

D6BCA2304

Reg. No.....

Name:

SIXTH SEMESTER UG DEGREE EXAMINATION, APRIL 2026

(Regular/Improvement/Supplementary)

BCA

GBCA6E03T: SOFTWARE TESTING AND QUALITY ASSURANCE

Time: 2 Hours

Maximum Marks: 60

SECTION A: Answer the following questions. Each carries *two* marks.

(Ceiling 20 marks)

1. What is validation?
2. Define regression testing problem.
3. What does effort variance measure in project metrics?
4. Provide an example of a test defect metric and its interpretation.
5. What are the challenges in performance testing?
6. Name one type of regression testing done before a product release.
7. Define the term 'Quality Assurance' in software testing.
8. What is the role of static analysis tools in code review and error detection?
9. Define the term "Entry/Exit Criteria" in the context of testing.
10. Mention a popular load testing tool used in performance testing.
11. Define the metric "Defects per 100 Hours of Testing".
12. What is the advantage of Black-Box testing over White-Box testing?

SECTION B: Answer the following questions. Each carries *five* marks.

(Ceiling 30 marks)

13. Identify and elaborate on two major challenges encountered specifically in White-Box testing methodologies. Provide insights into how these challenges impact the testing process and suggest potential strategies to overcome them.
14. Explain the concept of Equivalence Partitioning in software testing.
15. Explain how the testing phases ensure software quality.

(PTO)

16. What is a Defect Bash in software testing? How does it help in identifying and resolving integration-related issues?
17. Differentiate between functional and non-functional testing, Provide examples of each type.
18. Explain two different techniques used in conducting regression testing. Discuss their advantages and scenarios where each technique is most beneficial.
19. Differentiate between Project Metrics and Progress Metrics used in software testing.

SECTION C: Answer any *one* question. The question carries *ten* marks.

20. Compare and contrast white-box and black-box testing methodologies. Discuss scenarios where each approach would be most suitable and justify your choice in different software development contexts.
21. Explain the different phases of a software project, emphasizing the role of Quality Assurance (QA) and Quality Control (QC) in ensuring software quality.

(1 × 10 = 10 Marks)