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

Question Paper Code : 45930

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

Fifth Semester

Software Engineering

XSE 351/ 10677 SW 504 — SOFTWARE ARCHITECTURE

(Regulation 2003 / 2010)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. List out any three architectural styles with suitable example.
2. Define Repositories.
3. What is shared information systems?
4. State software architecture.
5. List out any five guidance for user interface architecture.
6. Define quantified design phase in software architecture.
7. What are the principles for data specification?
8. List out any four notation linguistic issues.
9. Define Unicon.
10. List out any four tools for architectural design.

PART B — (5 × 16 = 80 marks)

11. (a) Compare and contrast about layered system architecture and Hetero Generous architecture.

Or

(b) Briefly discuss about taxonomy of architectural styles.

12. (a) Explain the difference between a database that services one or more conventional business applications and a data warehouse with suitable example.

Or

(b) Assume that you are the project manager for a company that builds software for consumer products. You have been contracted to build the software for a finance System. Explain the process of developing architectural structures for shared information systems for the above application.

13. (a) Discuss about architectural design guidance with suitable application.

Or

(b) Develop an approach that would automatically integrate error messages and a user help facility. That is, the system would automatically recognize the error type and provide a help window with suggestions for correcting it. Perform a reasonably complete software user interface design that considers appropriate data structures and algorithms.

14. (a) (i) Write short notes on the value of architectural formalism. (10)

(ii) Write short notes on Formal models and specifications. (6)

Or

(b) Briefly explain about Description languages and adding implicit invocation to traditional programming languages.

15. (a) Discuss about the steps to develop an exploiting style in architectural design environments.

Or

(b) Write a three to four page paper that presents guidelines for selecting data structures based on the nature of the problem. Begin by delineating the classical data structures encountered in software work and then describe criteria for selecting architectural design from these for particular types of problems.