

TILAK MAHARASHTRA VIDYAPEETH, PUNE
BACHELOR OF COMPUTER APPLICATIONS (044)/
BACHELOR OF SCIENCE (COMPUTER APPLICATIONS)(750)/
SPECIALIZATION IN CYBER SECURITY (464)/
BACHELOR OF SCIENCE (CYBER SECURITY)(760)
EXAMINATION: MAY - 2026
SEMESTER – IV
Sub: Software Testing & Quality Assurance
(BCA –23-403/BSC24-403/BCAC23-403/BSCC24-403)

Date : 28/05/2026**Total Marks : 60****Time: 2.00 pm to 4.30 pm**

Instructions:

1. All questions are compulsory unless and otherwise stated.
 2. Bold figures to the right of every question are the maximum marks for that question.
 3. Candidates are advised to attempt questions in order.
 4. Answers written illegibly are likely to be marked zero.
 5. Use of scientific calculators, Log tables, Mollier Charts is allowed.
 6. Draw neat and labeled diagrams wherever necessary.
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Q.1. Fill in the blanks.**(5)**

1. Syntax testing is most appropriate for_____
 - a) GUI color schemes
 - b) Specific grammar or format
 - c) Memory management
 - d) Network bandwidth
2. Building blocks of SQA usually involve_____
 - a) Management commitment, standards, procedures, and reviews
 - b) Only test automation scripts
 - c) End-user manuals only
 - d) Hardware devices
3. A quality factor in software could be_____
 - a) Electricity cost
 - b) Reliability or maintainability
 - c) Team size
 - d) Hardware brand
4. Non-functional testing techniques generally address_____
 - a) Only unit-level functionality
 - b) Performance, reliability
 - c) Only code coverage
 - d) Only requirement traceability
5. Domain testing focuses on_____
 - a) Hardware compatibility
 - b) Input domain regions
 - c) User documentation
 - d) Team structure

Q.2. State True/False.**(5)**

1. Validation testing ensures that the software meets the specified requirements and performs as expected.
2. Stress testing evaluates how the software behaves under extreme conditions or stress.
3. Regression testing ensures that changes made to the software do not negatively affect existing functionalities.
4. Acceptance testing evaluates how the software handles a large volume of data.
5. Performance testing evaluates how the software performs under various conditions, such as load and stress.

- Q.3. Answer the following. (Solve any 5) (10)**
1. Define performance testing and give one example
 2. What is a walkthrough?
 3. Define a test case and list its basic components.
 4. What is unit testing? Give one example.
 5. Define black-box testing.
 6. What is meant by usability testing?
- Q. 4. Answer the following in detail. (Solve any 6) (30)**
1. Explain manual vs. automatic testing in detail.
 2. Differentiate between SDLC and STLC.
 3. State any two principles of software testing.
 4. Differentiate between alpha testing and beta testing.
 5. What is the capability maturity model (CMM)?
 6. Describe software quality metrics.
 7. Compare verification and validation in depth.
- Q. 5. Answer the following in detail. (Solve any 1) (10)**
1. Explain ISO and Six Sigma for software testing.
 2. Describe Process vs. product quality, and process improvement in software testing.
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