DHANALAKSHMI SRINIVASAN ENGINEERING COLLEGE
PERAMBALUR-621 212

DEPARTMENT OF INFORMATION TECHNOLOGY

IT 1008 SOFTWARE TESTING

QUESTION BANK

UNIT I

PART A

1. **Compare Verification and Validation.**
2. **Define software quality.**
3. **List the four components of the software development process is comprised of.**
4. **Define testing.**
5. **State some of the important test related issues.**
6. **Write some of the benefits of test process improvements.**
7. **What is meant by maturity goals?**
8. **What is meant by ATR's?**
9. **Draw the Internal structure of TMM maturity levels.**
10. **State maturity goals at each level of TMM.**
11. **What is meant by errors?**
12. **What is meant by defect?**
13. **What is meant by failure?**
14. **What is meant by test case?**
15. **What do test cases contain?**
16. **What is meant by Test?**
17. **What is meant by Test Oracle?**
18. **What is meant by Test Bed?**
19. **What is Quality Metric?**
20. **List out the Quality attributes.**
21. **What is SQA?**
22. **What is meant by principle?**
23. **List out the principle of Myer's.**
24. **What are the four major classes of defects?**

PART B

1. **Give the internal structure of TMM and explain about its maturity goals at each level.**
2. **Write brief about principles of software testing.**
3. **Write a note on defect repository.**
4. **Tabulate and discuss the life cycle chart showing the verification activities for each phase.**
5. **Write down the advantages and disadvantages of functional testing and structural testing.**
6. **What is test strategy? Explain the methods for developing test strategy.**
7. **Discuss the economics of SDLC testing with a suitable illustration.**

8. **Explain the cubic relationship between test factors, test strategies and test tactics.**
9. **Explain the verification and validation activities and the deliverables in software development life cycle.**
10. **State the various testing methodologies.**

UNIT II

PART A

1. **When we say test case is effective.**
2. **What are the two basic strategies used in Test cases?**
3. **What is black box approach?**
4. **What is white box approach?**
5. **What is random testing?**
6. **What is equivalence class partitioning?**
7. **Write the importance of equivalence class partitioning.**
8. **What is boundary value analysis?**
9. **What are the conditions that are used in input specification?**
10. **Write the steps for designing test cases.**
11. **Write the steps a user to perform a search of character in an existing string.**
12. **What is meant by STG charts?**
13. **What is state transition testing?**
14. **What is a usage profile?**
15. **What is certification?**
16. **Write down the difference between white and black box testing.**
17. **Write the application scope of test adequacy criteria.**
18. **What is test data?**
19. **What are logic elements considered for coverage and control flow graph?**
20. **What is meant by path?**
21. **Write the test case for a simple loop testing.**
22. **What is mutation testing?**
23. **Write down the two major assumptions of mutation testing.**
24. **What is test set?**
25. **What is an axiom?**
26. **Write down the assumptions for axioms.**
27. **Write down axioms described by weyuker.**

PART B

1. **Explain about the following methods of black box testing with example.**
    - **(i) Equivalence class partitioning.**
    - **(ii) Boundary value analysis.**
2. **Write a note on COTS components.**
3. **Explain briefly about path and cyclomatic complexity.**
4. **Write a note on the following.**
    - **(i) Loop testing.**
    - **(ii) Mutation testing.**

5. **Explain about test case design strategies.**
6. **Explain about Cause-and-effect graphing, State transition testing and Error guessing.**
7. **Explain in detail about Test adequacy criteria and Coverage and control flow graphs.**
8. **Discuss in detail about covering code logic.**
9. **How the test adequacy criteria is to be evaluated explain briefly.**

UNIT III

PART A

1. **What is unit testing?**
2. **What are the components of unit test?**
3. **List the tasks for unit test.**
4. **List out the steps for unit test planner.**
5. **What are the issues to be considered in adequate test plan?**
6. **What is meant by test harness?**
7. **What is integrated test?**
8. **What are the two major goals considered for integrated testing?**
9. **Write down the two major approaches for integrated testing.**
10. **What is meant by cluster?**
11. **What is generic class cluster?**
12. **What does integrated test plan includes?**
13. **What is system test?**
14. **What are the types of system test available?**
15. **What is meant by load and transaction?**
16. **What is functional testing?**
17. **What is performance testing?**
18. **What is stress testing?**
19. **What are the objectives of configuration testing?**
20. **What are the operations performed during configuration testing?**
21. **What is security testing?**
22. **What is recovery testing?**
23. **What is installation test?**
24. **What is regression testing?**
25. **What is alpha test?**
26. **What is beta test?**
27. **What is acceptance test?**

PART B

1. **Write short notes on need for levels of testing.**
2. **Explain briefly about unit test.**
3. **Write about unit test planning and designing.**
4. **Write the detail description on class as a testable unit.**
5. **What is meant by test harness? Explain.**
6. **Explain in detail about integration test.**
7. **Discuss about various system tests.**
8. **What is meant by regression and acceptance test? Explain briefly.**

UNIT IV

PART A

1. **What is goal?**
2. **What is meant by policy?**
3. **What is test plan?**
4. **What is milestone?**
5. **What does a planner includes?**
6. **What is the hierarchy of test plan?**
7. **What are the components of test plan?**
8. **What is meant by feature?**
9. **What is meant by WBS?**
10. **List down the responsibilities of test related task.**
11. **What is meant by test cost?**
12. **Enumerate the key characteristics of test cost impact systems.**
13. **What is cost driver?**
14. **What does a cost driver project include?**
15. **Write a note on COCOMO model.**
16. **Write down elements of WBS used in testing.**
17. **What is test cost?**
18. **What are test related documents?**
19. **What is test incident report?**
20. **List the components test procedure specification.**
21. **What is meant by test transmittal report?**
22. **What is test log?**
23. **What is test summary report contains?**
24. **Write down skills needed by a test specialist.**
25. **Write down the skills needed by a technical level tester.**
26. **Write down the steps to form a test group.**

PART B

1. **Explain briefly about testing and debugging goals and policies.**
2. **Write about test planning and Components in detail.**
3. **Discuss in detail about test plan attachments.**
4. **Write about test case specification and test procedure specification.**
5. **Briefly explain about test result documentation.**
6. **Explain the steps in forming a test group.**
7. **Explain in brief about test cost impact items.**
8. **Write down skills needed by a test specialist.**
9. **Write down the skills needed by a technical level tester in detail.**

UNIT V

PART A

1. **What is project monitoring?**
2. **What is project controlling?**
3. **List down the major tasks for controlling project monitoring by Thayer.**
4. **What is mile stone?**
5. **Write down the key elements used for monitoring.**
6. **What are the types of test status measurements?**
7. **What are the elements used for coverage measures?**
8. **What are the elements used for black box measures?**
9. **What are the measures used for test cases?**
10. **Write down the measures used for test execution.**
11. **Write down the measures used for test regression.**
12. **Write down the measures for test harness.**
13. **List out the measure for test monitoring.**
14. **List the measures for test productivity.**
15. **Hoe does the fault, error monitoring helps?**
16. **Write down some of the measures of defect tracking systems.**
17. **What is test effectiveness?**
18. **What is DRL?**
19. **What is milestone meeting event?**
20. **What does test report contain?**
21. **What does a stop test criteria contain?**
22. **List down the major activities of CM.**
23. **What is baseline?**
24. **List down the items for audit.**
25. **What is managers' role in controlling and monitoring?**
26. **What is testers' role in controlling and monitoring?**
27. **What is users' and clients role in controlling and monitoring?**
28. **Define testing.**
29. **Define review.**
30. **List down the goals of reviewer.**
31. **Write down the benefits of review program.**
32. **What are the types of reviews?**
33. **Write down steps of inspection process.**
34. **List the components of review plan.**
35. **List the preconditions to be reviewed.**

PART B

1. **Write a summary about the following types of reviews.**
   - **(i) Requirements reviews.**
   - **(ii) Design reviews.**
2. **Write a note on five stop test criteria based on quantitative approach.**
3. **What is software configuration management? Explain about the four major activities associated with configuration management.**
4. **Explain about measurements for monitoring testing status.**
5. **Explain about measurements to monitor tester productivity.**

6. **Explain about measurements for monitoring testing costs.**
7. **Explain about measurements for monitoring errors, faults and failures.**
8. **Explain about monitoring test effectiveness.**
9. **Mention the criteria for test completion and explain briefly.**
10. **Discuss about various types of reviews.**