

25/11/14/15
2014

Reg. No. :

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Question Paper Code : 45281

5 Year M.Sc. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2014.

Fifth Semester

Software Engineering

ESE 054 — SOFTWARE ARCHITECTURE

(Regulation 2010)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Define architectural styles? List the common architectural styles.
2. What are the common software architecture structures?
3. What is tight coupling?
4. Give the different domains in which shared information systems are applied.
5. List the characteristics of GUI Direct Manipulation System.
6. Give the Dataflow Diagram for Interactive Database.
7. Compare formal model and formal specification.
8. Define Software Requirements Traceability Matrix.
9. List down the tools used for architectural design.
10. What are the tools for architectural design specification?

PART B — (5 × 16 = 80 marks)

11. (a) (i) Define software architecture. How the architecture business cycle works? Explain with neat diagram. (8)
(ii) Explain the different steps involved in the architectural activities. (8)

Or

- (b) (i) What makes a good architecture? Name the two major recommendations and list down the process recommendations. (8)
 - (ii) Explain about architectural pattern, reference models and reference architecture with a neat diagram. (8)
12. (a) (i) Explain in detail the internal picture of batch update process. (8)
- (ii) Describe the Batch sequential database architecture (8)

Or

- (b) (i) Write about the evolution of Shared Information Systems in Software Development Environments (8)
 - (ii) Compare batch sequential and pipe filter architecture. (8)
13. (a) Why user interface architecture is needed? Explain in detail the guidelines for designing user interface architecture. (16)

Or

- (b) Explain how the needs of customers would be converted into technical requirements using Quality Function Deployment. Give suitable examples. (16)
14. (a) (i) Discuss the consequences of PAC architectural pattern (8)
- (ii) Distinguish between availability scenarios and modifiability scenarios. (8)

Or

- (b) (i) Explain how documentation is prepared for performance Analysis of Architecture. (8)
 - (ii) Explain in detail the Component-Based and Layered architectural styles. (8)
15. (a) What is dynamic scenarios of MVC? Explain with a neat diagram. (16)

Or

- (b) Identify the Architecture Objectives for mobile and web applications. (16)