Reg. No.

Question Paper Code : **57486**

B.E./B.Tech. DEGREE EXAMINATION, MAY/JUNE 2016

Sixth Semester

Computer Science and Engineering

IT 6004 – SOFTWARE TESTING

(Regulations 2013)

Time : Three Hours   Maximum : 100 Marks

Answer ALL questions.

PART – A (10 × 2 = 20 Marks)

1.   Define the objective of software testing.

2.   Differentiate Error, Defect and Failure.

3.   What are the basic primes for all structured program ?

4.   What are the errors uncovered by black box testing ?

5.   Why is it important to design test harness for unit testing ?

6.   What are the issues in testing object oriented systems ?

7.   Make distinctions between structures of Single Product and Multi Product companies.

8.   Mention the reasons to create a WBS.

9.   State any two generic requirements for test tool and framework.

10. What are the skills needed in automation ?

PART – B (5 × 16 = 80 Marks)

11. (a) (i) State and explain in detail the various software testing principles. (8)

        (ii) Explain the developer and tester support for the development of a defect repository. (8)

OR

    (b) (i) Define defect and illustrate the various origin of defects. (8)

        (ii) What approach would you use to solve the concepts of defects with the coin problem ? (8)

12. (a) (i) Explain the significance of control flow graph and cyclomatic complexity in white box testing with a pseudo code for sum of positive numbers. Also mention the independent paths with test cases. (8)

        (ii) Briefly explain the Weyuker's eleven axioms that allow testers to evaluate test adequacy criteria. (8)

OR

    (b) (i) Demonstrate the various black box test cases using Equivalence class partitioning and boundary value analysis to test a module for an ATM. (8)

        (ii) Explain how black box testing is performed in COTS components. (8)

13. (a) (i) Define a unit. Explain why test planning is so important for developing a repeatable and managed testing process ? (8)

        (ii) Tabulate the key differences in integrating procedural oriented systems as compared to object oriented systems. (8)

OR

    (b) Explain the different integration testing strategies for procedures and functions with suitable diagrams. (16)

14. (a) Explain the various impacts of globalisation and geographically distributed teams on product testing. (16)

OR

    (b) Explain the different challenges and issues faced in the testing service organization. Discuss how those challenges can be addressed. (16)

15. (a) Explain the various types of Progress and Productivity metrics based on what they measure and what area they focus on. (16)

OR

    (b) Explain the design and architecture for software test automation. (16)