VALLIAMMAI ENGINEERING COLLEGE
SRM NAGAR, KATTANKULATHUR

DEPARTMENT OF INFORMATION TECHNOLOGY

QUESTION BANK

IT2032 SOFTWARE TESTING]

(Regulation 2008)

SEMESTER/YEAR: VII/IV

UNIT I

PART-A
1.What is test case? what are the information it contains?
2.Differentiate verification and validation.
3.List the defect classes.
4. Name the different levels in Testing Maturity Model. Also mention the key
activity in each of the levels
5.what is meant by validation and verification?
6.define software process.
7.name the TMM Levels.
8.give an example for design defect and testing defect.
9.list the defect classes. Give an example for each of the class.
10.name the different levels in testing maturity model. Also mention the key activity in each
of the levels.
11.define the term defect.
12.write the role of process in software quality.
13.list the categories that defects fall into.
14.write the major components in a software development process.
15.write the verification activities of design phase of the software development.
16.list any 2 classification of defect.
17.distinguish between fault and failure.
18.differentiate the process of testing and debugging.
19.what is the basic objective of software testing? what is its scope?
20.define software quality.

PART-B
1.a.Explain the various software testing principles. (8)
  b. Define correctness, reliability, integrity, interoperability. (8)
2.a.Define defect and write the various origins of defects. (8)
  b. Explain the concepts of defects with the coin problem(8)
3. a. Explain the various software testing principles.(8)
  b. Explain the process of defect repository development and the role of developer in it.(8)
4.a. Discuss the information in defect repository(8)
  b. Explain the tester's role in software development organization(8)

5. a. Compare and contrast errors, faults and failures using suitable examples (8)

   b. Explain the different phases in testers mental model (8)

6.a.Wuthsutable examples explain the various types of defects and their effects(8)

   b. Explain the role of tester in software development organization.(8)

7.Explain in detail processing and monitoring of the defects(16)

8. a. List and discuss the components of software development process(8)

   b. List and discuss the technological developments that are causing organizations
      to revise their approach to testing.(8)

9.a.Why is it important to meticulously inspect test result? Give Example?

   b.Discuss the drawbacks incase if you fail to inspect.

10. a. Why is it necessary to develop test cases for both valid and invalid input condition.

    b. How important is document for product? How will you test requirement and design
       Document?

UNIT II

PART-A

1.Write down the limitations of random testing.

2. What is a Test case?

3.what is black box approach.

4. What is a control flow graph.

5.Write the two basic testing strategies used to design test cases.

6..State the need for code functional testing in test case design.

7.List out the people who are associated with testing

8.Give the role of process in software quality.

9.define boundary value analysis.

10.how to compute cyclomatic complexity?

11.what is meant by desk checking?

12.define code complexity testing. how it can happen?

13.identify the equivalence classes in testing the program for
quadratic equation solution.

14.how is mutation testing helpful in testing the software?

15.what is random testing?

16.enumerate the black box testing methods. Also write one merit for each.

17.what is the smarter tester?

18.what is post implementation testing?

19.which testing strategy is best to uncover the defect? why?

20.what are the objectives of requirement testing?

PART-B

1.Explain the concepts of equivalence class partitioning and boundary value analysis.

2. Explain the various additional white box test design approaches.

 3.Explain the concept of Equivalence class partitioning and boundary value analysis with
    example

4. Develop black-box test cases using equivalence class partitioning and boundary
    value analysis to test a module for ATM system.

5.a. In what way black box testing and COTS can be compared?(8)

b. When to start testing process and why? discuss(8)

6.Explain in detail about additional white box test design approaches

7.a,Explain in detail about code coverage testing.(8)

   b. Explain with neat flow chart code complexity testing.(8)

8. With suitable test cases explain the various white box approaches .state the cyclomatic
   complexity measure used in it.

9.With suitable examples explain in detail the following test approaches.

   a. Boundary value analysis(8)

   b. Equivalence class partitioning(8)

10. What is test strategy? Explain the methods for developing test strategy.

UNIT III
PART-A

1. Write the workable definition for a software unit and characterize it.
2. Define test harness
3. Differentiate verification and validations.
4. Write the two basic testing strategies used to design test cases
5.What is Unit Testing?
6. Why is it so important to design a test harness for reusability?
7. Bring out the need for the levels of testing.
8. Define regression testing.
9. What are the various tools available for internalization?
10. Define unit test. Give example.
11. Quote an example and explain test adequacy criteria.
12. Define alpha and beta testing.
13. What is the difference between alpha and beta testing?
14. What is the function of a moderator in inspecting a test plan?
15. Define usability testing.
16. Define accessibility testing
17. Define scenario testing.
18. Define performance testing.
19. Define internalization testing.
20. Define system testing.

PART-B

 1. a..Describe the activities or tasks and responsibilities for developer tester in support of
       multilevel testing? (8)

    b. List the tasks that must be performed by the developer or tester during the preparation
for unit testing. (8)

2. a. Write the importance of security testing and what are the consequences of security
breaches, also write the various areas which has to be focused on during security testing. (8)

   b. State the need for integration testing in procedural code (8)

3. List and explain types of system test.

4. Develop a use case to describe a user purchase of a laptop with credit card from online
vendor using web based software. With use case, design a set of tests you would use during
system test (general).

5.a.How to run the unit tests and record results?(8)

   b. Discuss about the test harness.(8)

6.Distinguish between alpha and beta testing. Explain in detail about the phase in which alpha and beta testing is done.in what way it is related to milestone and deliverable

7. a. State and explain different levels of testing (8)

   b. Compare and contrast regression and AD-Hoc testing (8)

8. Write short notes on scenario testing and performance testing.

9. Explain the design of unit tests for functions, procedures, classes and methods.

10. Describe the integration testing strategies for procedures and functions.

UNIT IV

PART-A

1. What is the purpose of Test Transmitted report and the test log?

2. Write the various approaches to test cost estimation

3. List any two importances to testing plan.

4. Write down the skills needed by a technical level tester.

5. How to locate testing items?

6. List any two most needed skills by a test specialist.

7. What are business impact of globalization?

8. How will you identify test case specification?

9. Define test cases.

10. List the responsibilities of test group.

11. List the test plan components.

12. Write down the measurements for monitoring errors, faults and failures.

13. What are the various skills needed by a test specialist?

14. State the need of test plan components.

15. Specify the five stages in a test plan process.

16. What are the components of a test plan?

17. What is the role of manager in support of test group?

18. List any two importance of testing plan.

19.What is the purpose of a testing plan? Name a few typical resources that should be considered when test planning.

20.What is the use of test log?

PART-B

1..Explain the components of test plan.

2. a. write any four IEEE recommended test related documents in detail. (8)

   b. Write the various technical skills needed by a test specialist(8)

3. Why is testing plan important for developing a repeatable and managed testing process. Give example.

4. What role do user/client play in the development of test plan for a project? Should they be present at any of the test plan reviews. Justify your answer.

5. What are the roles of three groups in test planning and policy developments? Discuss in Detail

6.a. List out the responsibilities of test specialist with their skills.(8)

  b. How to build a testing group? explain.(8)

7. a. Discuss testing team structure for single product companies.(8)

   b. What are the skills needed for a test specialist.(8)

8 .a. Explain with example test people management.(8)

   b. How will you build a testing group? Explain with example.(8)

9.With suitable examples, explain the preparation of test plan components.

10. a. Write notes on testing and debugging goals and policies.(8)

    b. Write notes on the role of the groups in test planning and policy development.(8)

UNIT V

PART-A

1. Differentiate between project monitoring and project controlling.
2. What is software configuration management?
3. What should be included in milestone report for testing?
4. Define test measurement process
5. Distinguish between milestone and deliverable.
6. What are the criteria for test completion?
7. What is meant by test case execution productivity?
8. Define SCM.
9. Differentiate inspections from walkthrough.
10. Differentiate the terms: error, fault and failure.
11. Define the review metrics.
12. Give the various roles in a testing group.
13. What is the purpose of critical design review?
14. Define tracing.
15. Name any two test metrics.
16. Define test measurement process.
17. List any 4 benefits of a review program.
18. What are the components of a review plans.
19. Define test automation.
20. What is the purpose of test specific status meeting?

PART-B

 1. a. Explain the five stop-test criteria that are based on quantitative   approach. (8)

     b. Narrate about the metrics or parameters to be considered for evaluating the software quality. (8)

2. What is the role of the tester in supporting, monitoring and controlling of   testing?

3. What are the types of reviews? When do the process of review starts? Discuss   about review reports.

4. a. Explain about the components of review plans.(8)

   b. In what way review helps to control project.(8)

5. a .Explain the design and architecture for automation.(8)

   b. List and discuss metrics that can be used for defect prevention and how.(8)

6. a. List the requirements of test tool. Explain with 5 suitable examples.(8)

b. Explain the components of review plan.(8)
7. Discuss the significance of various measurements in the testing process.
8. Explain in detail about various components of review plan.
9. Explain in detail about the measurements for monitoring.
10. Write short notes on(8+8)
       a. SCM
       b. Components of review plan