Reg. No.

Question Paper Code : 86321

M.E. DEGREE EXAMINATION, MAY/JUNE 2016

Elective

Computer Science and Engineering (With specialization in Networks)

CP7014 – SOFTWARE ARCHITECTURES

(Common to M.E. Computer Science and Engineering)

(Regulations 2013)

Time : Three Hours   Maximum : 100 Marks

Answer ALL questions.

PART – A (10 × 2 = 20 Marks)

1. What are the benefits of Software Architecture ?

2. Justify with comments : "Architecture is high level design".

3. When will you say that the views are consistent?

4. Create any two UML notations for module view type.

5. State the merits and demerits of Shared data.

6. Define architectural style and architectural pattern.

7. List the parts of Quality Attribute Scenario.

8. Distinguish between Availability and Modifiability Scenarios.

9. Specify the Quality attributes are measured in AT AM.

10. What is SOA ? What is the role of SOA for solving Integration Challenge in SA ?

PART – B (5 × 13 = 65 Marks)

11. (a) (i) Generate scenarios for the business and architectural qualities. Which qualities are difficult to capture with scenarios.   (9)

        (ii) Discuss the concept of documenting quality attributes.   (4)

OR

    (b) (i) Discuss about the steps involved in Quality Attribute Workshop.   (6)

        (ii) Classify the various tactics being used and tabulate how they help to achieve quality attributes in detail.   (7)

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12. (a) (i) What are views ? How they serve the architecture with examples ? List the steps in documenting a view for architecture. (7)

(ii) Discuss the various notations available to represent various views. (6)

OR

(b) (i) Explain about how ACME supports the definition of four distinct aspects of architecture. (8)

(ii) Illustrate about the different kinds of views. (5)

13. (a) (i) Describe about all the types of Call-and-return style with neat sketch. (8)

(ii) A remote procedure call is nondistinguishable from standard main program and subroutine systems – Generalize. (5)

OR

(b) (i) Illustrate Event style with example and highlight its importance. (6)

(ii) Describe the various Data flow styles with suitable examples. (7)

14. (a) (i) Explain about the need of system decomposition while designing the software architecture. (9)

(ii) List the pros and cons of UML as an ADL. (4)

OR

(b) Discuss about the concept of Architectural conformance and also explain why it is needed ? (13)

15. (a) Explain in detail about Scenario based Architecture Evaluation with suitable diagrams. (13)

OR

(b) (i) Write notes on Cloud Computing and its types. State the uses of Cloud Computing. (7)

(ii) Discuss about Adaptive structures with neat diagrams in detail. (6)

PART – C (1 × 15 = 15 Marks)

16. (a) You are a new hire to a project. Lay out a sequence of documentation you would like to have to acquaint you with your new position. For performance analyse what documentation would you need to do. (15)

OR

(b) Software architecture is often compared to building architecture. What are the valid points for this comparison ? What is the correspondence in buildings to software architecture structures and views ? What is the weakness of this comparison ? (15)

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