PAPER ID-310465

Roll No: | | | | | | | | | | |

B. TECH.
(SEM VIIth) THEORY EXAMINATION 2020-21
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. What is the difference between QA and testing?
b. When is used Decision table testing?
c. Write different types of regression testing.
d. What do you understand from genetic algorithm?
e. Write the tools for test data generation.
f. Explain test metrics and measurements in brief.
g. How can you do black box testing of a database?
h. What are drivers and stubs?
i. Write short note on mutation testing.
j. What is website testing?

SECTION B

2. Attempt any *three* of the following: 10x3=30

a. How do you measure software quality? Discuss correctness versus reliability pertaining to programs.
b. Describe class testing with the help of an example.
c. Draw a flow chart to show overall mutation testing process?
d. Gray box testing is well suited for web applications testing. Why?
e. What is cyclomatic complexity? How can we relate this to independent paths?

SECTION C

3. Attempt any *one* part of the following: 10x1=10

a. How object oriented testing is different from procedural testing.
b. What are the categories to evaluate regression test selection techniques? Why do we use such categorization?

4. Attempt any *one* part of the following: 10x1=10

a. What is structured Programming? Why it is important?
b. Differentiate between top down and bottom up integration testing.

5. Attempt any *one* part of the following: 10x1=10

a. Describe cause-effect graphing technique with the help of an example.
b. Define the following:
(i) Error oriented testing
(ii) Functional and Structural Testing
(iii) Sandwich Integration Approach

6. Attempt any *one* part of the following: 10x1=10

a. What are dynamic testing tools? Explain the functions that they must support.
b. What is the difference between equivalence partitioning and boundary value analysis method?

7. Attempt any *one* part of the following: 10x1=10

a. What is software quality? What are three dimensions of software quality? Explain briefly.
b. Explain how risk matrix can be used to prioritize the test cases?

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