



JSPM's
**Bhivarabai Sawant Institute of Technology
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DEPARTMENT OF COMPUTER ENGINEERING
WORKBOOK

BE COMPUTER SEM I
A.Y. 2020-2021

**SUBJECT: SOFTWARE TESTING AND
QUALITY ASSURANCE**

SUBJECT CODE: 410245(B)

UNIT NO : 2

Test Planning and Management

Designed By: Prof. Adsure S. S.

Syllabus Covered

Unit 2	Test Planning and Management
Review of Fundamentals of Software Testing, Testing during development life cycle, Requirement Traceability matrix, essentials, Work bench, Important Features of Testing Process, Misconceptions, Principles, salient and policy of Software testing, Test Strategy, Test Planning, Testing Process and number of defects found, Test team efficiency, Mutation testing, challenges, test team approach, Process problem faced, Cost aspect, establishing testing policy, methods, structured approach, categories of defect, Defect/ error/ mistake in software, Developing Test Strategy and Plan, Testing process, Attitude towards testing, approaches, challenges, Raising management awareness for testing, skills required by tester. .	

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Roll No: BE-B 20

1] Fill in blanks :

- a) SDLC stands for Software Development Life Cycle.
- b) Debugging studies, the functionality in detail to find where the bugs are likely to occur.
- c) Requirement is phase where a cost to remove defect is not high?
- d) Exit Criterion is the test document describes the Exit Criteria of Testing?
- e) By collecting Metrics during software testing, it is possible to develop meaningful guidelines to halt the testing process.

2] Select correct option. (Click right tick on correct answer)

- i) Select from which of the following the regression testing should be performed.
 - i Once a month
 - ii When a defect has been fixed
 - iii When the test environment has changed
 - iv When the software has changed
 - a) **ii and iv.iii**
 - b) ii and iv.
 - c) i, ii and iii.
 - d) i and iii.
- ii) . Which of the following is a form of functional testing?
 - a) Security level testing
 - b) **Boundary value analysis**
 - c) Performance testing
 - d) Usability testing
- iii) When reporting faults found to developers, testers should be:

- a) Polite and helpful
 - b) Diplomatic
 - c) Sensitive and insisting that a bug is not a “feature” if it should be fixed
 - d) All of the above
- iv. Impact Analysis help to decide which of the following testing describe below.
- a) How much regression testing should be done
 - b) How many more test cases need to written
 - c) Exit Criteria
 - d) Different Tools to perform Regression Testing
- v. Select which of the below is not a Fundamental Test Process?
- a) Test Planning
 - b) Requirement Analysis
 - c) Implementation and Execution
 - d) Evaluating test criteria and reporting
- vi. E-Commerce software testing follows different approach than gaming software testing. Which testing principle implies this?
- a) Pareto principle
 - b) Testing is Context dependent
 - c) Testing shows presence of defects
 - d) Absence of errors-fallacy

3] Mutation testing

Mutation Testing is a type of software testing in which certain statements of the source code are changed/mutated to check if the test cases are able to find errors in source code. The goal of Mutation Testing is ensuring the quality of test cases in terms of robustness that it should fail the mutated source code.

4] Attitude towards testing, Test approaches

When there is new member in team. We takes pride what we have developed. Conflict between developer and testing. A test approach is a way of working for designing and executing tests. There are two groups of test approaches: experience-based testing and coverage-based testing.

A test approach is the test strategy implementation of a project, defines how testing would be carried out. Test approach has two techniques:

- Proactive - An approach in which the test design process is initiated as early as possible in order to find and fix the defects before the build is created.
- Reactive - An approach in which the testing is not started until after design and coding are completed.

5] Short note on :

a. Test Policy

A Test Policy is a high level document and is at the top of the hierarchy of the Test Documentation structure. The purpose of the Test Policy document is to represent the testing philosophy of the company as a whole and to provide a direction which the testing department should adhere to and follow. It should apply to both new projects and maintenance work. Setting an appropriate test policy by senior managers, provides a robust framework within which testing practitioners can then operate. This will help to ensure the maximization of the strategic value inherent in every project.

b. Test Case:

A test case is a document, which has a set of test data, preconditions, expected results and postconditions, developed for a particular test scenario in order to verify compliance against a specific requirement. Test Case acts as the starting point for the test execution, and after applying a set of input values, the application has a definitive outcome and leaves the system at some end point or also known as execution postcondition.

c. Test Planning in S/w Testing:

Test planning, the most important activity to ensure that there is initially a list of tasks and milestones in a baseline plan to track the progress of the project. It also defines the size of the test effort.

It is the main document often called as master test plan or a project test plan and usually developed during the early phase of the project.

6] Match the following terms and statements.

1. Decision Table Testing
2. Decision Testing
3. State Transition Testing
4. Exploratory Testing

- W. Testing carried out w boxes to achieve specific test objectives, possibly to complement structured testing.
- X. A test technique used which may be used to verify different system re depending on current conditions or previous history.
- Y. A test technique which combines combinations of inputs that might not otherwise have been exercised during testing.
- Z. A form of control flow testing based on decision outcomes.

Options:

A. 1Y, 2Z, 3X, 4W.

B. 1X, 2W, 3Z, 4Y.

C. 1Z, 2X, 3W, 4Y.

D. 1Z, 2Y, 3X, 4W.

-----EVALUATION SHEET -----

Ques.no	Max.Marks	Marks Obtained	Remark
1	5		
2	5		
3	5		
4	5		
5	6		
6	4		
TOTAL	30		

SUBJECT INCHARGE**DAC****HOD**