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Question Paper Code : 90799

B.E./B.Tech. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2022.

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. Is software testing a process? Justify.
2. What is the difference between error and defect?
3. Define Cyclomatic complexity.
4. Define Test case. Give its basic structure.
5. What is Test Harness?
6. Define Regression Testing.
7. Bring out the role of Testing group.
8. Define Test plan.
9. State the advantages of test automation.
10. What is the role of testing tools? Give its advantages.

PART B — (5 × 13 = 65 marks)

11. (a) (i) Define Software Testing. Explain the various principles of software testing. (6)
(ii) Explain the various types of Defect classes with suitable example. (7)

Or

- (b) (i) State the origins of Defects and explain how cost of defect is estimated. (6)
(ii) Discuss the role of testers in software development organization. (7)

12. (a) (i) Give any two Test Adequacy criteria and explain how it is evaluated. (6)
 (ii) With suitable example, explain State-based testing. (7)

Or

- (b) (i) Compare and contrast static testing and structural testing. (6)
 (ii) Explain how code complexity and code functionality is tested. (7)
13. (a) (i) With a neat diagram, explain the unit testing environment. (6)
 (ii) Discuss the various types of testing carried out in system testing. (7)

Or

- (b) (i) Define Integration Testing. Describe its types with example. (6)
 (ii) Discuss about the key attributes to be tested in website testing. (7)
14. (a) (i) Give the organization structure for testing teams. (6)
 (ii) Explain the activities involved in test management. (7)

Or

- (b) (i) With a neat diagram, explain the components of Test Plan. (6)
 (ii) Bring out the different skills needed by a test specialist. (7)
15. (a) Define Software test automation. What are the skills needed for automation. Also explain the challenges in automation. (13)

Or

- (b) With suitable example explain about various project metrics, progress metrics and productivity metrics. (13)

PART C — (1 × 15 = 15 marks)

16. (a) Draw the flow chart for finding the greatest of three numbers and Perform Basis Path testing for the given program. (15)

Or

- (b) Perform Black box (Equivalence Partitioning and Boundary Value Analysis) testing for a Student Grading System. (15)

Mark Range	Grade
>90	S
80 to 90	A
70 to 80	B
60 to 70	C
50 to 60	D
<50	F