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**Question Paper Code : 27469**

**5 Years M.Sc. DEGREE EXAMINATION, MAY/JUNE 2016**

**Seventh Semester**

**Software Engineering**

**XSE 471 / 10677 SW 701 – SOFTWARE TESTING**

**(Regulations 2003/2010)**

**Time : Three Hours**

**Maximum : 100 Marks**

**Answer ALL questions.**

**PART – A (10 × 2 = 20 Marks)**

1. List out the technological developments that are causing organizations to revise their approach to testing.
2. Define test factor. List out a few test factors.
3. How are testing tools selected ?
4. Compare and contrast functional and structural testing.
5. State any two functional testing techniques.
6. Mention any two structural testing tools.
7. What are the possible difficulties faced by the test team in the installation phase ?
8. How does testing the audit trail function help ?
9. Write the tasks of client/server software.
10. What is meant by data integrity process ?

**PART – B (5 × 16 = 80 Marks)**

11. (a) (i) Explain the multiple roles of testing in detail with the diagram of software development process. (8)
- (ii) Write in detail about the various risk factors in software testing. (8)

**OR**

- (b) (i) Write about process problems and defect rates in testing. (8)
- (ii) Explain the strategies and methodologies of testing in detail. (8)

12. (a) Explain the workbench concept. Explain the eight considerations to convert the test strategy into test tactics or test plan. (16)

**OR**

- (b) (i) Describe the structured approach to software testing. (8)
- (ii) Explain the steps to develop test strategy. Develop an test strategy for a payroll system for a corporation that must transmit tax information to the appropriate government agency after January 1, 2000. (8)

13. (a) Consider the automation requirements and evaluate the options in selection of tools for each : (16)

- (i) Designing test cases from requirements/design/program specifications.
- (ii) Generation of test data.
- (iii) Choice of test cases for a given release, based on the changes made to code.
- (iv) Tools for automatic analysis of correctness of tests.
- (v) Tools for automatic assignment of right people to work on defects uncovered by tests.
- (vi) Tools for performance testing.
- (vii) Tools for test reporting.

**OR**

- (b) Explain the inspecting of test plan and test cases. Develop a test plan for an application on test. (16)

14. (a) Discuss the tasks involved in design phase testing. (10)

**OR**

(b) Discuss the workbench activities involved in testing the installation of new software.

15. (a) With an online shopping site as a case study., show how web based systems can be tested.

**OR**

(b) Describe how spiral testing aids RAD systems.

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