**Đề 3\_đáp án**

1. Which is a correct relation between test conditions and test cases?...[K1]
2. Test conditions explain procedures to execute of test case.
3. **Test cases are design to fill test conditions.**
4. Test conditions are design to fill certain test cases.
5. Test conditions are equivalent to certain test cases.
6. Which of following is NOT related with Inspection type of review? [K1]
7. **Result may be documented**
8. Led by trained moderator
9. Includes metrics gathering
10. Specified entry and exit criteria for acceptance of the software product.
11. Which of following is NOT success factors for review? [K1]
12. **Developers should not involve to increase effectiveness of defect identification**
13. Test are valued reviewers who contributes to the review and also learn about the product which enables them to prepare tests earlier
14. Defects found are welcomed and expressed objectively
15. The review is conducted in an atmosphere of trust
16. Which of the following are NOT a reasonable conclusions you could draw from the test principles?...[K1]
17. **Safety critical systems are tested exhaustively**
18. The testing coverage required in one organization may not be appropriate in another organization.
19. Risk assessment is required to understand how much testing is enough for each system.
20. Safety critical systems are likely to need more coverage than non-safety critical system.
21. Which of the following alternatives is true? [K2]
22. Independence assures effective testing.
23. Component testing is best done by developers. System testing must be done by a group independent from the developers.
24. **A certain degree of independent is often more effective in finding defects.**
25. Tests are best designed by the person who wrote the Software Quality Engineering.
26. In any software development life cycle (SDLC) model, which of the following are characteristics of good testing?
27. Providing complete test coverage of all branches of the system code
28. Having a corresponding testing activity for each development activity.
29. Testers should be involved in reviewing documents as soon as drafts are available
30. Each test level has test objectives specific to that level.
31. I and III
32. **II, III and IV**
33. I, III and IV
34. I and II
35. Which of following is NOT correct regarding of Interactive-incremental Development Models?[K1]
36. This is the process of establishing requirements, designing, building and testing a system in a series of short development cycles.
37. **This model demonstrates the relationships between each phase of the life cycle and its associated phase of testing.**
38. A system that is produced using this model is tested at several test levels during each iteration.
39. Regression testing is increasing important on all iterations after the first one.
40. Which of the following is NOT classified as a Non-Functional Testing?...[K1]
41. Performance Testing
42. Usability testing
43. **Structural Testing**
44. Reliability testing
45. Which of following is NOT a typical defects discovered by static analysis tools? [K2]
46. Referencing a variable with an undefined value
47. Inconsistent interfaces between modules and components
48. Unreachable code
49. **Memory leak**
50. Which of the following is true of acceptance testing?

a. A goal of acceptance testing is to stress-test the system.

**b. A goal of acceptance testing is to establish confidence in the system.**

c. Acceptance testing is performed by technical staff.

d. Acceptance testing is only used to address functionality issues within the system.

1. In this type of software testing techniques, inputs to the software or system are divided into groups that are expected to exhibit similar behavior, so they are likely to be processed In the same way. Which of following techniques is correct? [K2]
2. **Equivalence Partitioning**
3. Boundary values analysis
4. Use Case Testing
5. Decision Testing
6. Which of following is NOT a Specification-based or Black-box Techniques? [K2]
7. Decision Table Testing
8. **Decision testing and Coverage**
9. State Transition Testing
10. Use Case Testing
11. Which of the following statements are true for Review?..[K1]
12. Meeting is led by author
13. Main purpose is to review inexpensive way to get some benefit.
14. Main purpose is to discuss problems and check conformance to specifications and standard
15. Formal process based on rules and checklists with entry and exit criteria.

T. Informal

U. Walkthrough

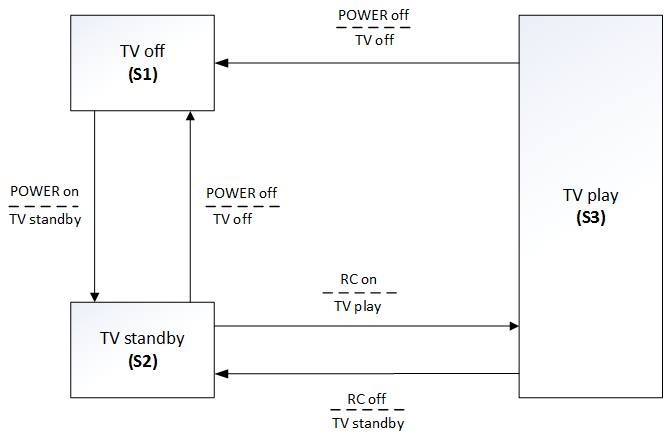
V. Technical Review

W. Inspection

1. A and T, B and U, C and V, D and W
2. **A and U, B and T, C and V, D and W**
3. A and W, B and V, C and T, D and U
4. A and U, B and T, C and W, D and V
5. Which of the following are included as part of static testing?..[K2]
6. **Inspection of work products and analysis of software artifacts using tools.**
7. Inspections, execution of the software, and walkthroughs.
8. Inspections, walkthroughs, and comparison of expected to actual results
9. Walkthroughs, simulation, and defect tracking.
10. This testing includes regression testing to parts of the system that have not been changed. The scope of this testing is related to the risk of the change, the size of the existing system and to be the size of the change. What is this testing?[K1]
11. **Maintenance Testing**
12. Interoperability testing
13. Re-Testing
14. Structural Testing
15. Which of following is NOT correct? [K2]
16. Statement coverage is determined by the number of all executable statements in the code under test
17. Decision coverage is determined by the number of all decision outcomes covered by test cases divided by the number of all possible decision outcomes in the code under test
18. Decision coverage is a form of control flow testing as it follows a specific flow of control through the decision points.
19. **100% statement coverage guarantees 100% decision coverage**
20. Company ABC is going to provide their employees with a bonus which will be based on the employee’s length of service in the company. The bonus calculation will be zero if they have been with the company for less than two years, 10% of their salary for more than two but less than five years, and 25% for five to ten years, 35% for ten years or more. The interface will not allow a negative value to be input, but it will allow a zero to be input. How many equivalence partitions are needed to test the calculation of the bonus?...[K3]
21. Two equivalence partitions.
22. Three equivalence partitions
23. **Four equivalence partitions**
24. Five equivalence partitions
25. Which of the following statements about functional testing is TRUE?...[K2]
26. **Functional testing is primarily concerned with “what” a system does rather than “how” it does it.**
27. Control flow models and menu structure models are used primarily in functional testing.
28. Functional testing includes, but is not limited to, load testing, stress testing and reliability testing.
29. Functional testing is often referred to as “structural” testing by testers and developers
30. A defect was found during testing that the system crashed when the network got disconnected while receiving data the server. The defect was fixed by correcting codes which check the network availability during data transferring. The corresponding module did cover 100% of statement with existing test cases. To verify the fix and ensure more extensive coverage, some tests were designed and added to the test suite. What types of testing are mentioned above?..[K3]
31. Functional testing
32. Structural testing
33. Confirmation testing
34. Performance testing
35. A, B and D
36. A and C
37. **A, B and C**
38. A, C and D
39. Which is a correct explanation about non functional testing?..[K2]
40. Non functional testing shall not be executed in component testing, because non functional testing is required to integrate whole functions.
41. **Non functional testing is a testing which measure and judge various quality attributes.**
42. Non functional testing shall be executed based on ISO/IEC 9126 (Software Product Quality)
43. Non functional testing is a testing which requires inspirations and experiences, and has difficulty with numeric evaluation.
44. A test case has the following elements:…[K1]
45. A test environment description, and test instructions
46. A test plan, test inputs, and logging instructions
47. Execution instructions, and a function description to help decide if the outcome is correct
48. **A set of inputs, execution preconditions, and expected outcomes developed**
49. You are testing an e-commerce system that sells cooking supplier such as spices, flour and other items in bulk. The units in which the items are sold are either grams (for spices and other expensive items) or kilograms (for flour and other expensive items). Regardless of the units, the smallest valid order amount is 0.5 units (e.g.,half a gram of cardamom pods) and the largest valid order amount is 25.0 units (e.g., 25 kilograms of sugar). The precision of the units field is 0.1 units.

Which of the following is a set of input values that cover the equivalence partitions for this field? [K3]

1. 12.3
2. 0.4, 0.5, 25.0, 25.1
3. **0.2, 0.9, 29.5**
4. 10.0, 28.0
5. The following rule must be followed when using the equivalence class partitioning method: [K3]
6. **The representatives of the valid equivalence classes of the actual parameters can be combined**
7. The representatives of the invalid equivalence classes of the actual parameters shall be combined
8. The representatives of the invalid equivalence classes of the actual parameters must be combined pair wise
9. The representatives of one invalid equivalence classes shall be combined with another representative of another invalid equivalence class.
10. Which of the following statements for the given state table designed with state transition test technique is NOT correct?...[K3]



|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test Case | 1 | 2 | 3 | 4 | 5 |
| Input | A | Power off | RC on | RC off | Power off |
| Expected output | TV standby | TV off | B | TV standby | TV off |
| Finish State | S2 | C | S3 | S2 | D |

1. A – “Power On”
2. B – “TV Play”
3. **C –“ S2”**
4. D –“ S1”
5. For the following piece of code, how many test cases are needed to get 100% statement coverage?

|  |
| --- |
| Procedure X  Read (Color)  IF(Colors \*Red\*) THEN  Call Roses(Color)  ELSEIF ( Color == \*Blue\*) THEN  Call Violets(Color)  ELSE  PRINT \*User is no Shakespeare\*  SaveToDatabase(Color) End Procedure X  End Procedure X |

1. 1
2. **3**
3. 5
4. 7
5. Inspect the following piece of code: ..[K3]

|  |
| --- |
| If Payment by Cash  If it’s Vietnam Dong  Accept the VietNam Dong  Else  Exchange to Vietnam Dong  End if  Else  Pay by Credit Card  Endif |

How many test cases are needed at least to cover decision coverage testing?…[K3]

1. 2 test cases
2. **3 test cases**
3. 4 test cases
4. 5 test cases
5. You start specification- based testing of a program. If calculates the greatest common divisor[ abbr,: GCD] of two intergers IntA and IntB bigger than zero.

The following test cases have been specified.

intcalcGCD (intintA, intintB);

INT\_MAX; largest Integer (e.G,.216 = 65536);

|  |  |  |
| --- | --- | --- |
|  | IntA | IntB |
| A | 1 | 1 |
| B | INT\_MAX | INT\_MAX |
| C | 1 | 0 |
| D | 0 | 1 |
| E | INT\_MAX+1 | 1 |
| F | 1 | INT\_MAX+1 |

Which test technique has been applied in order to determine the test cases A to F?..[K3]

1. **Boundary value analysis**
2. Equivalence partitioning
3. State transition testing
4. Decision table testing.
5. Which is a correct combination to achieve 100% branch coverage for following code?.. [K3]

Public void foo(int x, int y) {

If (x!=0) {

Y =y/x;

If (y>0) {

Y =y -1;

}

}

}

1. **(x=1, y=1), (x=0, y=0), (x=1, y=0)**
2. (x=1, y=1), (x=1, y=-1), (x=1, y=0)
3. (x=1, y=1), (x=0, y=0)
4. (x=1, y=1)
5. You are working on testing an e-learning application. A business analyst gives you a document that describes the most common user scenarios. You would use this document to create what kind of test?
6. Component tests
7. Structure –base test
8. **Specification-based tests**
9. Experiences-based tests
10. You have become the test manager of a software development project that is already underway. Which questions do you ask FIRST in order to write a test plan and to define the overall testing strategy?...[K2]
11. What are the biggest product risks?
12. Where and how are the system requirements specified?
13. Is there already test data available?
14. When is the project due to be finished?
15. Have end-users already been selected as testers?
16. Is a tool for automated testing in place?
17. **A, B and D are true; C, E and F are false**
18. A, C and E are true; B, D and F are false
19. A, D and F are true; B, C and E are false
20. B, C and D are true; A, E and F are false
21. Which of the following alternatives are typical test exit criteria?...[K2]
22. **Thoroughness measures, reliability measures, test cost, schedule, state of defect correction and residual risks.**
23. Thoroughness measures, reliability measures, degree of tester independence and product completeness.
24. Thoroughness measures, reliability measures, test cost, time to market and product completeness, number of defects.
25. Time to market, residual defects, tester qualification, degree of tester independence, thoroughness measures and test cost.
26. Which of the following are NOT valid objectives for incident reports?...[K2]
27. Provide developers and other parties with feedback about problem to enable identification, isolation and correction as necessary
28. Provide ideas for test process improvement
29. **Provide a vehicle for assessing tester competence**
30. Provide testers with a means of tracking the quality of the system under test.
31. Which of the following details would most likely be included in an incident report?
32. Identification of the test item (configuration item) and environment
33. Development process characteristics such as organization stability and test process used
34. A review of the test basis, such as requirements, design, interfaces
35. Scope or degree of the impact on the stakeholders’ interest.
36. I, II and III
37. II and III
38. **I and IV**
39. III and IV
40. Which of the following alternatives are typical project risks to be considered by the test manager?...[K2]
41. **Delays and especially complex areas in the delivered product.**
42. Low quality of requirements, design, code and tests, as well as failure-prone areas in the delivered product.
43. Potential failure areas in the software or system.
44. **Supplier problems, organizational factor and the quality of design code and tests.**
45. Which is a correct explanation about product risk?..[K1]
46. Due to shortage of budgets, testing members can’t be assigned to a testing team as planned.
47. **Delivery of software which may include some easy bugs.**
48. Due to delay of development phase, period of test phase get to be shortened
49. Due to a wrong order of testing tools, the progress of testing phases gets to delay.
50. Which of the following alternatives are typical product risks to be considered by the test manager?...[K3]
51. **Error-prone areas; the potential harm to the user; poor product characteristics**
52. Low quality of requirements, design, code and tests, as well as error-prone areas.
53. Political problems and delays in especially complex areas in the product.
54. **Problems in defining the right requirements; potential failure areas in the software or system.**
55. A project to introduce a chosen test tool in an organization would be run like which of the alternatives?...[K2]
56. **Pilot project, adaptation of processes, developing adapted rules and standards, training, step wise introduction, coaching, follow-up costs and benefits.**
57. Pilot project, adaptation of processes, rules and standards, developing an FAQ, training, introduction, coaching, adaptation of the tool, follow-up of costs and benefits
58. Pilot project, step wise introduction, adaptation of processes, follow-up of costs and benefits
59. Pilot project, adaptation of processes, training, step wise introduction, coaching, follow-up of costs and benefits
60. Which of the following is characteristics of test management tools?.. [K1]
61. Logging of test results and generation of progress reports.
62. Improve the efficiency of testing activities by automating repetitive tasks.
63. Independent version control or interface with an external configuration management tool.
64. Assignment of actions to people (e.g. fix or confirmation test)
65. B & D
66. A, B & D
67. **A & C**
68. B, C & D
69. Which is a wrong explanation about static analysis tools?...[K2]
70. Static analysis tools measure a complexity of source codes.
71. **Static analysis tools measure a codes coverage and an effectiveness of static testing.**
72. Static analysis tools find defects of certain patterns of source codes.
73. Static analysis tools measure level of accordance with coding rules.
74. Which of the following testing activities can be automated?
75. Reviews and inspections
76. Collecting and measurements
77. Test planning
78. Test execution
79. Test data generation
80. **B, D and E are true; A and C are false**
81. A, C and D are true; B and E are false
82. B, C and E are true; A and D are false
83. A, B and C are true; D and E are false