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**Question Paper Code: 31878**

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2016

Elective

Information Technology

01UIT903 - SOFTWARE ARCHITECTURE

(Regulation 2013)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1. Why is software architecture important?
2. Classify the architectural structures?
3. What is a quality attribute scenario?
4. Differentiate fault and failure.
5. Define views and how will you represent the views.
6. Write the usage of operational view points.
7. What is Call-and-Return styles? List their types.
8. What do you mean by code on demand?
9. State the need for formal languages.
10. Write the need of web services.

PART - B (5 x 16 = 80 Marks)

11. (a) Explain in detail the building of architecture business cycle. (16)

Or

(b) Discuss in detail about the functional requirements and technical constraints in framing the quality attributes. (16)

12. (a) Explain the following with respect to tactics: (i) Fault recovery (ii) Internal monitoring (iii) Resource arbitration (iv) Resisting attacks. (16)

Or

(b) Explain six part scenarios in detail. With the proper example and neat diagram. (16)

13. (a) (i) What are views? How they serve the architecture with examples explain in detail. (8)

(ii) List the steps in documenting a view for architecture. (8)

Or

(b) Prepare a case study on your own for choosing the views. Consider all the essential criteria, factors and perspectives regarding with the selection of views in Architectures. (16)

14. (a) (i) Discuss the importance and advantages of the architectural styles with reference to an appropriate application area. (8)

(ii) Discuss the invariants, advantages and disadvantages of pipes and filters architectural style. (8)

Or

(b) Develop a case study for each style, analyze and pinpoint its problem and implement solution for the same using each style. Report the various impacts observed. (16)

15. (a) Discuss about documenting the views using UML with suitable diagram. (16)

Or

(b) (i) Illustrate architectural description languages with suitable example. (8)

(ii) Discuss adaptive structures in detail. With neat diagram. (8)