

**BACHELOR OF TECHNOLOGY (CBCS) (2021-COURSE)**  
**B. Tech, Sem - V Computer Science & Engineering : SUMMER : 2025**  
**SUBJECT: SOFTWARE TESTING & QUALITY ASSURANCE**

Day : Tuesday  
Date : 13/05/2025

S-25588-2025

Time : 10:00 AM-01:00 PM  
Max. Marks : 60

**N.B :**

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw neat and labeled diagrams **WHEREVER** necessary.
- 4) Use of non programmable **CALCULATOR** is allowed.
- 5) Assume suitable data if necessary.

Q.1 Explain the concept of black-box testing and white-box testing. When would (10)  
to use each approach, and what are their advantages and disadvantages?

OR

Q.1 Explain the difference between static testing and dynamic testing with suitable (10)  
example.

Q.2 What is acceptance testing, and how does it relate to system testing? Explain (10)  
the purpose of acceptance testing and the criteria used to determine whether a  
system has passed acceptance testing.

OR

Q.2 Describe the process of test execution and defect management in system (10)  
testing. How are defects identified, reported, and tracked during this phase of  
testing?

Q.3 Describe the role of boundary values in test case design. What is it important (10)  
to include boundary test cases, and how do they contribute to finding defects?

OR

Q.3 As a user, I want to be able to log into the web application using my username (10)  
and password. Design minimum ten test cases for the given scenario.

Q.4 Discuss the key dimensions of software quality, such as functionality, (10)  
reliability, usability, performance and maintainability. How do these  
dimensions contribute to overall software quality?

OR

Q.4 Explain the benefits of implementing a Test Maturity Model (TMM) within (10)  
an organization testing processes. How does TMM contribute to improving  
testing effectiveness and efficiency?

Q.5 Define Software Quality Assurance (SQA) and explain its significance in the (10)  
software development process.

OR

Q.5 Describe the components of a Software Quality Management System (SQMS) (10)  
and their roles in facilitating SQA activities.

Q.6 Discuss the advantages and disadvantages of a automation testing compared (10)  
to manual testing. When is automation testing most appropriate?

OR

Q.6 Discuss the challenges associated with automation testing, such as test script (10)  
maintenance, test environment setup, and handling dynamic elements. How  
can these challenges be addressed affectively?

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