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Question Paper Code : 11161

B.E./B.Tech. DEGREE EXAMINATION, MAY/JUNE 2014.

Seventh Semester

Computer Science and Engineering

080230049 — SOFTWARE TESTING

(Regulation 2008)

Time : Three hours   Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1.   List the characteristics of a good test case.

2.   Distinguish between failure and defect with an example.

3.   What is the significance of Cyclomatic Complexity in basis path testing?

4.   List any four distinct test cases in testing for loop in a C — program.

5.   How is verification different from validation? Who should be doing these activities?

6.   What is extreme testing?

7.   What are the common issues in testing object oriented systems?

8.   Which one should be considered as the basic unit of testing in object oriented systems: Method or class? — Justify your answer.

9.   Why do we need taxonomy for test tools?

10. What are the benefits of silk test?

11. (a) (i) Develop a classification scheme for faults based on input/output, logic, and data. (10)

   (ii) Bring out the relationship between software lifecycle and various levels of testing using a diagram. (6)

Or

   (b) Consider a program reading three integer values representing the lengths of the sides of a triangle. The program prints out the message that states whether the triangle is scalene, isosceles or equilateral. Draw the flow graph of the program and develop a set of test cases that would appropriately test the program.

12. (a) Briefly outline the methodology and applicability of equivalence partitioning and Boundary value analysis in software testing.

Or

   (b) Illustrate the usage of decision table in testing. Briefly discuss how it deals with multiple fault assumption.

13. (a) Briefly explain the significance of the following levels of software testing with suitable examples:

   (i) Unit testing (8)

   (ii) System testing. (8)

Or

   (b) Describe the top-down and bottom-up approaches in integration testing. Discuss about the merits and limitations of these approaches.

14. (a) Explain how test cases can be derived from behavior of objects. Illustrate your answer with a suitable example.

Or

   (b) Develop a set of guidelines for testing a standard GUI.

15. (a) Explain the various approaches to debugging and comment on the suitability of each approach with an example scenario.

Or

   (b) Write short notes on the following :

   (i) Factors to be considered in selecting a testing tool. (8)

   (ii) Capabilities of load runner. (8)