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Reg. No. : | | | | | | | | | | | | |

Question Paper Code : 95467

5 Year M.Sc. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2015.

Fifth Semester

Software Engineering

XSE 351/10677 SW 504 — SOFTWARE ARCHITECTURE

(Regulations 2003/2010)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What is meant by software architecture?

2. Mention the important invariants of pipe filter architectural style.

3. What is meant by shared information system? Specify the various domains in which it appears.

4. Mention the role of repository architectural style in designing shared information system.

5. Define functional design space and structural design space.

6. List down some of the key quality attributes.

7. State the features of z-specification language.

8. Define event binding. List the approaches of event binding.

9. What are the important elements of a design language?

10. State the uses of architectural tool.

PART B — (5 × 16 = 80 marks)

11. (a) (i) Discuss the advantages and disadvantages of layered systems. (8)

(ii) How is pipe filter architectural style suitable to describe batch system? (8)

Or

(b) (i) Explain the application of event based implicit invocation. (8)

(ii) What is the use of heterogeneous architecture? (8)

12. (a) Explain different models used for specifying shared information system in business data processing.

Or

(b) (i) Discuss the structure of traditional compiler model. (6)

(ii) Compare pipe filter and repository system for integrating software development environments. (10)

13. (a) Discuss the design space for user-interface architecture with important functional dimensions.

Or

(b) (i) Describe the steps of a QFD process. (8)

(ii) Explain how to implement a design space on a QFD framework. (8)

14. (a) (i) What are the format models and specifications used for software design? (8)

(ii) Explain about the Z-notation. (8)

Or

(b) (i) What is a first class connector? What are the problems with the current price in the usage of these connectors? (8)

(ii) Explain the requirements for architecture description languages. (8)

15. (a) (i) Describe the various steps in defining a style. (8)

(ii) Explain any two architectural styles. (8)

Or

(b) Describe the architecture of the component based system using WRIGHT architectural description tool.