Question Paper Code : 50816

B.E./B.Tech. DEGREE EXAMINATIONS, APRIL/MAY 2023.

Sixth Semester

Information Technology

IT 8076 – SOFTWARE TESTING

(Common to: Computer Science and Engineering/Computer and Communication Engineering)

(Regulations 2017)

Time : Three hours   Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Define software testing.

2. What is the difference between error, failure, and defect?

3. Give the structure of a Test case.

4. Define cyclomatic complexity.

5. Differentiate alpha testing and beta testing.

6. Define regression testing.

7. What will be the contents in the test report?

8. What is meant by test plan?

9. Name few productivity metrics.

10. State the need for test automation.

PART B — (5 × 13 = 65 marks)

11. (a) Explain the need for and importance of defect repository. How does developers and testers support for developing defect repository? (13)

Or

(b) (i) Bring out the role of tester in software development. (6)

(ii) Explain the origin of defects and about various defect classes. (7)

12. (a) (i) Differentiate black box testing and white box testing. (6)

(ii) Write a short note on requirement-based testing and its importance. (7)

Or

(b) (i) Compare static testing and structural testing with example. (6)

(ii) What is test adequacy? How to evaluate test adequacy criteria? (7)

13. (a) (i) Define unit testing. Explain the components of unit test environment. (6)

(ii) Bring out the various types of testing under system testing. (7)

Or

(b) (i) Define Integration testing. Discuss its types. (6)

(ii) What are the testing considerations for website testing. (7)

14. (a) (i) Explain the activities involved in test planning. (6)

(ii) Present the organization structure of testing teams and their roles. (7)

Or

(b) Discuss the role of test specialist in an organization and explain the skills that are needed by a test specialist. (13)

15. (a) What is the need for test automation? Detail the skills needed for test automation and the challenges involved in it. (13)

Or

(b) Discuss the role of test metrics towards software quality. With suitable example compare project metrics and progress metrics. (13)

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16. (a) Perform Basis Path testing for student grading system.   (15)

Student Grading System Criteria:

Marks range	Grade
91 to 100	S
81 to 90	A
71 to 80	B
61 to 70	C
50 to 60	D
Less than 50	F

Or

(b) Apply Equivalence partitioning technique and Boundary value analysis for testing student grading system.   (15)

Student Grading System Criteria:

Marks range	Grade
91 to 100	S
81 to 90	A
71 to 80	B
61 to 70	C
50 to 60	D
Less than 50	F

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