Paper Id: | **110715** | **Roll No:** | | | | | | | | | | | |

B. TECH.
(SEM-VII) THEORY EXAMINATION 2019-20
SOFTWARE TESTING AND AUDIT

Time: 3 Hours   **Total Marks: 100**

Note: Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. **Attempt all questions in brief.**   **2 x 10 = 20**

   a. Explain the testing life cycle.
   b. Software testing is software verification plus software validation. Discuss.
   c. Software testing is an incremental process" justify your statement.
   d. Explain the code walkthrough and inspection briefly.
   e. Explain the difference between white box and black box testing.
   f. Define Risk Matrix.
   g. What are the drivers and stubs? Why are they required?
   h. Explain web application testing. Also explain object oriented testing.
   i. What are the difference between data flow testing and mutation testing.
   j. Define Performance and usability Testing.

SECTION B

2. **Attempt any three of the following:**   **10 x 3= 30**

   a. Explain the boundary value analysis and Equivalence class portioning method.
   b. Explain the Decision table based and cause effect graph technique for test data selection.
   c. Explain the concept of cyclomatic complexity with suitable example in detail.
   d. What is regression testing? What are different risk analysis techniques?
   e. What are debugging techniques? Explain types of debugging techniques.

SECTION C

3. **Attempt any one part of the following:**   **10 x 1 = 10**

   a.   Explain the user interface testing and database testing in detail.
   b.   What are different software testing tools? Also explain software test plan.

4. **Attempt any one part of the following:**   **10 x 1 = 10**
   a.   What is object oriented testing? Also explain significance of object oriented testing.
   b.   Explain the differences between verification and validation of any software product.

5. **Attempt any one part of the following:**   **10 x 1 = 10**
   a. Explain the terms Error, Fault failure, software audit and code review.
   b. Explain the testing Process with a suitable diagram.

6. **Attempt any one part of the following:**   **10 x 1 = 10**

   a. What are the different prioritization guidelines to reduce test cases?

   b. Define Big Bang, Call based integration, Decomposition based integration testing.

7. **Attempt any one part of the following:**   **10 x 1 = 10**

   a. How formal technical review is different from management review?

   b. Write short notes on- (i) levels of testing (ii) SRS verification Techniques