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SPECIALIZATION IN CYBER SECURITY (CS)
EXAMINATION: DECEMBER-2025
SEMESTER – III

Sub: Software Testing & Quality Assurance/ Software Quality Testing
(BCA-345-20/BCA-CS-345-20)

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.

(5)

- Alpha testing is usually performed by _____
 - Clients
 - End users
 - Developers
 - Project Managers
- _____ is a type of non-functional testing
 - System testing
 - Integration testing
 - Performance testing
 - Unit Testing
- QA stand for _____
 - Quick Automation
 - Quality Adjustment
 - Quality Assurance
 - Question Analysis
- _____ testing is performed to ensure that the software can handle a large number of concurrent users
 - Load
 - Stress
 - Integration
 - Unit
- _____ testing ensures that the software has been built according to the design specifications.
 - Verification
 - Validation
 - Performance
 - System

(5)

1. Load testing checks how the system performs under load, such as a large number of concurrent users.
2. Regression testing ensures that changes made to the software do not negatively affect existing functionalities.
3. Informal technical reviews aim to identify errors early in the development process, preventing defects from reaching the customer.
4. Quality of conformance refers to the degree to which design specifications are followed in manufacturing the product.
5. System testing evaluates how the software behaves under extreme conditions or stress.

(10)

1. What are reviews?
2. What is test case?

3. Define Alpha and Beta Testing.
4. Define QA.
5. What are inspections?
6. Define PDCA.

Q. 4. Answer the following in detail. (Solve any 6) (30)

1. Difference between manual and automatic testing
2. Define integration testing. Explain different integration strategies.
3. Describe the concept of V model with diagram
4. Explain ISO and Six-Sigma in detail
5. List and explain various testing objectives
6. Explain with diagram how test information flows
7. Describe need of SQA

Q. 5. Answer the following in detail. (Solve any 1) (10)

1. Explain use of control flow graphs and cyclomatic complexity in software testing
 2. Explain following blackbox testing methods
 1. Equivalence partitioning
 2. Boundary value analysis
 3. State transition testing
 4. Cause effect graphing
 5. Error guessing
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