

**B.Tech Sem – VIII (2007 Course) (Inf. Tech.) : WINTER -
2017**

SUBJECT : ELECTIVE – II: SOFTWARE TESTING & QUALITY ASSURANCE

Day : **Wednesday**
Date : **22/11/2017**

W-2017-2686

Time : **02.30 PM TO 05.30 PM**
Max. Marks : 80

N.B.:

- 1) **Q.No.1 and Q.No.5 are COMPULSORY.** Out of the remaining questions attempt **ANY TWO** questions from each section.
- 2) Answers to both the sections should be written in the **SEPARATE** answer books.
- 3) Figures to the right indicate **FULL** marks.
- 4) Draw neat and labeled diagram **WHEREVER** necessary.
- 5) Assume suitable data if necessary.

SECTION – I

- Q.1** a) What is testing process? How it can be implemented? What are its limitations? [05]
b) What are limitations of boundary value analysis technique? Discuss the [04]
situations in which it is not effective.
c) What are different types of structural techniques? Discuss any one technique [05]
with the help of example.
- Q.2** a) Discuss the significance of the V-shaped software life cycle model and also [07]
establish the relationship between its development and testing part.
b) What is software failure? Discuss the conditions of a failure. Mere presence of [06]
faults may not lead to failure. Explain with the help of example.
- Q.3** a) Describe following verification methods: [06]
i) Peer reviews ii) Walkthroughs iii) Inspections.
b) Differentiate between white box and black box testing. Consider the program to [07]
find the largest number amongst three numbers. Generate the test cases using
one black box testing and one white box testing technique.
- Q.4** a) Discuss some of issues related to source code reviews. How can we incorporate [07]
these issues in the source code review checklist?
b) Compare the top down and bottom up integration testing approaches to test a [06]
program.

SECTION – II

- Q.5** a) Explain the importance of documentation in testing. [05]
b) Explain the format for test incident report. [05]
c) Describe the metrics for measuring the reliability of software. [04]
- Q.6** a) Write a test case for testing software for visually disabled user. [07]
b) Explain the concept of Gray-box testing. [06]
- Q.7** a) How a test case should be planned and executed for washing machine [07]
firmware?
b) Differentiate between stress and load testing. [06]
- Q.8** a) How to test reliability of alarm application? [07]
b) What is capability maturity model? Explain CMM level II. [06]

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