

- Question 1:**Test Reporting & Metrics** **B, C, E**

Which of the following are critical steps in identifying and reporting a software defect?

- A. Describing the steps to install, setup and run the software
- B. Identifying the steps needed to replicate the issue
- C. Generalizing to define the scope of when a bug does and does not occur
- D. Debugging the code to locate the area of the code causing the issue
- E. Documenting the defect using a defect tracking system or whatever methods are used by the group to track bugs

- Question 2:**Test Tool Types** **A, D, E**

Which of the following tool types help to evaluate test effectiveness?

- A. Requirements management tools help to map requirements to test plans and thereby showing the coverage of the requirements in the testing effort.
- B. Comparator tools show differences in test result files from one cycle of testing to another.
- C. Code complexity and analyzer tools help to evaluate the complexity of the code to be tested and therefore the complexity of the test cases to run.
- D. Code coverage tools demonstrate the effectiveness of the test cases in executing lines of code
- E. Debuggers help to determine if a true or a false issue has been reported and therefore the effectiveness of the test case runs.

- Question 3:**Test Planning** **A, D, E**

Which of the following are valid test plan risks requiring contingencies such as adding resources to a project, reducing testing coverage or delaying testing completion dates?

- A. Scope creep that materially impacts the testing schedule
- B. Software issues reported in bug triage meetings
- C. Negative testing including test scenarios against unavailable databases, down networks and loss of internet connection
- D. Code rewrites after projects enter testing
- E. Load degradation in which software testing degrades due to a large number of bugs found

- Question 4:**Test Environment Management** **A, B, C**

Which of the following statements about the introduction of new builds into a test environment are true?

- A. When a new build enters into testing, it is critical to know what features of the software have changed and what features are the same
- B. When a new build enters into testing, it is critical to know what items are deemed ready for testing and what are not ready for testing.
- C. When a new build enters into testing, it is critical to know what bugs have fixed and marked ready for retesting.
- D. When a new build enters into testing, it is critical to know what lines of code have changed, including commented lines of code, uppercase and lowercase changes and

differences in blank spaces.

- E. When a new build enters into testing, it is critical to know what bugs were found and fixed during unit testing.

- Question 5: **Test Reporting & Metrics A, D, E**

Which of the following support the implementation of metrics to track and measure a software development related activity?

- A. Recording and measuring a behavior is an objective method in calculating the cost of an activity.
- B. Recording and measuring a behavior is an objective method in calculating the benefit of an activity
- C. Software development activities are often easy to track and measure and, therefore should be measured, in case trends point to a problem that would otherwise go unnoticed.
- D. Observing and recording behavior often motivates individuals to improve the activity being measured.
- E. Tracking and measuring individual performances to reward and punish individuals accordingly helps to gain the trust of the overall group.

- Question 6: **Test Automation Techniques A, C, E**

When aiming to help maximize the benefit of test automation, what concepts are used to minimize the potentially high maintenance cost of using automated test scripts over time?

- A. Creating test libraries, test objects and shared functions to allow for reuse of code across test cases
- B. Advocating for minimal code changes to ensure tests continue to run as originally implemented
- C. Designing data driven test cases so that changes in software can be added to test cases by updating data tables rather than updating code
- D. Creating automated test cases with as minimal code as possible because it is more efficient to throw away old automated test cases and create new ones when test application software changes.
- E. Investing a significant amount of time testing the test scripts so that minimal automated test script code fix are needed when running the automated scripts.

- Question 7: **Reviews & Inspections ABE**

Which of the following are software quality risks due to hard coding?

- A. Code containing specific dates
- B. Code containing a user's username and password text string
- C. Code containing a lookup table of states based on postal code
- D. Code containing a pointer to the first record in a database
- E. Code containing a list of file locations

- Question 8: **B**

One method of test case design is creating test cases from use cases. Which of the following are

benefits of using use cases to design test cases?

- A. Provides an inventory of test cases for unit testing
- B. Emphasizes use of the software system from the users' perspectives as opposed to use based on the software's functional design
- C. Provides functional and boundary system tests that would otherwise go untested
- D. Replaces other test case design techniques and therefore creates a small, more efficient set of comprehensive test cases.
- E. Provides an effective white box testing method that can be used to replace a gray box testing method.

- Question 9: **User Acceptance Testing A, B, D**

Which of the following methods are used to develop User Acceptance Test criteria?

- A. Speaking to the business analysts and the primary customer interfaces to find out how the customers will be using the system and what features are important to them.
- B. Include in the acceptance criteria all requirements included in the software requirements document.
- C. Talking to the development staff to determine which features have the most risk. Include these features in the User Acceptance Test criteria
- D. If a software contract exists which includes user Acceptance Test criteria, only use these criteria in the User Acceptance Test test plan.
- E. The User Acceptance Test criteria MUST include criteria covering major functions, software interfaces, security concerns and performance goals.

- Questions 10: **Web Testing B, C, D---BC**

Testing web servers with requirements to handle a large volume of end users would involve what type of testing?

- A. Portability testing to make sure users using different web browsers and operating systems have equal access to the web address.
- B. Performance testing to determine the optimal minimum number of simultaneous users.
- C. Testing a load balancer setup to make sure large volumes of requests are equally distributed across the available servers.
- D. Testing a spooler system, to make sure large volumes of requests are handled in the order received.
- E. Stress testing to determine the maximum life of the hardware of the web server.

- Questions 11: **Reviews & Inspections A, D, E**

Which of the following are principal benefits that can be obtained by quality assurance teams by participating in reviews and inspections of software development requirements and design documents early in the software development process?

- A. Minimized rework in cycles of inspections early in the life cycle of the software project
- B. Reduction in quality assurance costs due to less time needed in the project during the quality assurance planning stages
- C. Improved project estimates for quality assurance project tasks
- D. Improved understanding of projects, facilitating quality assurance planning and less

- ramp up time needed late in the project.
- E. Reduced risk in time spent inspecting enhancements that will be removed or changed late in the project.

- Questions 12: **Test Planning B, D**

Software version 1.0 has been released. Late in the development of software version 1.0, software version 1.0 was branched to create a software version 2.0 code base. Which of the following collections of software issues should be planned for and tested in software version 2.0?

- A. Defects identified and fixed prior to software version 1.0's code branch
- B. Defects deferred from software version 1.0
- C. Defects deferred to software version 3.0
- D. Defects identified and fixed after software version 1.0's code branch
- E. Defects found after software version 1.0's code freeze but before software version 1.0's code branch to version 2.0.

- Question 13: **Test Planning A,C ACE**

Which of the following are true when planning test coverage of software to be tested?

- A. Planning test coverage of components of software under test should be based on a relative risk assessment of each component
- B. All components of a software project should be tested.
- C. All components of software under test should be tested in an order based on dependencies, priority and availability to be tested.
- D. All components of a software project should be given equal importance when planning test coverage.
- E. Operational profiles should be considered when prioritizing software components for testing.

- Question 14: **Detecting Software Errors B, D**

Which of the following are valid reasons for not reporting a software defect?

- A. Software issue does not match design specification
- B. Software issue occurs only using a prior software build.
- C. Software issue occurs using rare user scenarios.
- D. Software issue is replicable.
- E. Software issue is masked by another software issue

- Questions 15: **Web Testing A, C, E**

Which of the following are critical factors to consider when testing the scalability of web sites to handle various numbers of users?

- A. User abandonment – a measure of users leaving a web site due to increased wait time for page to load
- B. Single users – the fixed response time of a single user loading a web page
- C. Concurrent users – the number of users simultaneously loading web pages
- D. Idle time – the time period when no web pages are being loaded.
- E. Downtime – the time when the server is unavailable to users.

- Question 16: **Reviews & Inspections A, C, D**

To ensure consistent, effective inspections which of the following actions are essential?

- A. To have frequent meetings each time an inspector is ready to inspect to ensure all questions are asked and comments are considered
- B. To have many cycles of inspections per work product to ensure the work product has close to zero defects
- C. To use document analyzer tools to make use of automation inspection tools
- D. To use checklists as a guide for inspectors
- E. To end the inspection process once all defects have been identified

- Question 17: **User Acceptance Testing B, C, D**

Which of the following test cases are not included in User Acceptance Testing?

- A. Performance testing - to verify how the software handles normal and anticipated worst case workload.
- B. Sanity testing – to verify high level end-to-end testing of the core system functionality
- C. Automated regression tests – to verify that new software functionality did not damage non-changing features.
- D. White-box tests – to validate software functionality
- E. Security validations.

- Questions 18: **Test Case Design A, D, E**

Using an equivalence partitioning or equivalence class validation method, which of the following tests should be run to cover this requirement? An input requires at least 2 names but no more than 4 names.

- A. Fewer than 2 names and greater than 4 names in order to test invalid equivalence classes
- B. All numbers of names 2 names, 3 names and 4 names to test all valid equivalence classes
- C. 2names, 3names or 4 names to test a valid equivalence classes
- D. 3 names to test the valid equivalence class median input
- E. 2 names and 4 names to test valid boundary equivalence classes

- Questions 19: **Test Automation Techniques A, B, C**

What are common potential causes of false fail results returned by automated tests?

- A. Data issues – the comparison of new result values versus saved prior result values mismatch for data reasons and not software reasons.
- B. Synchronization errors – The automated tests interacting with the software user interface attempt clicks or key strokes too far ahead or behind the response time of the application being tested.
- C. Scripting error – the test scripts themselves contain errors that do not contain correct logic when verifying test results
- D. Coding errors - the software being tested contains bugs that causes fail results
- E. False passes – the test scripts miss an error in the software being tested.

- Questions 20: **Test Life Cycle A, B**

Which of the following correctly describe a critical test life cycle phase?

- A. Build acceptance testing – unit testing
- B. Regression testing – retesting previously tested test cases
- C. Test events – reporting defects found
- D. Ad hoc testing – planned, specified testing
- E. Smoke testing – testing software for minor issues

- Questions 21 **Detecting Software Errors B, C**

Which of the following describe code scenarios that do not lead to software errors?

- A. Declaring a variable as one type and assigning values of another type
- B. Creating an object in object oriented coding and not releasing the object
- C. Redimensioning a dimensioned array with valid values without first clearing the array
- D. Using a global variable locally and a local variable globally
- E. Referencing an API call without first declaring the API procedure

- Question 22: **Test Environment Management A,B,D**

One testing strategy is to use real, live test data when running test cases on an application in testing. Which of the following support reasons for using a test data generator and creating test data rather than using a live sample of data for testing?

- A. New data sets and null values – A live data set may represent a mature or aged, complete set of data, but may need to be cleared and partially regenerated to mimic a new or fresh set of data.
- B. Boundary tests – when testing outside of valid ranges, a tester may need to create or seed outlier values in order to cover scenarios that may be missed with live data.
- C. Beta testing – A test data generator may be needed to provide users with live, actual data when completing their beta testing.
- D. Time and date dependent tests – A complete set of time and date dependent data may not be available with a given set of live data on a given day, so a test data generator may be needed to simulate data from varying times and dates.
- E. Acceptance testing – A test data generator may be needed to create commercial, production data when testers complete any testing that requires as close to user environment as possible.

- Question 23: **Test Planning A, C**

Metrics from prior projects can be used as a basis for estimates for future projects. Which of the following demonstrate metrics used this way?

- A. The number of test cycles for a given project is estimated based on the number of test cycles needed for a prior similar project.
- B. The number of test cases estimated for a given project is based on the number of bugs estimated for a given project.
- C. The number of testing hours needed for a given project is based on a proportion of the coding time to match a proportion of time spent for a similar prior project.

- D. The number of test cases projected and bugs projected is based on the defined project milestone dates.

● Question 24: **Test Environment Management A, C**

Which of the following are symptoms of software configuration management issues?

- A. An old, outdated software version is tested instead of the current version expected to be in test.
- B. A bug previously tested and verified reappears.
- C. Multiple programmers make changes to the same code files but only one set of the changes is in the compiled build
- D. A developer rolls back his code to an earlier version to remove code that is no longer approved for the software release.
- E. A programmer cannot check in a code fix because a file is unavailable since it is checked out by another programmer.

● Question 25: **Web Testing B, C**

Which of the following are examples of security bugs with web applications?

- A. A software system supports different user groups with varying rights to read, write and delete message; and users can be moved to different user groups.
- B. Modifying the URL address text of a previously entered URL displays new data that is otherwise sent as encrypted text when entered using the application.
- C. Non-secure web sites authenticate user information using cookies for storing user names and passwords on the user's local machine.
- D. A user is prompted to re-enter their password when logging into a website.
- E. The web server verifies data received from a user who has made changes to the viewable source code.

● Question 26: **User Acceptance Testing A, D**

Which of the following are entrance criteria to user acceptance testing?

- A. Software successfully passes System Test regression testing.
- B. Test cases for both integration and system test have passed.
- C. All open defects identified during system testing have been corrected.
- D. The user acceptance testing test plan and test cases have been baselined.
- E. The software has been delivered to the end-user's site for installation.

● Question 27: **Test Environment Management C, D**

Different test environments are appropriate for different levels of testing. Which of the following match correct test environments for the level of testing?

- A. Unit Testing- any machine on which any part of an application can run compiled.
- B. System an Integration Testing – any machine on which a compiled application can run.
- C. User Acceptance Testing – machines located at customer's site.
- D. Beta Testing – machines that mimic users'
- E. Ad hoc Testing – a user's machine.

● Question 28: **Test Automation Techniques A?B,C BC**

Which of the following describe uses of a state model automated testing approach?

- A. Define actions or users of an application and outcomes of these actions to generate and run tests combinations.
- B. Define actions of applications and code methods to correspond to each defined action
- C. Match software GUI design views to corresponding test cases and automating test cases that run sequentially
- D. Create automated test cases that run randomly click and press buttons of an application
- E. Create automated test cases that produce log files to be compared against previously saved log files known to contain correct results.

● Question 29: **Test Reporting & Metrics A, C**

Defects found and reported can be used to help mark milestones and direct workflow in a development process. Which of the following are examples of this?

- A. Using a certain percentage of test cases failing as criteria to halt testing and hand a project back to development for additional work
- B. Six months after deployment, the number of bugs found by clients is no longer counted as escaped bugs for a project.
- C. Using a certain total number of found bugs to decide if software is release ready
- D. Retesting random test cases during regression testing
- E. Testers with highest number of bugs found are positively rewarded and programmers with the highest number of bugs created are given more training.

● Question 30: **Test Reporting & Metrics A, B, C**

Root Cause Analysis can be used to investigate at what phase in the development cycle issues are introduced. Which of the following explain the benefits of tracking the metrics to determine root cause analysis trends?

- A. If many bugs late in the testing phase are found to have existed early in testing phases, it may point to a need to create and run more effective test cases.
- B. If many of the bugs late in development are found to be direct results of late enhancements, it may support an improvement initiative to add emphasis to document inspections early the development life cycle.
- C. If many bugs are introduced and found during the coding phase, it may point to a need for better code reviews.
- D. If many of the bugs found at client sites are found to be introduced in the requirements phase, then emphasis should be added to the beta testing phase.
- E. If few bugs are found at client sites then root cause analysis trends should show a mature development process.

● Question 31: **Reviews & Inspections B, D**

Which of the following are benefits of conducting reviews and inspections of software development requirements and design documents early in the software development process?

- A. A decreased risk in project rework because a large percentage of software defects tend to be introduced in the analysis and design phases of the development process.
 - B. A decreased risk in project rework because a large percentage of software defects can be corrected in the analysis and design phases of the development process before coding and testing begin.
 - C. Overall cost reduction because early detection of software defects increases the average defect age and lowers the total number of project defects introduced in analysis and design.
 - D. Overall cost reduction in removing defects because the cost of removing software defects increases throughout the development life cycle.
 - E. Project cost reduction because reviews and inspections allow for enhancements to be added to projects and the scope of a project to increase throughout the life of the software development project.
- Question 32: **Test Planning B, E**
- Test plans detail the levels of testing for a given project, from low level specific testing to high level general testing. Which of the following correctly describe relative testing levels?
- A. Unit testing of common use cases is a higher level of testing than regression testing functionality.
 - B. Build acceptance testing of build drops is a higher level of testing than integration testing of combinations of build components.
 - C. Smoke testing of builds entering testing is a lower level of testing than system testing of individual build components.
 - D. Acceptance testing based on business requirements is a lower level of testing than system testing based on software design specifications.
 - E. System testing a breadth of system components is a higher level of testing than integration testing of interdependent build components.
- Question 33: **Test Case Design A, D ACE**
- One method for verifying large amounts of result values against another set of known result values is to compare each value pair one at a time using automation. Which of the following are other methods for comparing large amounts of normally distributed data sets to confirm the sets are exactly equal?
- A. Comparing the min and the max value of the data sets.
 - B. Comparing the outliers of the data sets.
 - C. Comparing the median and standard deviation of the data sets.
 - D. Comparing the first and last value of the data sets.
 - E. Comparing the average values and the standard deviation of the data sets.

● Question 34: **Test Reporting & Metrics B, C**

- Which of the following are the primary objectives of the software testing effort?
- A. To identify and fix all software bugs.
 - B. To verify the software meets all user requirements.
 - C. To evaluate software and find all software defects.

- D. To execute and pass all test cases.
 - E. To release software on time.
- Question 35:**Test Automation Techniques A, D, E**
Which of the following are reasons that would require an organization to use an automated performance testing tool?
 - A. An organization develops a web-based application that needs to support many users. An automated performance testing tool can simulate the load of many users.
 - B. An application in test must open windows within a required number of seconds. An automated test tool can measure the time to open and close windows.
 - C. An application in test must complete specified processes within a required number of seconds. An automated test tool can measure the time a process begins and ends.
 - D. An organization requires a certain response time during peak usage time. An automated performance tool can show response times over time relative to the simulated number of users of an application.
 - E. An application must be tested using real load examples before it goes into production. An automated stress tool can capture real load examples and play them back on an application being tested.

- Question 36:**Detecting Software Errors D**
Which of the following software outputs illustrates a defect in initializing or reinitializing a variable?
 - A. A text string with results of {a, bc, def}.
 - B. A numeric variable with results of {2,5,11}.
 - C. A counter with results of {1,2,3}
 - D. A Boolean variable with results of {0,1,2}
 - E. A timer with results of {0:05, 0:25, 0:15,0:20}

- Question 37:**Detecting Software Errors B, D**
Which of the following will cause a boundary error?
 - A. An integer of -1.
 - B. The date February 30,2000
 - C. A progress indicator that does not complete.
 - D. A value of 1 in a zero based array.
 - E. An infinite loop.

- Question 38:**Reviews & Inspections C**
What types of critical software defects do reviews and inspections uncover?
 - A. Errors of omission Requirements or code are incomplete.
 - B. Ambiguous information Requirements or code contain unclear information or logic.
 - C. Business or design requirements that cannot be tested – Documentation contains requirements that cannot be tested.
 - D. Spelling mistakes Requirements or documents contain typos for text that is not contained in the software.

E. Questions and suggestions – Inspectors take the opportunity to add questions and comments to defect logs.

● Question 39: **User Acceptance Testing A, B, C**

Which of the following are good User Acceptance Test practices for accepting a vendor developed product?

- A. Providing the vendor, in advance, sample acceptance tests for their product.
- B. Setting a schedule with the vendor for starting and ending User Acceptance Testing.
- C. Reviewing the vendor's test documentation to determine if the system meets the customer expectations.
- D. Since acceptance test criteria change, it is best not to include in the software contract any acceptance test criteria.
- E. Although it is beneficial to keep management and testers apprised of testing progress, it is not necessary to notify the vendor of test results until the end of the User acceptance Testing.

● Question 40: **Detecting Software Errors A, B, D**

Reported software defects often require further software repairs after the defect is reported and initially marked fixed. What are key guidelines to follow for testers when working with defect reports in order to ensure bugs are correctly fixed the first time?

- A. Isolate bugs – once steps are found to reproduce a bug, find out under what conditions the bug does not occur.
- B. Identify root causes – once steps are found to reproduce a bug, pinpoint why an issue is occurring by detailed investigation and by stepping through code.
- C. Enhance software – once bugs are identified suggest enhancements to improve the software and likelihood of a first time fix.
- D. Generalize bugs – once steps are found to reproduce a bug, find out under what additional conditions the bug also occurs.
- E. Detail steps – once steps are identified that reproduce a bug, add numbers to steps, convert simple phrases to complete sentences, run spell-check, and add steps so that any user new to the software could retest the issue once it is marked fixed.

● Question 41: **Test Tool Types C**

Which of the following describe how using a test matrix can help to make an efficient set of test cases?

- A. A test matrix illustrates how input values and output values interact. When certain input values fail, other similar input values can be added to the matrix to make more efficient test cases.
- B. All test cases are listed and compared against all requirements. Where each intersects, it is noted. Then if multiple test cases cover a single requirement, a test case can be eliminated or combined with another to make more efficient test cases.
- C. A table of all possible input scenarios to run all possible test scenarios. It is considered an efficient set of test cases because no effort is spent determining which test cases are risky and important to run and which are not worth running or are repetitive.

- D. It is a comprehensive mapping of test cases, illustrating a 1-to-1 relationship between requirements and test cases.
- E. A test matrix is considered an efficient set of test case because all possible test scenarios are represented and therefore the assumption is all test cases only need to be run once, and therefore subsequent, redundant regression test cycles can be eliminated.

- Question 42: **Test Reporting & Metrics B, D**

Test reporting and metrics is important not only to communicate software testing progress and product quality to management but also to provide testing results and feedback to developers. Which of the following explain why this is important?

- A. Testers should provide testing results and metrics to developers as a way of reporting on individual developer performance.
- B. Developers need to know what areas of the product have had bugs so that they know to focus on these high risk areas when future development and enhancements are made to these and similar features.
- C. Testers should provide this information to developers because often testers report to developers and developers are the primary clients of testers.
- D. Developers need to know what feature testing has been completed so that they do not cause inadvertent code changes or code chum in features and programs that testers report as completed.
- E. Developers do not test their own code when a separate quality assurance department is available to unit test their code.

- Question43: **Test Tool Types B, D----B,C**

Which of the following explain why comparators are useful testing utilities?

- A. Multiple bitmap and image files can be displayed and merged into a single file.
- B. A test set of values from a software system under test can be compared to a known set of valid values.
- C. Comparators identify causes for software output discrepancies.
- D. Comparators are playback tools that automate software comparisons.
- E. Comparators find matches using lookup and search logic as well as filtering logic

- Question44: **Web Testing B,C,D**

Which of the following are true statements about testing web services?

- A. Testers can create a web page and use the Get method to submit requests and receive data from a web service.
- B. Testers require custom in-house automated testing utilities when testing web services since web services communicate using proprietary binary formats for data, such as XML file formats.
- C. Testers can create a web page and use the Post method to submit requests and receive data from a web service.
- D. Web services latency or response time is measured from the time an end user sends a request to the time of the TTLB, the time to last byte of a web page loading.
- E. The graphical user interface must be tested for functionality.

● Question45: **Detecting Software Errors A, C, E----A,C**

Which of the following are application software printing errors?

- A. Print output shows an incorrect scaling for an image printed.
- B. Printout with True Type fonts and screen images coded as WYSIWYG (What you see is what you get) match monitor display.
- C. Print output from a print screen key does not match the screen display.
- D. A user prints from a machine with an incorrect print driver.
- E. Generic, nonscalable fonts appear correctly aligned on a screen display but not on a printout.

● Question46: **Test Case Design A, C, D**

Using boundary analysis validation methods, which of the following tests should be run to cover the below requirement?

A valid input range for an input box is 1 through 10.

A function returns a result by taking the absolute value of the input value -5.

$$f(x)=\text{abs}(x-5)$$

- A. Validate maximum and minimum values 1 and 10 to verify end points of valid input ranges
- B. Input values 2,4,6,8 and 10 to test valid even input values and input values 1,3,5,7 and 9 to test valid odd input values.
- C. Input values 5 and 10 to verify valid output maximum and minimum values
- D. Input values 0 and 11 to test invalid input values just outside of the valid input ranges
- E. Input values 2-9 to test the valid middle range of input values

● Question47: **Test Planning ACD**

Which of the following are associated with the starting and stopping of testing activities based on product quality and testing dependencies?

- A. Suspension and resumption criteria- Stopping planned testing activities due to a large number of issues found and resuming criteria for when the product quality improves to a level acceptable for resuming testing.
- B. Drop build and rollout - A build drop is a build rejected or dropped by testing and sent back to development for major repairs, and rollout is setting up test builds into test environments.
- C. Acceptance and regression – Acceptance testing begins when a new build is accepted into testing and regression occurs when a large number of issues are found and major development regresses back to the coders.
- D. Entrance and exit criteria – accepting a build into testing from development and releasing a build to the next major phase of testing or to clients.
- E. Test driver and harness – A build enters into testing and the testing group drives the development process until it is harnessed and configured for release.

- Question48:User Acceptance Testing C,D

For formal User Acceptance Testing, which of the following parties are responsible for building the test environment?

- A. System test group
- B. Developers
- C. Software Vendor
- D. Customers
- E. Project Manager

Question 49:Test Automation Techniques A, B

Which of the following describe the challenges surrounding automating scripts that must interact with the graphical user interface of software applications being tested?

- A. Applications that contain a large amount of graphics that must be verified do not lend themselves to automation due to the high percentage of false fails that result from bitmap and pixel-to-pixel type comparisons.
- B. If a development group often changes their user interface many automated scripts will fail because new controls have been added, deleted or renamed, or screen locations used to create the scripts are no longer valid.
- C. Many commercial automation tools interact well with standard code controls but do not interact well with applications containing custom controls.
- D. Many commercial vendor tools do not support simulating user interactions with software, like sending keystrokes and mouse clicks to applications.
- E. Many commercial vendor tools cannot provide information about standard screen controls, like strings from a text box or lists from a listbox.

- Question50:Test Reporting & Metrics B, D, E

Which of the following measures can be used to evaluate the quality of the current software under development?

- A. Average defect age from the time a bug is opened to the time a bug is retested and closed
- B. Defects found during beta and post release relative to total defects found during entire life cycle of project
- C. Development time of the current software relative to the development time of the prior release
- D. Open bugs found during the development cycle for the current software relative to prior release
- E. New defects found during the development cycle for the current software relative to prior release

- Question51:Detecting Software Errors B, C, D

Which of the following will not result in a software error?

- A. A loop routine containing the start of another loop routine but not the end
- B. A nested loop routine
- C. An if statement containing logic within one condition that is required for both conditions

- D. Branching to an undefined label
- E. A case statement using branching scenarios that are not mutually exclusive

● Question52: **Detecting Software Errors AE**

A user calls and reports a software printing problem. Which of the following statements would support the fact that this reported issue is a software application bug? **A,E**

- A. Another client at the same company sees the same printing issue.
- B. The user installs and updates current machine fonts which does not resolve the problem.
- C. Copying the user's custom printer setting to another user's machine does not produce the same issue.
- D. The user's technical support group reinstalls the latest print drivers which resolves the problem.
- E. A client support representative is able to reproduce the same issue in-house.

Question 53: **Reviews & Inspections C, D, E**

When determining the level of risk of a work product in order to choose an appropriate level of inspection, which of the following should be considered?

- A. Software areas or work products that are easy to inspect.
- B. Software areas of work products that are complex or difficult to understand.
- C. Software areas of work products that are likely to have defects.
- D. Software areas of work products that are critical to the success of a product.
- E. Software areas of work products that are rarely inspected or reviewed.

Question 54: **Reviews & Inspectionsm A, C**

Which of the following are direct benefits to the software testers participating in the inspection of software prototypes?

- A. Learning the design of the user interface.
- B. Learning the development software language being used by the programmers.
- C. Having a basis for creating test cases and use case scenario tests.
- D. Learning the technical requirements of the software.
- E. Beginning to test the implemented code.

Question 55: **Test Automation Techniques A, C**

Which of the following describe a data driven approach to creating automated scripts?

- A. Testers can create automated scripts to test data file outputs from the software under test using valid data ranges and invalid data scenarios.
- B. Testers use capture replay tools to simulate users adding, editing and deleting data required by the software under test.
- C. Testers maintain information changes to their automation scripts by editing data input files rather than editing data specified within coded scripts.
- D. Testers use data variables within their coded scripts in order to simulate user data input scenarios.

- E. Testers create linear scripts which have a length based on the number of data scenarios to test. These scripts require a large maintenance effort when data is changed or added relative to scripts that are not data driven.

Question 56: **Test Environment Management A, B, C**

When releasing multiple versions of a software release to clients and communicating known issues and issues found post release, which of the following are true?

- A. Defects should contain version number found and version number fixed information to assist client support in knowing the availability of software fixes for client reported issues.
- B. Defects should contain version number found and version number fixed information to assist client support in matching client supports calls to known issues.
- C. Once software has been released, configuration management should be used to ensure all clients are always upgraded to a new software version when it is available to clients.
- D. Once software has been released, configuration management should be used to ensure no duplicate software issues are reported.
- E. Defects found internally and defects found by clients within the same software versions should be fixed prior to a new software version release.

Question 57: **User Acceptance Testing A, C**

Which of the following are exit criteria for completing User Acceptance Testing?

- A. User Acceptance Test signoff sheet has been signed.
- B. Test results and error reports are published.
- C. All acceptance test criteria have been met.
- D. All defects must be resolved.
- E. Scheduled window for testing expires.

Question 58: **Test Planning B, E**

Which of the following are principal reasons for writing a test plan?

- A. To plan for business requirements and software requirement inspections.
- B. To gain consensus on test team activities and deliverables for a software project.
- C. To document release notes and release issues.
- D. To report software issues and identify bugs.
- E. To document the technical design of the software under test.

● Question 59: **Detecting Software Errors A, C**

A requirements document contains the information below. Which of the following correctly identify the lines that contain defects and why?

- 1.An input box shows a date selection for years 51-57.
- 2.The same input box shows valid days of 1-27 and valid month end values of 28,30 and 31, depending on the month selected.
- 3.Same input box show valid months of 1-12.
- 4.Dates can be formatted to display as MM/DD/YYYY or D/MM/YYYY.
- 5.The default day displayed should be 1/1/51.

- A. Line 1 because it is unclear what century is associated with the years.
- B. Line 4 because other valid date formats are not listed.
- C. Line 2 because leap years are not considered.
- D. Line 3 because 1-12 are not valid months.
- E. Line 5 because the date showing is a holiday.

Question 60: **Test Planning C, D, E**

Which of the following are true statements about the benefits of creating a traceability matrix that maps test cases to requirements and design specifications?

- A. Creating a traceability matrix allows testers to create a one-to-one ratio of test cases to requirements and design specifications.
- B. Creating a traceability matrix helps testers create more detailed test cases and test steps for their documented test cases.
- C. Creating and using a traceability matrix facilitates creating an efficient set of test cases so that one test case that tests multiple requirements can replace test cases that test only one requirement.
- D. Creating and using a traceability matrix helps to ensure all requirements and design specifications are covered by the documented test cases.
- E. Creating a traceability matrix facilitates test coverage and test coverage reporting even when design and requirements specifications are unavailable to the tester.

Question 61: **Test Life Cycle C, E**

Which of the following are true explanations for why adding new testers late in a development project may not make a late project finish on time?

- A. Software delays are rarely due to resource issues since most development groups have a developer/tester ratio of 2:1.
- B. An important stage early in the development project includes tester training in the testing process for a given project.
- C. An important stage early in the development project includes tester training in the software product to be tested.
- D. When testers are on the critical path late in a project, adding developers rather than tester is more likely to help a project complete on time.
- E. Adding additional testing resources has no benefit because people with a fresh or different perspective add no value to the testing effort.

Question 62: **Test Automation Techniques B, C, E**

Automated tests that mimic user interactions with software by randomly sending key strokes and clicks can identify errors that are sometimes difficult to recreate?

- A. A user watches the automated test application run so that when errors are found, a witness can reproduce the random key strokes and clicks needed to demonstrate the software issue.
- B. The automated scripts are run within the development environment so that when an error occurs, the software being tested will break on the line of code causing the error.
- C. The test is designed so that the input combinations are logged to a results file that can

- be read back by the test automation program to playback the series of actions that demonstrate the software issue.
- D. A video camera is set to record while the software runs to document the series of keystrokes and clicks sent to the program. The tape can be analyzed later for areas of the software that revealed errors.
 - E. The tests are integrated with a code coverage tool to mark the lines of code where a software issue occurs.

Question 63: Detecting Software Errors A, C, E

Which of the following describe error guessing validation methods?

- A. Designing test cases based on expertise, experience, and/or intuition, with the expectation that these specific tests are likely to expose an error.
- B. Designing test cases to cover all requirements, based on the idea that if all test requirement are covered, all defects can be found.
- C. Ad hoc testing, without planned or designed test cases, based on the idea that not all tests can be planned for and premeditated.
- D. Random testing to design test cases based on random inputs and outputs with the idea that, based on the law of probability, if enough test cases are run, errors are likely to be found.
- E. Designing test cases to test error handling, based on assumptions or guess of what input scenarios will actually trigger error handling procedures.

● **Question 64: Web Testing ABE**

Which of the following are items monitored by testers after deployment of a web application?

- A. Vertical scaling and horizontal scaling – to modify configurations, adding machines and upgrading machines to meet load capacity.
- B. Web server logs – to assess the load results of live normal and peak user levels.
- C. SSL – to verify encryption and user privacy using secure socket layers.
- D. Server side interface – to assess the design of the deployed server.
- E. Reliability – to verify a web application functions over time without error.

● **Question 65: Detecting Software Errors B, C, D**

Which of the following are explanations for a binary search function returning an incorrect result?

- A. The list contains both values and text formatted as text
- B. The searched list is not sorted.
- C. The total count of items in the list is not known.
- D. The greater than or less than logic is reversed.
- E. The list contains duplicate items.

Question 66: Test Environment Management A,B,D

Which of the following are factors that must be considered when designing a test environment?

- A. Operational profiles – the variety and distribution of hardware and software environments under which users will install and run the software being tested
- B. Localization – factors specific to various user groups, including international factors such as date formats, currency types, and language.
- C. Cross compilation – compiling software builds across a good sampling of user environments.
- D. Portability – the software systems in which the software under test can successfully run.
- E. Debugging – stepping through code in design time on machines simulating user environments in order to replicate issues found during testing.

Question 67: **Test Planning A**

If information regarding the number of test cases failed relative to a number of test cases passed out of a random sampling of test cases is presented, how can this help in test planning?

- A. The total number of expected failed test cases can be projected.
- B. The total time spent testing can be reported.
- C. The total number of hours needed to test the project can be extrapolated.
- D. The total time to fix issues can be estimated.
- E. The total number of test cases passed relative to the total number of test cases blocked can be reported.

Question 68: **Detecting Software Errors B**

If error handling is omitted in the software being tested, which of the following coded functions will cause an error?

- A. Reading an open file
- B. Deleting an open file.
- C. Adding lines of data to a file open for append.
- D. Opening a read-only file.
- E. Copying a read-only file.

● Question 69: **Test Automation Techniques B, C, D**

Which of the following factors should be controlled when evaluating performance issues of an application?

- A. Operating system version including latest installed service packs.
- B. CPU usage and memory usage.
- C. Processor speed and RAM
- D. Network traffic and network configuration
- E. Uninstalled and disabled applications.

Question 70: **User Acceptance Testing C, D, E**

Which of the following are tested in User Acceptance Testing?

- A. User interactions for which the system may not be designed including improper usage of

- system functions.
- B. User guides and training materials developed by training organizations outside of the software development group
 - C. Software installation procedures.
 - D. Back-end processes to verify the software meets operation staff needs.
 - E. Software recovery and restart procedures.

Question 71: User Acceptance Testing A, B, D

Which of the following groups do not run the actual User Acceptance Tests?

- A. Project test group
- B. Development organization with the assistance of the end-user organization
- C. Objective group of people chosen by the customer.
- D. Product manager
- E. Customers.

Question 72: Issue Tracking E A

When one user sees an issue that another user does not see, which of the following are not effective steps in isolating the issue?

- A. Resetting local settings for each user.
- B. Comparing data values for both setups.
- C. Verifying software version and installed files.
- D. Replicating usage scenarios for each user.
- E. Identifying a workaround for the issue.

Question 73: Reviews & Inspections B, C

Which of the following options do reviewers have when assessing a work product in a formal review or inspection?

- A. Abstain – The reviewer concludes the work product is not worth reviewing.
- B. Reject – The work product requires major changes and will need a subsequent full review.
- C. Accept or approve – the work product is clear and complete and the next phase of development can proceed.
- D. Accept or approve with conditions – The work product is almost complete and requires only minor modifications to make it clear and complete.
- E. Make modifications and approve – The reviewer makes the modifications to the document in order for it to meet his or her approval.

Question 74: Test Case Design D

Which of the following represent a state transition test case?

- A. A user dials a local telephone number and then a long distance telephone number.
- B. A user incorrectly speaks into the wrong end of the phone and listens to the wrong end of the phone.
- C. A user waits on hold.
- D. A user picks up the telephone, dials and makes a successful connection.

- E. A user makes a short phone call and a user makes a long phone call.

Question 75: **Test Reporting & Metrics B, C, D**

Which of the following describe the benefit of tracking the trends of the category or type of bug found (functional, installation, performance, etc.) and the program area found?

- A. Tracking these bug characteristics can be used in place of test coverage reporting for testing status reports.
- B. Tracking these bug characteristics helps to determine the relative risk areas of programs to help plan and prioritize software testing efforts.
- C. Tracking these bug characteristics communicates at what point bugs are introduced in a development life cycle.
- D. Tracking trends of these bug characteristics determines areas of the software that should be redesigned, re-architected, recoded and retested.
- E. Tracking these bug characteristics communicates at what point bugs are found in a development life cycle.

Question 76: **Test Case Design B, D**

Which of the following testing methodologies support the creation of test cases during the actual software execution period?

- A. Use case testing-A user uses the software as the software functions suggest in order to find software defects.
- B. Exploratory testing-It is interactive, concurrent test design and testing. Test case results influence the next designed and executed test cases.
- C. Static testing-A user tests, stops and writes a new test case and then resumes testing.
- D. Risk based acceptance testing-A user takes an accepted level of risk in testing new code as it is available each day without premeditated test cases designed. This is common when no software documentation is available and the release to market time is short.
- E. Clear case testing-Users enter user scenarios as they expect the software should be used, clear and free of the assumptions used to design and implement the software.

Question 77: **Test Life Cycle A, B**

Which of the following are major software project milestones associated with the start or end of primary software testing activites?

- A. Alpha and beta builds.
- B. Releases and point releases.
- C. Code reviews and code inspections.
- D. First identified bug and last reported bug.
- E. Change control and code branch.

● Question 78: **Test Reporting & Metrics A, B, D**

When a software development project is about to be released to clients, tracking a trend of

closed issues is important for which of the following reasons?

- A. Product Integrity-To ensure all reported issues requiring fixing are corrected prior to a software release.
- B. Project Management-To ensure all coding and development work is completed prior to the software release.
- C. Process Assessment-To demonstrate a process improvement initiative is successful.
- D. Product Stability-Tracking the trend of defects closed and open can be used to gauge the release risk due to the amount of software changes being introduced.
- E. Managing Expectations-To reassure clients that the software is bug free.

Question 79: Issue Tracking A

Which of the following accurately describe differences between defect severity and defect priority?

- A. The defect severity describes how critical defect issue is, and the defect priority describes the immediacy with which the issue should be addressed.
- B. The defect priority is independent of the other open defects while defect severity is determined with respect to other open defects.
- C. The defect priority does not change but the defect severity may change as software development and testing approaches a release date.
- D. The defect severity indicates the importance of an issue while the defect priority does not.
- E. The defect severity trends illustrate the changing level of software quality while the defect priority trends do not.

Question 80: User Acceptance Testing C, E

Which of the following are risks associated with User Acceptance Testing?

- A. Critical problems first detected during User Acceptance Testing may not get fixed.
- B. Since User Acceptance Testing is performed at the end of the project, it may get skipped even though previously scheduled.
- C. As end-users test the software, they see the need for feature enhancements which may delay software delivery dates.
- D. Using informal methods, end-users may focus on the way the system works and not see or report the defects.
- E. Defects found during User Acceptance Testing may delay actual deployment.

Question 81: Test Planning A, D, E

Which of the following describe elements of the testing strategy or testing approach as described in a test plan?

- A. Major test activities planned, testing techniques and tools.
- B. Planned coverage of features, specifying how much coverage, as in number of test cycles is planned during testing.
- C. Test cases detailing test requirements and test steps that map to all software and design requirements.
- D. Software features to be tested and priority and relative importance of features to be tested.

- E. Test life cycle process detailing testing activities from the start to completion of a project.

Question 82: **Web Testing A, C**

Which of the following are file formats associated with testing web applications?

- A. XML – Extensible Markup Language.
- B. HTTP – Hypertext Transfer Protocol.
- C. HTML – Hypertext Markup Language.
- D. URL - - Uniform Resource Locator.
- E. IP – Internet Protocol.

Question 83: **Test Case Design A, C, E**

Which of the following fields should be specified in every test case?

- A. The specific software requirements covered by the test case.
- B. For the software under test, the software version number for which the test case was first developed
- C. A unique test case id.
- D. The priority and relative importance of the test case
- E. The description of the test case.

● Question 84: **Test Life Cycle A, B, E**

Software testing efforts often occur after software products have been released to clients. Which of the following is critical quality characteristics of software intended to meet users' needs over a prolonged period of time?

- A. Legacy Requirements – systems must meet all historically supported user requirements to maintain users' satisfaction and familiarity with the systems.
- B. Adaptability Requirements- The systems should have qualities that allow them to adapt to changing requirements or new feature. For example, features or user selections may be file driven.
- C. Persistence Requirements – user requirements must persist over time in order to match the implemented code.
- D. Maintainability Requirements – There must be a way to make proactive as well as reactive fixes to issues in systems in the field. For example, automated batch files may periodically check for errors and refresh or install corrected components.
- E. Integration Requirements – Systems must be built to integrate with other current and future software products.

● Question 85 **ABE**

Which of the following are benefits of conducting review and inspections of software development requirements and design documents early in the software development process?

- A. Overall cost reduction because early detection of software defects increases the average defect age and lowers the total number of project defects introduced in analysis and design.
- B. A decreased risk in project rework because a large percentage of software defects can be corrected in the analysis and design phases of the development process before coding and testing begin.
- C. A decreased risk in project rework because a large percentage of software defects tend to be introduced in the analysis and design phases of the development process
- D. Overall cost reduction in removing defects because the cost of the removing software defects increases throughout the development life cycle.
- E. Project cost reduction because review and inspection allow for enhancements to be added to projects and the scope of a project to increase throughout the life of a software development project.

- Question 86 DE

Which of the following are benefits of using a software defect tracking database?

- A. A defect tracking tool communicates the test coverage for the software under test.
- B. A defect tracking tool automatically detects software issues in the software under test.
- C. A defect tracking tool pinpoints the location in the code where an error occurs.
- D. A defect tracking tool provides a central location for creating, routing and viewing information on software defects.
- E. A defect tracking tool tracks code volatility throughout the development life cycle.

- Question 87 AEC

Which of the following are major test deliverables in a software development project?

- A. Test Plan
- B. Test Life Cycle Process Document
- C. Test Case Specifications
- D. Test Process Improvement Plan
- E. Test Reports

- Question 88 BD

Which of the following accurately explain the importance of the Risks & Contingencies section of a Software Test Plan?

- A. It is a solution plan to address schedule issues by adding resources, reducing project scope or delaying the release date.
- B. It is a disclaimer section relinquishing liability from the testing group if software bugs escape during the release.
- C. It is a risk mitigation plan to address bugs that escape in the field after a software release.
- D. It is a risk mitigation plan, identifying the risks of the project and the action plan to

take if project problems occur.

E. It is a contingency plan to address bugs that are found during the system testing phase.

● Question 89 DE

Using an equivalence partitioning or equivalence class validation method, which of the following tests should be run to cover this requirement?

An input requires at least 2 names but no more than 4 names.

A. 2 names, 3 names or 4 names to test a valid equivalence class

B. All numbers of names 2 names, 3 names and 4 names to test all valid equivalence classes

C. 3 names to test the valid equivalence class median input

D. Fewer than 2 names and greater than 4 names in order to test invalid equivalence classes

E. 2 names and 4 names to test valid boundary equivalence classes

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Question 90 D

Software defects reported vary in degree of how critical a bug is, how risky a fix is in terms of the likelihood it could introduce new bugs and how much a fix may cost in terms of time. What are means of addressing these issues?

- A. A retro meeting – A project team discusses process improvement efforts to correct and prevent critical, showstopper bugs.
- B. Bug resolution meeting – Developers and testers work together to fix and test bugs together in order to minimize the risk of introducing new bugs and speeding up the fix time of bugs.
- C. A proactive meeting – A project team discusses risky areas of a software product and a means of preventing critical bugs, risky fixes and costly fixes.
- D. Bug triage meeting – A project team meets to discuss what issues should and should not be fixed and issues to be fixed are prioritized.
- E. A status meeting – A project team meets and reports on new and open critical bugs and risky fixed bugs.

Question 91 B, C

Which of the following are valid test requirements for client server installation testing?

- A. Restrictions should be placed on which end users will install the software and when.
- B. Correct files are copied and registered as needed to the correct location.
- C. An installation logfile is required to troubleshoot installation issues.
- D. User uninstalls software by deleting files.
- E. All installation processes should be user friendly.

Question 92 ABD

Which of the following are differences between testing web applications and client server applications?

- A. Client server applications must be deployed and run on multiple operating systems and multiple configurations.

- B. Client server applications must meet minimum performance requirements defined by business needs and end user expectations.
- C. Web applications must be scalable to meet the demands of different levels of users.
- D. Web applications must address security risks of transmitting proprietary and private information over the web.
- E. Client server applications must have function testing and regression testing.

Question 93 A,D

There are many levels of document and software reviews that organizations can do. Which of the following pair project circumstances and review types correctly?

- A. A walkthrough for an internal design demonstration
- B. A buddy check for a high risk project
- C. A 6 step, high impact, Fagan type inspection for regression test cases.
- D. A formal code inspection for a high risk code rewrite for a project
- E. A code review of an application six months after released to clients

Question 94 ABE

Which of the following are basic test items for nearly all web-based products?

- A. Configuration – Users must be able to view and use web pages across supported browsers and operation system configurations.
- B. Hyperlinks – User clicks to navigate to other web pages and page locations.
- C. Installation – All software files are installed to correct program and system directories.
- D. Maintainability – Software providers must be able to make proactive and reactive fixes to address issues reported by clients.
- E. Security – Information displayed should be customer specific and users should not send or receive data and files to and from any web servers.

Question 95 AC

Which of the following contribute to successful User Acceptance Testing?

- A. Limiting end-users time to perform ad-hoc testing makes sure all scripted tests are completed.
- B. Scheduling the end-user testers to work significant overtime will guarantee that the testing will be completed on time with quality.
- C. Matching the level of complexity of the test plans to the skills and motivation of the end-user testers will guarantee quality testing.
- D. Allowing end-user testers to participate in policy decisions provides testers a feeling that they have contributed to the success of the project.
- E. Releasing end-user testers from their normal work responsibilities during the User Acceptance Test period will contribute to quality testing.

Question 96 BCD

In testing web page response time, which of the following are variables influencing the time to load a web page?

- A. Web page hyperlink targets\

- B. Minimum bandwidth as measured in Kbytes/sec
- C. Server and client machine processing time.
- D. Page size, including web page components, including controls, images and applets.
- E. Time to open a cached web page.

Question 97

BD

Which of the following methods are used to allow automated test scripts to run independently of the changing data, independently of a sequence of simulated user actions and independently of test results?

- A. Logfiles – a capture and recording of a series of actions and input data and test results.
- B. Base State – a way of setting and returning to a starting point of an application for a series of related tests within an application.
- C. Remote Reboot – a way of remotely restarting a computer
- D. Test Harness – a recovery method for restarting a test.
- E. Error trap – a coding method for trapping coding errors within scripts and returning control to main functions.

Question 98

BD

Which of the following describe the purpose of a beta phase?

- A. To ensure software compatibility on all hardware platforms
- B. To ensure users' requirements have been met
- C. To verify all test cases pass
- D. To ensure all software requirements are valid
- E. To verify all software defects have been corrected.