MCQ:

1. What is software testing?

(a) It is the process of demonstrating that errors are not present.

(b) It is the process of establishing confidence that a program does what it is supposed to do.

(c) It is the process of executing a program with the intent of finding errors.

(d) It is the process of showing the correctness of a program.

2. Why should testing be done?

(a) To ensure the correctness of a program

(b) To find errors in a program

(c) To establish the reliability of a program

(d) To certify the effectiveness of a program

3. Which phase consumes maximum effort to fix an error?

(a) Requirements analysis and specifications

(b) Design phase

(c) Coding phase

(d) Feasibility study phase

4. Which objective is most difficult to achieve?

(a) Execute every statement of a program at least once

(b) Execute every branch statement of a program at least once

(c) Execute every path of a program at least once

(d) Execute every condition of a branch statement of a program at least once

5. Software errors during coding are known as:

(a) Bugs

(b) Defects

(c) Failures

(d) Mistakes Introduction

6. The cost of fixing an error is:

(a) More in requirements analysis and specification phase than coding phase

(b) More in coding phase than requirements analysis and specification phase

(c) Same in all phases of a software development life cycle

(d) Negligible in all phases

7. Beta testing is done by:

(a) Developers

(b) Testers

(c) Potential customers

(d) Requirements writers

8. Alpha testing is carried out at the:

(a) Developer's site in a controlled environment

(b) Developer's site in a free environment

(c) Customer's site in a controlled environment

(d) Customer's site in a free environment

9. The purpose of acceptance testing is:

(a) To perform testing from the business perspective

(b) To find faults in the software

(c) To test the software with associated hardware

(d) To perform feasibility study

10. Acceptance testing is done by:

(a) Developers

(b) Customers

(c) Testers

(d) All of the above

11. Program is:

(a) Subset of software

(b) Superset of software

(c) Set of software

(d) Union of software

12. Which is not an infrastructure software?

(a) Compiler

(b) Operating system

(c) Testing tools

(d) Result Management Software

13. Software should have:

(a) Program + operating system + compiler

(b) Set of programs + operating system

(c) Programs + documentation + operating procedures

(d) None of the above

14. Concepts of software testing are applicable to:

(a) Procedural programming languages

(b) Object oriented programming languages

(c) 'C', 'C++' and Java programming languages

(d) ve All of the abo 30 Software Testing

15. CASE Tool is:

(a) Computer Aided Software Engineering Tool

(b) Component Aided Software Engineering Tool

(c) Constructive Aided Software Engineering Tool

(d) Complete Analysis Software Enterprise Tool

16. One fault may lead to:

(a) One failure

(b) Many failures

(c) No failure

(d) All of the above

17. Test suite of a program is a:

(a) Set of test cases

(b) Set of inputs with pre-conditions

(c) Set of outputs with post-conditions

(d) Set of testing strategies

18. Alpha and Beta testing techniques are related to:

(a) Unit testing

(b) Integration testing

(c) System testing

(d) Testing by Customer

19. Testing a software is primarily focused on:

(a) Verification activities only

(b) Validation activities only

(c) Verification and validation activities

(d) None of the above

20. Testing a software with real data in real environment is known as:

(a) Alpha testing

(b) Beta testing

(c) System testing

(d) Integration testing

21. Verification activities are:

(a) Performed manually

(b) Related to reviewing the documents and source code

(c) Known as static testing

(d) All of the above

22. Validation activities are:

(a) Dynamic activities and require program execution

(b) Related to inspecting the source code

(c) Related to static testing

(d) Related to source code design and documentation

23. When the output of a program is different from the expected output, it is known as:

(a) A fault

(b) An error

(c) A failure

(d) A mistake

24. Software testing activities should be started:

(a) After the completion of source code

(b) After the completion of design phase

(c) As early as possible in the software development life cycle

(d) After the completion of software requirements and analysis phase

25. Software testing activities are important in:

(a) Every phase of the software development life cycle

(b) The last few phases of the software development life cycle

(c) The software requirements and analysis phase

(d) All of the above

26. The focus of acceptance testing is:

(a) To find faults

(b) To ensure correctness of software

(c) To test integration related issues

(d) To test from the user's perspective

27. A reliable software is one which is:

(a) Liked by its users

(b) Delivered on time and with budget

(c) Unlikely to cause failures

(d) Very easy to use

28. When to stop testing and release the software to customers should be decided on the basis of: (a) Market conditions

(b) Budget and availability of resources

(c) Test metrics

(d) Capabilities of the testing persons

29. What are the good software testing practices?

(a) Involve testing persons as early as possible in the software development life cycle

(b) Apply effective verification techniques

(c) Enforce inspections and reviews after every phase of the software development life cycle

(d) All of the above

30. What is a test case?

(a) Input(s), expected output(s), pre-condition(s) and post-condition(s)

(b) Steps of execution

(c) A list of activities which can be tested

(d) None of the above

31. You cannot control what you cannot :

(a) Define

(b) Measure

(c) Improve

(d) Change

32. What is the major benefit of verifications in the early phases of the software development life cycle?

(a) It identifies changes in the SRS

(b) It reduces defect multiplication

(c) It allows involvement of testing persons

(d) It improves discipline in the various development activities

33. Behavioural specifications are required for:

(a) Modelling

(b) Verification

(c) Validation

(d) Testing

34. Which, in general, is the least expected skill of a testing person?

(a) Diplomatic (b) Reliable (c) Having good attention to detail (d) Good developer

35. Debugging of a program is

(a) The process of executing the program

(b) The process of identifying a fault and removing it from the program

(c) The process of experiencing a failure

(d) The process of improving the quality of the program

36. All validation activities come under the category of:

(a) Dynamic testing (b) Static testing (c) Source code design (d) None of the above

37. All verification activities come under the category of:

(a) Dynamic testing (b) Static testing (c) Source code design (d) None of the above

38. Which is not a factor of software quality?

(a) Reliability (b) Portability (c) Efficiency (d) Functionality

39. Which is the most important factor of software quality?

(a) Reliability (b) Understandability (c) Efficiency (d) Consistency

40. Quality assurance activities concentrate on

(a) Software design (b) Software performance (c) Software products (d) Software processes

41. Which is not the quality of a testing person?

(a) Cautious (b) Curious (c) Judgmental (d) Critical

42. What should be the best possible objective for testing?

(a) Execute every statement at least once

(b) Execute every path at least once

(c) Execute every branch statement at least once

(d) Execute every condition of a branch statement at least once

43. Which is not a user manual?

(a) Reference guide (b) Beginner's guide (c) Sequence diagrams (d) System overview

44. Which is not a documentation manual?

(a) SRS document (b) SDD document (c) Source code (d) Installation guide

45. Which is not the limitation of testing?

(a) Difficult to measure the progress of testing

(b) Availability of testing tools

(c) Input domain is too large to test

(d) Too many paths in the program

46. How much percentage of cost is generally consumed in software testing with reference to software development cost?

(a) 10 – 20 (b) 40 – 50 (c) 80 – 90 (d) 70 – 80

47. How much testing is enough?

(a) Not easy to decide

(b) Depends on complexity and criticality

(c) Depends on abilities of testing persons

(d) Depends on maturity of developers

48. If an expected output is not specified then:

(a) We cannot execute the test case

(b) We may not be able to repeat the test

(c) We may not be able to decide if the test has passed or failed

(d) We may not be able to automate the testing activity

49. Which of the following is a reason for a software failure?

(a) Testing fault (b) Software Fault (c) Design Fault (d) Requirement Fault

50. Why is it impossible to test a program completely?

(a) Input domain is too large to test

(b) Good testers are not available

(c) Efficient testing tools are not available

(d) None of the above

QUESTIONS:

1. What is software testing? Is it possible to do complete testing?

2. What are the limitations of testing? Discuss with the help of examples.

3. Describe some software failures. How can we minimize such failures?

4. Why should we test software? What are the associated risks, if we release it without testing?

5. Who should do the testing of the software? Is there any international standard?

6. What should we test? Discuss the areas which should be focused on during testing.

7. There are two limitations in software testing: (i) Input domain is too large to test (ii) Too many paths in the program Justify these limitations with the help of suitable examples.

8. What are logical bugs? How are they different from syntax bugs? How can we handle logical bugs effectively?

9. Write a program to add two digit integers. Can we test the program completely? If so, how many test cases are required? Assume that each test case can be executed and analyzed in one second; how long would it take to execute all test cases?

10. What is the testing process? How can it be implemented? What are its limitations?

11. Will exhaustive testing (even if possible for a very small program) guarantee that the program is 100% correct?

12. What are the objectives of testing? Why is the psychology of the testing person important?

13. Software does not break or wear out with time (unlike hardware). Why does software fail even after a good amount of testing?

14. What is the tester's role in software development?

15 When to stop testing is a very crucial decision. What factors should be considered for taking such a decision?

16. Differentiate between (i) Alpha and Beta testing (ii) Development and regression testing (iii) Fault, bug and failure (iv) Verification and validation (v) Static and dynamic testing (vi) Program and

software (vii) Test, Test case and Test Suite (viii)Deliverable and milestones (ix) Quality and Reliability (x) Testing, Quality Assurance and Quality Control11 Introduction 35

17. Explain a typical test case template. What are the reasons for documenting test cases?

18. With the help of a suitable example, illustrate why exhaustive testing is not possible.

19. Define a test case. What are the objectives of test case design? Discuss the various steps involved.

20. What is the role of Quality Assurance in software development? How is it different from Quality Control?

21. What is software crisis? Was Y2K a software crisis?

22. What are the components of a software system? Discuss how a software differs from a program.

23. Differentiate between generic and customized software products. Which one has a large market share and why?

24. What is a software failure? Discuss the conditions of a failure. Mere presence of faults may not lead to failures. Explain with the help of an example.

25. Verification and validation are used interchangeably many times. Define these terms and establish their relationship with testing.

26. Testing is not a single phase in the software development life cycle. Explain and comment.

27. Discuss the advantages of testing with reference to the software product.

28. Discuss the significance of the V-shaped software life cycle model and also establish the relationship between its development and testing parts.

29. What is the relationship of the V-shaped software life cycle model with the waterfall model? How is acceptance testing related to requirement analysis and specification phase?

30. Differentiate between the V-shaped software life cycle model and the waterfall model.

MCQ:

1.Which is not a component of a use case diagram?

 (a) Actor (b) Use case (c) Relationship between actor and use case (d) Test case

2. Which is not included in a use case template?

 (a) Actors (b) Pre-conditions and post-conditions (c) Test cases (d) Flow of events

3. UML stands for any one of the following:

 (a) Unified Modeling Language

(b) Unified Machine Language

(c) United Modeling Language

(d) United Machine Language

4. Which of the following is not correct

 (a) An actor initiates a use case.

(b) Every use case has a specified functionality.

 (c) One or more actors may interact with a use case.

 (d) Two use cases may have the same name.

5. Use case scenario is:

(a) An input of a use case

 (b) An instance of a use case

 (c) An output of a use case

 (d) An information of a use case

6. Which is not an accepted strategy for data validity?

(a) Accept only known valid data

(b) Reject known bad data

 (c) Sanitize all data

 (d) Reject non-effective data

7. Guidelines for generating validity checks should include the following:

(a) Mandatory data inputs (b) Blank data inputs (c) Data range (d) All of the above

8. The most popular area of database testing is:

(a) Websites (b) Networks (c) Scientific applications (d) Operating systems

9. Which is not an actor in use cases?

(a) External data base (b) Administrator (c) Keyboard (d) Data entry operator

10. Every use case may have:

(a) At least one actor (b) At most one actor (c) No actor (d) None of the above

11. A use case scenario may generate:

(a) At most one test case (b) At least one test case (c) No test case (d) None of the above

12. Use cases and use case diagrams are used to define:

(a) Complexity of a system

(b) Criticality of a system

(c) Stability of a system

(d) Behaviour of a system

13. Special requirements in a use case template define:

(a) Business rules

(b) Reliability requirements

(c) Expectations of the users

(d) Associated use cases Creating Test Cases from Requirements and Use Cases 333

14. Any variable in a use case has:

(a) At least one valid value and one invalid value

(b) At most one valid value

(c) At most one invalid value

(d) At most one valid value and one invalid value

15. A selection variable in a form:

(a) Has one option (b) Has many options (c) Has no option (d) None of the above

QUESTIONS:

1. What is a use case? How is it different from a use case diagram? What are the components of a use case diagram?

2. How do we write use cases? Describe the basic and alternative flows in a use case. Discuss any popular template for writing a use case.

3. Explain the various steps for the generation of test cases from the use cases. Why do we identify variables in a use case?

4. Design a problem statement for library management system and generate the following: (i) Use cases (ii) Use case diagram (iii) Basic and alternative flows in use cases (iv) Test cases from use cases.

5. Consider the problem of railway reservation system and design the following: (i) Use cases (ii) Use case diagram (iii) Test cases from use cases What is the role of an actor in use case diagram? Discuss with the help of a suitable example.

6. Discuss the guidelines for the creation of use cases for designing of any system. Is there any limit for the number of use cases in any system?

7. Consider the problem statement of a university registration system as given in Chapter Write the 'maintain scheme detail' use case description and also generate test cases accordingly.

8. What are various strategies for data validity? Discuss with the help of an example.

9 .Consider the scheme detail form given in chapter 5 of a university registration system. Write the validity checks and generate test cases from the validity checks.

10. What are the guidelines for generating the validity checks? Explain with the help of an example.

11. Why should we do database testing? Write some advantages and applications of data base testing.
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12. Write the problem statement for library management system. Design test cases for various operations using database testing.

13. Design the test cases for all operations of 'maintain scheme detail' form of university registration system using database testing.

14. Why do we consider domain specific checks very important for generating validity checks? How are they related with the functionality of the system?

15. Why should data validation be given focus in testing? Why do we expect valid data? How do we prevent the entry of invalid data in a system?

MCQ:

1. Regression testing should be performed:

(a) After every month of release of software

 (b) After the changes in the software

(c) After the release of the software

(d) After the completion of development of software

2. Regression testing is primarily related to:

 (a) Functional testing (b) Data flow testing (c) Maintenance testing (d) Development testing

3. Which test cases are easy to identify?

(a) Fault revealing (b) Modification revealing (c) Modification traversing (d) Bug revealing

4. Which of the following is not achieved by regression testing?

(a) Locate errors in the modified program

 (b) Increase confidence in the correctness of the modified program

(c) Ensure the continued operation of the program

(d) Increase the functionality of the program

5. Which activity is performed in crisis situations and under greater time constraints?

(a) Regression testing (b) Development testing (c) Verification (d) Validation

6. Regression testing process may include:

(a) Fault Identification (b) Code modification (c) Test cases selection (d) All of the above

7. Which regression test cases selection technique is more useful?

(a) Select all test cases

 (b) Select test cases randomly

(c) Select modification traversing test cases

(d) Select 50% of available test cases

8.Risk should include:

 (a) Probability of occurrence of a problem (b) Impact of that problem (c) Test cases (d) (a) and (b) both

9. Which is not the way to organize a risk matrix?

 (a) Threshold by quadrant

 (b) Threshold by diagonal quadrant

 (c) Threshold by available test cases

 (d) Threshold based on high impact of the problem

10. Which prioritization technique is used when we assign equal importance to 'probability of occurrence' and 'Impact of problem' in risk matrix?

(a) Threshold by quadrant

 (b) Threshold by diagonal quadrant

(c) Threshold based on high impact of the problem

(d) Threshold based on high probability of occurrence of problem

11. In prioritizing what to test, the most important objective is to:

(a) Find as many faults as possible

(b) Test high risk areas

(c) Obtain good test coverage

(d) Test easy areas

12. Test cases are prioritized so that:

(a) We shorten the time of testing

(b) We do the best testing in the time available

(c) We do more effective testing

(d) We find more faults

13. A regression test:

(a) Will always be automated

(b) Will help to ensure that unchanged areas have not been affected

(c) Will help to ensure that changed areas have not been affected

(d) Will run during acceptance testing

14. Which of the following uses impact analysis most?

(a) Acceptance testing (b) System testing (c) Regression testing (d) Unit testing

15. Which of the following is most benefited when a tool is used with test capture and replay facility?

(a) Regression testing (b) Integration testing (c) System testing (d) Acceptance testing

QUESTIONS:

1. (a) What is regression testing? Discuss various categories of selective re-test problem. (b) Discuss an algorithm for the prioritization of test cases.

2. What are the factors responsible for requirement changes? How are the requirements traced?

3. Identify the reasons which are responsible for changes in the software. Comment on the statement "change is inevitable."

4. Compare regression testing with development testing. Do we perform regression testing before the release of the software?

5. Is it necessary to perform regression testing? Highlight some issues and difficulties of regression testing.

6. Explain the various steps of the regression testing process. Which step is the most important and why?

7. Discuss techniques for selection of test cases during regression testing. Why do we rely on the selection of test cases based on modification traversing?

8. What are selective re-test techniques? How are they different from the 'retest all' technique?

9. What are the categories to evaluate regression test selection technique? Why do we use such categorization?

10. (a)Discuss the priority category schemes for the prioritization of test cases. (b) What is the role of risk matrix for the reduction of test cases?

11. How is risk analysis used in testing? How can we prioritize test cases using risk factor?

12. What is a risk matrix? How do we assign thresholds that group the potential problems into priority categories?

13. Explain the following: (a) Modification traversing test cases (b) Modification revealing test cases

14. What is the difference between general test case prioritization and version specific test case prioritization? Discuss any prioritization technique with the help of an example.

15. Explain the 'code coverage prioritization' technique. What are the test cases selection criteria? Write the modification algorithm which is used to minimize and prioritize test cases.

MCQ:

1. The purpose of acceptance testing is:

 (a) To find faults in the system

 (b) To ensure the correctness of the system

(c) To test the system from the business perspective

(d) To demonstrate the effectiveness of the system

2. Which of the following is not part of system testing?

 (a) Performance, load and stress testing

 (b) Bottom up integration testing

(c) Usability testing

 (d) Business perspective testing

3. Which of the following is not the integration testing strategy?

 (a) Top down (b) Bottom up (c) Sandwich (d) Design based

4. Which is not covered under the category of static testing tools?

(a) Complexity analysis tools

(b) Coverage analysis tools

(c) Syntax and semantic analysis tools

 (d) Code Inspectors

5. Which is not covered under the category of dynamic testing tools?

 (a) Flow graph generator tools

(b) Performance testing tools

 (c) Regression testing tools

 (d) Coverage analysis tools

6 .Which is not a performance testing tool?

(a) Mercury Interactive's Load Runner

(b) Apache's J Meter,

(c) IBM Rational's Performance tester

(d) Parasoft's Insure ++

7. Select a functional / regression testing tool out of the following:

(a) IBM Rational's Robot

(b) Comuware's QALOAD

(c) Automated QA's time

(d) Telelogic's Logic scope

8. Find a process management tool out of the following:

(a) IBM Rational Test Manager

(b) Mercury Interactive's Test Director 384 Software Testing

(c) Segue Software's Silk Plan Pro

(d) All of the above

9. Which is not a coverage analysis tool?

(a) Automated QA's time

(b) Parasoft's Insure ++

(c) Telelogic's Logic Scope

(d) Apache's J Meter

10. Which is not a functional / regression testing tool?

(a) Mercury Interactive Win Runner

(b) IBM Rational's Robot

(c) Bugzilla

(d) Segue Software's Silk test

11. Which is not the specified testing level?

(a) Integration testing (b) Acceptance testing (c) Regression testing (d) System testing

12. Which type of testing is done by the customers?

 (a) Unit testing (b) Integration testing (c) System testing (d) Acceptance testing

13. Which one is not a step to minimize the coupling?

(a) Pass only control information, not data

 (b) Avoid passing undesired data

(c) Do not declare global variables

 (d) Minimize the scope of variables

14. Choose the most desirable type of coupling:

(a) Data coupling (b) Stamp coupling (c) Control coupling (d) Common coupling

15. Choose the worst type of coupling

 (a) Stamp coupling (b) Content coupling (c) Common coupling (d) Control coupling

16. Which is the most popular integration testing approach?

 (a) Bottom up integration

(b) Top down integration

(c) Sandwich integration

 (d) None of the above

17. Which is not covered in the debugging process?

(a) Replication of the bug

 (b) Understanding of the bug

 (c) Selection of the bug tracking tool

 (d) Fix the bug and re-test the program

18. Which is not a debugging approach?

(a) Brute force (b) Backtracking (c) Cause elimination (d) Bug multiplication

19 .Binary partitioning is related to:

(a) Cause elimination (b) Brute force (c) Backtracking (d) Trial and Error method

20. Which is not a popular debugging tool?

(a) Run time debugger (b) Compiler (c) Memory dumps (d) Samba's Jitterbug

21. Finding reasons for a failure is known as:

(a) Debugging (b) Testing (c) Verification (d) Validation

22. Which of the following terms is not used for a unit?

(a) Component (b) Module (c) Function (d) Documentation

23. Non-functional requirements testing is performed at the level of:

(a) System testing (b) Acceptance testing (c) Unit testing (d) (a) and (b) both

24. The debugging process attempts to match:

(a) Symptom with cause

(b) Cause with inputs

(c) Symptoms with outputs

(d) Inputs with outputs 386 Software Testing

25. Static testing tools perform the analysis of programs:

(a) After their execution (b) Without their execution (c) During their execution (d) None of the above

QUESTION:

1. What are the various levels of testing? Explain the objectives of every level. Who should do testing at every level and why?

2 Is unit testing possible or even desirable in all circumstances? Justify your answer with examples.

3. What is scaffolding? Why do we use stubs and drivers during unit testing?

4. What are the various steps to minimize the coupling amongst various units? Discuss different types of coupling from the best coupling to the worst coupling.

5. Compare the top down and bottom up integration testing approaches to test a program.

6. What is debugging? Discuss two debugging techniques. Write features of these techniques and compare the important features.

7. Why is debugging so difficult? What are the various steps of a debugging process?

8. What are the popular debugging approaches? Which one is more popular and why?

9. Explain the significance of debugging tools. List some commercially available debugging tools.

10. (a) Discuss the static and dynamic testing tools with the help of examples. (b) Discuss some of the areas where testing cannot be performed effectively without the help of a testing tool.

11. Write short notes on: (i) Coverage analysis tools (ii) Performance testing tools (iii) Functional / Regression testing tools

12. What are non-functional requirements? How can we use software tools to test these requirements? Discuss some popular tools along with their areas of applications.

13. Explain stress, load and performance testing.

14. Differentiate between the following: (a) Integration testing and system testing (b) System testing and acceptance testing (c) Unit testing and integration testing (d) Testing and debugging

15. What are the objectives of process management tools? Describe the process of selection of such a tool. List some commercially available process management tools.

16. What is the use of a software test plan document in testing? Is there any standard available? 17 Discuss the outline of a test plan document as per IEEE Std 829-199

18. Consider the problem of the URS given in chapter 5, and design a software test plan document. 19 Which is the most popular level of testing a software in practice and why?

20. Which is the most popular integration testing approach? Discuss with suitable examples. F

MCQ:

11. A client-server application consists of:

(a) Server application (b) Database server (c) Application server (d) None of the above (Contd.)

12. A web application consists of:

(a) Web server (b) Database server (c) Client application (d) All of the above

13. A web application depicts:

(a) Two-tier architecture

(b) Three-tier architecture

(c) N-tier architecture

(d) Four-tier architecture

14. A web server incorporates:

(a) Business logic (b) Database storage (c) Web browser (d) All of the above

15. Key areas in testing web applications do not include

: (a) Security testing (b) Browser testing (c) Acceptance testing (d) Database testing

16. Navigation testing investigates the proper functioning of:

(a) Forms (b) Links (c) Tables (d) Frames

17. Which is not a link testing tool?

(a) LinkTiger'sLinkTiger (b) Illumit'sWebLight (c) Elsop'sLinkScan (d) Apache's Jmeter

18. Form based testing does not check:

(a) Data validations (b) Hyperlinks on each page (c) Mandatory fields (d) Navigation amongst fields

19. Usability does not consist of:

(a) Accuracy (b) Reliability (c) Learnability (d) Completeness

20. In selection of participants we must remember:

(a) Selection of the right number and type of participants

(b) Selection of participants with the right type of skills

(c) Selection of participants of the right age and experience

(d) None of the above

21. The goal of configuration and compatibility testing is:

(a) To ensure that the web application can handle load during maximum traffic

(b) To ensure database integrity

(c) To ensure proper functioning of the web application across varied platforms

(d) None of the above

22. Which of the following is not a browser?

(a) Internet explorer (b) Linux (c) Chrome (d) Mozilla

23 Browser testing does not verify the functioning of the web application in terms of:

(a) Load (b) Operating system compatibility (c) Text (d) Video

24. Compatibility matrix is created in:

(a) Security testing (b) Database testing (c) Performance testing (d) Browser testing

25. The aim of security testing is not:

(a) To protect the application from unauthorized access

(b) To protect the application against virus threats

(c) To ensure proper functioning of user interface items

(d) To protect the network from intruders

26. Architecture of a firewall consists of:

(a) External network (b) Database server (c) Router (d) Antivirus software

27. Virus testing ensures that:

(a) The network is protected from intruders

(b) Anti-virus software identifies, detects and removes viruses

(c) Hyperlinks function properly

(d) Anti-virus software is installed

28. Non-repudiation is:

(a) The receiver's ability to prove that data came from an unauthenticated user

(b) The receiver's ability to prove that data is not modified during transit

(c) The receiver's ability to prove that data came from a specified user

(d) None of the above

29. Access control is:

(a) Protecting data from virus threats

(b) Protecting data from unauthorized users

(c) Recovering the network from failure

(d) None of the above

30. The primary security requirements do not include:

(a) Reliability (b) Authentication (c) Delivery (d) Performance

31. The factors that influence performance include: (i) Network bandwidth (ii) Reliability (iii) Response time (iv) Time to market

(a) (i) and (ii) (b) (i) and (iii) (c) (i), (iii) and (iv) (d) All of the above

32. The difference between stress testing and load testing is:

 (a) Stress testing checks performance of the system beyond the specified limits while load testing checks the performance on specified limits

 (b) Load testing checks performance of the system beyond the specified limits while stress testing checks the performance on specified limits

 (c) Load testing consumes more resources than stress testing (d) None of the above

33. Which one is not a load testing metric?

(a) Number of concurrent users (b) Wait Time (c) Total links on a page (d) Throughput

34. Database testing may not include:

(a) Data validation (b) Virus checking (c) Concurrency control (d) Recovery from failure

35. An effective way to obtain the user's feedback is:

 (a) A questionnaire (b) A checklist (c) An interview (d) None of the above

36. Which one is not a web usability metric?

 (a) Total links on a page (b) Response time (c) Word count (d) Number of graphics

37. Which is not a load testing tool?

 (a) Empirix's e-Test (b) Illumit'sWebLight (c) Microsoft's ACT (d) Radview'sWebLoad

38. Post-deployment testing is used to:

 (a) Ensure database security

 (b) Ensure proper functioning of user interfaces

 (c) Improve the website and for future evaluations

 (d) Perform stress testing

39. Web usability metrics can be divided into: (i) Page composition metrics (ii) Page formatting metrics (iii) Recovery from failure metrics (iv) Performance verification metrics

(a) (i) and (iii) (b) (i) and (iv) (c) (i), (iii) and (iv) (d) (i) and (ii)

40. Length of link text metric is used to count:

(a) Links on a page

(b) Words in the text for a link

 (c) Total words in links

 (d) Links embedded in the text on a page

QUESTION:

11. What is web testing? Differentiate between client/server applications and web application.

12 .(a) What are the key areas in testing a web application? (b) Which conventional testing techniques are applicable in testing a web application?

13. What is user interface testing? Explain with the help of an example.

14. Consider a web application for registering users in order to create an email account. The registration form includes the following fields: (a) User name (b) Password (c) Re-type password (d) First name (e) Last name (f) Address (g) Country (h) Date of birth (i) Gender (j) Security question (k) Answer to security question Generate test cases using form based testing.

 15. Explain the significance of navigation testing. List some commercially available tools for link testing.

 16. Consider the web application given in exercise

 17. Design test cases using formbased testing. Make the necessary assumptions.

18 Define usability. List and explain various attributes of usability.

19. (a) What is usability testing? What steps must be followed in usability testing? (b) What is the purpose of preparing a questionnaire in usability testing?

20. What is the purpose of browser testing?

21. Describe the procedure to conduct configuration and compatibility testing for a web application.

22. What is the most important type of testing which we consider when we test a web application? Justify your answer.

23. What factors are considered while performing usability testing?

24. Design test cases for testing a search engine such as Google.

25. What is security testing? Explain the primary requirements that must be fulfilled by a web application during security testing.

26. Explain the significance of virus and firewall testing.

27. Define the following terms: (a) Access control (b) Authentication (c) Integrity (d) Non-repudiation (e) Virus (f) Firewall

28. What are several factors that influence major components of a performance test report? 118 (a) What is load testing? What metrics must be captured during load testing? (b) What do you understand by the following terms? (a) Response time (b) Throughput (c) Web page views per week (c) List some commercially available load testing tools.

29. Discuss some areas where web testing cannot be performed effectively without the help of a tool.

30. Consider the following web page. Design test cases using all kinds of web testing tests

31. What is database testing? Identify administrative and user operations of an online purchase of a website.

32. What aspects must be covered in order to ensure database correctness in database testing? Explain with the help of an example.

33. What is post deployment testing? How are surveys helpful in post deployment testing? Explain the criteria that must be followed for deciding which suggested idea must be implemented.

34. (a) Identify major risks in testing a web application. (b) What issues are considered while constructing test cases during user interface testing?

35. Explain three-tier architecture of a web application.

36. (a) Which metrics must be captured during web usability testing? (b) Identify web page composition metrics.

37. Explain the significance of stress testing in analyzing the performance of a web application. 128 Identify functional and performance test cases of the following web page:

38. Describe the following metrics: (a) Information quality (b) Link quality (c) Image quality (d) Content percentage (e) Wrapped links

39. Prepare a checklist for verifying security of an e-commerce website