture? (8)
- B Write Short note on
- (a) Components and Interfaces (8)
- (b) Dynamic Link Library

OR

- Q12. Short Notes on (16)
- (a) .NET web services
- (b) .NET remoting
- (c) .NET assemblies
- (d) IUNKNOWN