

**P.G. Department of Computer Applications
N.G.M College, Pollachi**

SOFTWARE TESTING -17PMC428

K1 Type Questions

Unit-1

1. **When should company stop the testing of a particular software?**
 - a. After system testing done
 - b. It depends on the risks for the system being tested**
 - c. After smoke testing done
 - d. None of the above
2. **White-Box Testing is also known as _____**
 - a. Structural testing
 - b. Code-Based Testing
 - c. Clear box testing
 - d. All of the above**
3. **_____ refers to a different set of tasks ensures that the software that has been built is traceable to Customer Requirements.**
 - a. Verification
 - b. Requirement engineering
 - c. Validation**
 - d. None of the above
4. **What do you verify in White Box Testing?**
 - a. Testing of each statement, object and function on an individual basis.
 - b. Expected output.
 - c. The flow of specific inputs through the code.
 - d. All of the above.**
5. **Who performs the Acceptance Testing?**
 - a. Software Developer
 - b. End users**
 - c. Testing team
 - d. Systems engineers
6. **Which of the following Review Technique is / are not time bound?**
 - a. Inspection
 - b. walkthrough**
 - c. Both of These
 - d. None of These
7. **Which of the following categories, Black-box testing attempts to find errors?**
 - a. Incorrect or missing functions
 - b. Interface errors
 - c. Behavior or performance errors
 - d. All of the above**

8. **Equivalence Partitioning comes under which type of Testing?**
 - a. White Box Testing
 - b. Black Box Testing**
 - c. Grey Box Testing
 - d. None of the above
9. **Black Box Testing is also known as _____ .**
 - a. Behavioral Testing**
 - b. Flow Testing
 - c. Data Testing
 - d. None of the above
10. **Cyclomatic Complexity is computed as _____ .**
 - a. The number of regions of the flow graph corresponds to the Cyclomatic Complexity.
 - b. Cyclomatic Complexity, $V(G)$, for a flow graph, G , is defined as $V(G) = E - N + 2$ where E is the number of flow graph edges, N is the number of flow graph nodes.
 - c. Cyclomatic Complexity, $V(G)$, for a flow graph, G , is also defined as $V(G) = P + 1$ where P is the number of predicate nodes contained in the flow graph G .
 - d. All of the above.**
11. **Which of the following is a software metric that provides a quantitative measure of the logical complexity of a program?**
 - a. Cyclomatic Complexity
 - b. LOC**
 - c. Function Point
 - d. None of the above.
12. **What is example of load testing?**
 - a) Downloading large contents from the internet.
 - b) Running multiple applications on a computer or server simultaneously.
 - c) Printing large document using printer in a queue.
 - d) Generating a large amount of traffic on particular page.
 - e) All the above**
13. **Which technique is applied for usability testing?**
 - a) White box
 - b) Black box**
 - c) Grey box
 - e) Combination of all

Unit-2

1. **Who is responsible for integration testing?**
 - a) Developer
 - b) Software Tester
 - c) Specialist integration tester
 - d) both a and c**
2. **What is the objective of integration testing?**
 - a) To verify that system is functioning according to specified requirements
 - b) To verify that system meets user expectation and needs

- c) To verify that system separately testable modules are functioning properly
- d) **To verify that interfaces between different parts of system**
- 3. **What is the order in which test levels are performed?**
 - a) Unit,Integration, System,Acceptance
 - b) Unit ,System, Integration,Acceptance
 - c) Unit, Integration, Acceptance, System
 - d) **It depends on nature of a project.**
- 4. **Which testing is concerned with behavior of whole product as per specified requirements?**
 - a) Acceptance testing
 - b) Component testing
 - c) **System testing**
 - d) Integration testing
- 5. **System testing is a**
 - a) **Black box testing**
 - b) White box testing
 - c) Grey box testing
 - d) Both a and b
- 6. **System architecture is determined during which phase?**
 - a) Requirement gathering
 - b) Implementation
 - c) Development
 - d) **Design**
- 7. **Verifying that whether software components are functioning correctly and identifying the defects in them is objective of which level of testing?**
 - a) Integration testing
 - b) Acceptance testing
 - c) **Unit testing**
 - d) System Testing
- 8. **Who is responsible for component testing?**
 - a) Software tester
 - b) Designer
 - c) User
 - d) **Developer**
- 9. **Component testing is a**
 - a) Black box testing
 - b) **White box testing**
 - c) Grey box testing
 - d) Both a and b
- 10. **Which of the following is not other name for structural testing?**
 - a) White box testing
 - b) Glass box testing

- c) **Behavioral testing**
 - d) None of the above
11. **In which of the following type of testing, testing is done without planning and documentation?**
- a) Unit testing
 - b) Retesting
 - c) **Ad hoc testing**
 - d) Regression testing
12. **Which of the followings is/are best described as Smoke Testing?**
- a) Part of Black Box Testing.
 - b) Unit testing for small programs
 - c) **Rolling Integration Testing**
 - d) None of the above.

Unit-3

1. **Which of the following is not a part of Performance Testing?**
 - a. Measuring Transaction Rate.
 - b. Measuring Response Time.
 - c. Measuring the LOC.
 - d. None of the above.
2. **Testing of individual components by the developers are comes under which type of testing?**
 - a. Integration testing
 - b. Validation testing
 - c. **Unit testing**
 - d. None of the above.
3. **In which of the following situations regression testing is not performed?**
 - a) **When project manger asks to perform**
 - b) When new functionality is introduced.
 - c) When database system is changed
 - d) When system is installed on different hardware configuration than previously tested.
4. **Which is not characteristic of regression testing?**
 - a) Regression testing can be performed on each level
 - b) **It is done to illustare that software is not changed intenationally**
 - c) It is done to illustrate that new defects are not introduced after adding a new functionality or corercting previous one.
 - d) It is best candidaye for automation
5. **When should Regression Testing to be performed?**
 - a. When the project manager says
 - b. **After the software has changed.**
 - c. Whenever software testing team get the time.
 - d. None of the above.
6. Performance is concerned with achieving that meet the performance objectives for the project or product.

- a) **response times, throughput, and resource-utilization levels**
 - b) response times, throughput, and stress levels
 - c) reason times, throughput, and resource-utilization levels
 - d) response times, click-through, and resource-utilization levels
7. Performance Testing explores several system qualities, that can be simplified to:
- a) **Speed**
 - b) Capacity
 - c) Scalability
 - d) Stability
8. Globalization refers to:
- a) **A more integrated and interdependent world**
 - b) Less foreign trade and investment
 - c) Global warming
 - d) Lower incomes worldwide
9. Which of the following do NOT facilitate globalization?
- a) Improvements in communications
 - b) **Barriers to trade and investment**
 - c) Looser immigration controls
 - d) Removal of controls on movement of capital across borders
10. Globalization is beneficial for firms because:
- a) It protects them against foreign competition.
 - b) It cushions them from the effects of events in other countries.
 - c) **It opens up new market opportunities.**
 - d) It increases the risk and uncertainty of operating in a globalizing world economy

Unit-4

1. **During which activity tester decides if extra test cases are required or not?**
- a) Test implementation and execution
 - b) Test planning and control
 - c) **Test analysis and design**
 - d) Evaluating exit criteria
2. **A logical collection of test cases which naturally work together is called as _____**
- a. Test log
 - b. Test procedure
 - c. Test data
 - d. **Test suite**
3. is concerned with summarizing information about the testing endeavor.
- a) Test control
 - b) Test monitoring

- c) **Test reporting**
- d) Configuration management
- 4. The purpose of is to provide feedback and visibility about test activities.
 - a) Test control
 - b) **Test monitoring**
 - c) Test reporting
 - d) Configuration management
- 5. **Writing a test summary report is a major task of _____.**
 - a) Test Closure activity
 - b) Implementation and execution
 - c) **Evaluating exit criteria and Reporting**
 - d) Analysis and Design
- 6. The purpose of is to establish and maintain the integrity of the products of the software or system through the project and product lifecycle.
 - a) Test control
 - b) Test monitoring
 - c) Test reporting
 - d) **Configuration management**
- 7. Which testing tool does a simple job of enforcing standards in a uniform way of many programs?
 - a) Static Analyzer
 - b) Code Inspector
 - c) Standard Enforcer
 - d) **Both Code Inspector & Standard Enforcer**

8.

Unit-5

- 1. Selenium doesn't support _____ to write programs (Test Scripts)
 - a) Java
 - b) Perl
 - c) **VBScript**
 - d) Python
- 2. _____ **doesn't support Test design (Creating test Cases)**
 - a) Selenium IDE
 - b) Selenium RC
 - c) Selenium WebDriver
 - d) **Selenium Grid**
- 3. A metric used to measure the characteristic of the methods, Techniques and tools employed in developing, implementing and maintaining the software system called as
 - a) **Process metric**
 - b) Product metric

c)Test metric

d)None

4. **Metrics collected during testing includes**
a) System test cases planned/executed/passed
b) Discrepancies reported/resolved
c) Staff hours
d) All of the above
5. **What is the scenario in which automation testing can be done:**
1) Application is stable
2) Usability testing is to be done
3) The project is short term
4) Long term project having numerous releases
A. 1
B. 1 & 4
C. 1 & 2
D. 2 & 3
6. **What is the common limitation of automated testing?**
a)They are not useful for performance testing
b) They cannot be used for requirement validation
c) It is very difficult for automated scripts to verify a wide range of application responses.
d) They are not useful when requirements are changing frequently
7. **The extent of automation for a given project is generally guided by**
a) Scope for automation
b) Tool support
c) Business Functionality
d) Vendor's skills
8. **What are the main attributes of test automation**
1) Time saving
2) Correctness
3) Less Manpower
4) More reliable
a) 1 and 2
b) 2 and 3
c) 1, 2, 3 and 4
d) None of the above
9. **Some of the common problems of test automation are**
a)Changing requirements
b) Lack of time
c) Both a and b
d) None of the above
- 10.Automation Testing should be done before starting Manual testing.
Is the above statement correct?
a) Yes
b) No

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K2 Type Questions

Unit-1

1. Define software Testing.

Testing can be described as a process used for revealing defects in software, and for establishing that the software has attained a specified degree of quality with respect to selected attributes.

2. Define Error.

An error is mistake or misconception or misunderstanding on the part of a software developer.

3. Define Software Quality.

Quality relates to the degree to which a system, system component, or process meets specified requirements.

4. List the levels of Testing or Phases of testing.

• Unit Test • Integration Test • System Test • Acceptance Test

5. What is traceability matrix?

The relationship between test cases and requirements is shown with the help of a document. This document is known as traceability matrix.

6. What is Equivalence partitioning testing?

Equivalence partitioning testing is a software testing technique which divides the application input test data into each partition at least once of equivalent data from which test cases can be derived. By this testing method it reduces the time required for software testing.

7. What is the MAIN benefit of designing tests early in the life cycle?

It helps prevent defects from being introduced into the code.

8. Define Validation.

Validation is the process of evaluating a software system or component during, or at the end of, the development cycle in order to determine whether it satisfies specified requirements.

9. Define Verification.

Verification is the process of evaluating a software system or component to determine whether the product of a given development phase satisfy the conditions imposed at the start of that phase.

10. Define process.

Process, in the software engineering domain, is the set of methods, practices, standards, documents, activities, policies, and procedures that software engineers use to develop and maintain a software system and its associated artifacts, such as project and test plans, design documents, code and manuals.

11. Define Testing

Testing is generally described as a group of procedures carried out to evaluate some aspects of a piece of software.

12. List the two basic Testing strategies.

1. Black box testing. 2. White box testing.

13. What are the knowledge sources for Black box testing?

1. Requirements 2. Document specification 3. Domain knowledge 4. Defect analysis data

14. What are the knowledge sources for White box testing?

1. High level design 2. Detailed design 3. Control flow graphs 4. Cyclomatic complexity

15. List the methods of Black box testing.

1. Equivalence class partitioning 2. Boundary value analysis 3. State transition testing 4. Cause and effect graphing 5. Error guessing

16. List the methods of White box testing.

1. Statement testing 2. Branch testing

UNIT-2

17. What is Integration testing?

Integration testing is a level of software testing process, where individual units of an application are combined and tested. It is usually performed after unit and functional testing.

18. Define Unit Testing

A unit is the smallest possible testable software component that can be characterized in several ways.

19. Define Work Breakdown Structure (WBS)

A Work Break Down structure is a hierarchical or tree like representation of all the tasks that are required to complete a project.

21. Define Walkthrough

Walkthrough are a type of technical review where the producer of the reviewed material serves as the review leader and actually guides the progression of the review. Walkthrough have traditionally been applied to design and code.

22. What is functional system testing?

Testing the end to end functionality of the system as a whole is defined as a functional system testing.

23.What is maintenance testing?

Triggered by modifications, migration or retirement of existing software

24.What are the Integration strategies?

- Top_ Down: In this strategy integration of the module begins with testing the upper level modules.
- Bottom_ Up: In this strategy integration of the module begins with testing the lowest level modules.

25.Define stress Testing.

When a system is tested with a load that causes it to allocate its resources in maximum amounts .It is important because it can reveal defects in real-time and other types of systems. which it will crash. This is sometimes called “breaking the system”.

26.What is Integration testing?

Integration testing is a level of software testing process, where individual units of an application are combined and tested. It is usually performed after unit and functional testing.

27. What is Alpha testing?

Pre-release testing by end user representatives at the developer's site.

28.What is beta testing?

Testing performed by potential customers at their own locations.

29.What is negative and positive testing?

A negative test is when you put in an invalid input and receives errors. While a positive testing, is when you put in a valid input and expect some action to be completed in accordance with the specification.

30.What is the purpose of a test completion criterion?

The purpose of test completion criterion is to determine when to stop testing What can static analysis NOT find?

For example memory leaks.

31.What is test coverage?

Test coverage measures in some specific way the amount of testing performed by a set of tests (derived in some other way, e.g. using specification-based techniques). Wherever we can count things and can tell whether or not each of those things has been tested by some test, then we can measure coverage.

32. Why is incremental integration preferred over "big bang" integration?

Because incremental integration has better early defects screening and isolation ability

33. What is called the process starting with the terminal modules?

Bottom-up integration

34. What is the main purpose of Informal review

Inexpensive way to get some benefit

35. When testing a grade calculation system, a tester determines that all scores from 90 to 100 will yield a grade of A, but scores below 90 will not. This analysis is known as:

Equivalence partitioning

36.What is Grey Box Testing?

Grey box is the combination of both White Box and Black Box Testing. The tester who works on this type of testing needs to have access to design documents. This helps to create better test cases in this process.

37.What is Load Testing?

It is to verify that the system/application can handle the expected number of transactions and to verify the system/application behavior under both normal and peak load conditions.

38.What is Stress Testing?

It is to verify the behavior of the system once the load increases more than its design expectations.

39.What is Scalability Testing?

Scalability testing is a type of non-functional testing. It is to determine how the application under test scales with increasing workload.

40.What is Interface Testing?

Interface testing is performed to evaluate whether two intended modules pass data and communicate correctly to one another.

41.What is Reliability Testing?

Perform testing on the application continuously for long period of time in order to verify the stability of the application

Unit-3

42.Define Regression testing.

Regression testing is not a level of testing, but it is the retesting of the software that occurs when the changes are made to ensure that the new version of the software has retained the capabilities of the old version and that has no defect have been introduced due to the changes.

43.When "Regression Testing" should be performed?

After the software has changed or when the environment has changed Regression testing should be performed.

44.What is Smoke Testing?

Smoke Testing is done to make sure if the build we received from the development team is testable or not. It is also called as “Day 0” check. It is done at the “build level”. It helps not to waste the testing time to simply testing the whole application when the key features don’t work or the key bugs have not been fixed yet.

45.What is Sanity Testing?

Sanity Testing is done during the release phase to check for the main functionalities of the application without going deeper. It is also called as a subset of Regression testing. It is done at the “release level”. At times due to release time constraints rigorous regression testing can’t be done to the build, sanity testing does that part by checking main functionalities.

46.What is Globalization Testing?

Globalization is a process of designing a software application so that it can be adapted to various languages and regions without any changes.

47.What is Internationalization Testing

Globalization is a process of designing a software application so that it can be adapted to various languages and regions without any changes.

48.What is Localization Testing ?

Localization is a process of adapting globalization software for a specific region or language by adding local specific components.

49.What is Exploratory Testing?,

Usually, this process will be carried out by domain experts. They perform testing just by exploring the functionalities of the application without having the knowledge of the requirements.

50.What is Monkey Testing?

Perform abnormal action on the application deliberately in order to verify the stability of the application.

51.What is Performance Testing?

This type of testing determines or validates the speed, scalability, and/or stability characteristics of the system or application under test. Performance is concerned with achieving response times, throughput, and resource-utilization levels that meet the performance objectives for the project or product.

Unit-4

52.What is Automation testing?

Automation Testing is a technique using an automation tool to write and execute tester's test scripts and cases.

The main goal of Automation Testing is to reduce the number of test cases to be run manually and not eliminate Manual Testing altogether.

53. When will you automate a test?

Automation is preferred in following cases

- Repetitive Tasks
- Smoke and Sanity Tests
- Test with multiple data set
- Regression test cases

54. When will you not automate testing?

One should not automate in following cases

- When the Application Under Test changes frequently
- One time test cases
- Adhoc – Random testing

55.What are the steps involved in the Automation Process?

In the automation process, steps involved are

- Selecting the Test tool
- Define scope of automation
- Planning, design, and development
- Test execution
- Maintenance

56.What are the most popular tools for automation testing?

The most popular test tool for automation testing are

- QTP (HP UFT)
- Rational Robot
- Selenium

57.What is QTP

QTP (Quick Test Professional) is now known as HP UFT. It is a commercial automation tool and supports a very wide range of test environments Web, Desktop, SAP, Delphi, Net, ActiveX, Flex, Java, Oracle, Mobile, PeopleSoft, PowerBuilder, Siebel, Stingray, Visual Basic amongst others.

Unit-5

58.What is metrics? What is test metrics?

Metrics can be defined as “STANDARDS OF MEASUREMENT”. Software Metrics are used to measure the quality of the project. Simply, Metric is a unit used for describing an attribute. Metric is a scale for measurement.

59. What type of metrics would you use?.

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K3 Type questions

Unit-1

1. What is the difference between QA and Testing?
2. What is the difference between Software Testing and Debugging?
3. What is the difference between Verification and Validation?
4. What is the difference between Alpha Testing and Beta Testing?
5. What is the difference between Static Testing and Dynamic Testing?
6. What is the difference between Software Testing and Debugging?
7. What is the difference between Verification and Validation?
8. What is the difference between Functional Testing and System Testing?
9. What are advantages & drawbacks of path coverage metric of software testing?
10. What are the benefits of Software Validation?

Unit-2

11. What is the difference between Stress Testing and Load Testing?
12. What is the difference between Black Box Testing & White Box Testing?
13. Differentiate between positive and negative testing?.
14. What are the difference between static and dynamic testing.
15. What is the difference between Unit Testing, Component Testing and Integration Testing?
16. What is the difference between Statement Coverage, Branch Coverage and Path Coverage?
17. What is the difference between Ad-hoc Testing, Monkey Testing and Exploratory Testing?
18. What is the difference between System Testing and End-to-End Testing or E2E Testing?
19. What is the difference between Alpha Testing and Beta Testing?
20. What is the difference between Stress Testing and Load Testing?
21. What is the difference between Black Box Testing & White Box Testing?
22. Out of Tester & Developer, who is most appropriate to do Unit Testing & Integration Testing?
23. What is the difference between code coverage analysis & test coverage analysis?
24. What are advantages & drawbacks of path coverage metric of software testing?

Unit-3

25. What is the difference between Smoke Testing and Sanity Testing?
26. What is the Difference between Retest and Regression Testing?
27. What is the difference between Smoke Testing and Sanity Testing?
28. What is the difference between Structural testing & functional testing?
- 29.** Explain sanity testing.
30. Discuss on the best practices used in regression testing?.
31. Explain the tools used for internationalization testing?.
- 32.** Explain the tools used for performance testing?.
33. Explain language and a Character set.
34. What is fake language testing? Explain.

Unit-4

35. Explain test planning?. Write about preparing the test plan and scope management?
36. Explain size and effort estimation?.
37. Discuss on activity breakdown and scheduling?.
38. Explain test management in detail.
39. Explain test people management.
40. Discuss on traceability matrix.
41. Explain test reporting?.
42. Explain the best practices used in test reporting?
43. Write test plan template.
44. Illustrate the baselining of test cases.

Unit-5

45. What is the purpose of Automated Test Tools?
46. Do automated testing tools make testing easier?
47. What questions you would ask to yourself while deciding to automate the tests?
48. What do we lose with Automation compared to Manual Testing?
49. How can you identify the types of testing amenable to automation?
50. Discuss on the management aspects in automation.
51. What are the challenges in automation?

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K4 and K5 type Questions

Unit-1

1. Explain (a) equivalence class partitioning (b) boundary value analysis.
2. Explain various black box testing in detail
3. Explain white box design approaches in detail
4. Explain non – functional testing techniques in detail
5. Discuss path and cyclomatic complexity
6. Explain scenario testing?
7. Discuss on defect bash?
8. Explain stress testing?
9. Briefly explain about Requirement based testing?
10. Explain about Positive and Negative testing?
11. Explain about Boundary value analysis
12. Briefly explain about Equivalence class partitioning?

Unit-2

13. Explain scalability testing?
14. Explain acceptance testing?
15. Explain system testing.
16. Explain bidirectional integration.
17. Explain system integration.
18. Explain reliability testing?
19. Explain business vertical testing.
20. Explain certification, standards and compliance.
21. Explain acceptance testing?.
22. Why system testing is done?. Explain.

Unit-3

23. Explain Internationalization or $I_{18}N$?
24. Explain localization or $L_{10}N$?
25. Explain Globalization $G_{11}N$?
26. Explain performance testing.
27. Explain regression testing.
28. Explain performance tuning.
29. Explain the factors that governing performance testing.
30. Explain performance benchmarking.
31. Explain the methodology for selecting test cases? In regression testing?
32. Explain the phases in internationalization testing.

Unit-4

33. Explain various groups in test plan and policy development with their role
34. Discuss challenges and issues involved in testing service organization

35. Explain essential high level items that are included during test planning. Discuss the test plans
36. What are the skills needed for a test specialist
37. Discuss IEEE recommended test in detail
38. Explain testing and debugging goals and policies
39. Explain test plan components
40. Explain test plan attachments
41. Explain reporting test result formats
42. Explain careers paths for tester with example.

Unit-5

43. Explain different types of software metrics and measurement used in testing process
44. Discuss Manual and automatic testing in detail
45. Explain parameters to be Focussed for evaluating the software quality
46. Explain the architecture of test automation
47. How defect can be prevention explain the different metrics used
48. Explain Automated Testing?
49. Explain management aspects in automation.
50. Why metrics in testing?. Explain.
51. Explain schedule variance.
52. Write about the criteria for selecting test tools.