Question 1

You are the Test Manager of a new project aimed at developing a software system that must be certified at level B of the DO-178B standard. The project will follow a V-Model software development life cycle and it will have four formal levels of testing: component, integration, system and acceptance testing.

You must produce the test plan documentation for this project by providing an adequate coordination across the four levels of testing in order to assure audit ability.

Which of the following answers would you expect to best describe how to organize the test plan?

K3 2 credits

Options:

A- Produce a single master test plan that covers in detail all four levels, describing the particular activities for all test levels

B- Produce a master test plan that covers three levels (component, integration, system test) and a separate acceptance test plan

C- Produce a master test plan describing the relationship between the four levels, and four separate detailed level test plans, one for each level

D- Produce four separate detailed level test plans, one for each level, without a master test plan

Answer:

C

Question 2

Question Type: **MultipleChoice**

You are the Test Manager of a new project that will have three formal levels of testing. unit, integration and system testing. The testing strategy you decide to adopt a blend of risk-based testing and reactive testing strategies.

Which of the following answers describes the most consistent example of implementation of this test strategy during the execution of the system tests?

K2 1 credit

Options:

A- Your test team executes exploratory tests following a session-based test management approach throughout the system test phase

B- Your test team executes system tests under the guidance of a sample of users throughout the system test phase

C- Your test team executes scripted tests designed and implemented before the execution of the system test phase, to cover the identified product risks. It also performs exploratory testing sessions throughout the system test phase

D- Your test team autonomously performs some exploratory testing sessions and, at the very end of the system testing phase, it also

executes more system tests under the guidance of a sample of users

Question 3

Question Type: **MultipleChoice**

Consider the following test strategies:

Consultative test strategy

Reactive test strategy

Analytical test strategy

Process-compliant test strategy

Consider also the following examples of test activities:

1. Prioritize the test cases, based on the results of a FMEA analysis, to ensure early coverage of the most important areas and discovery of the most important defects during test execution

2. Execute usability testing driven by the guidance of a sample of users (external to the test team)

3. Perform exploratory testing sessions throughout the system test phase

4. On an Agile project, execute tests that cover the test conditions identified for each user story of a feature planned for an iteration

Which of the following correctly matches each test strategy with an appropriate example?

K2 1 credit

Options:

A- I-2; II-3; III-4; IV-1

B- I-3; II-2; III-1; IV-4

C- I-1; II-2; III-3; IV-4

D- I-2; II-3; III-1; IV-4

Answer:

D

Question 4

Question Type: MultipleChoice

In the next two months some new features will be constantly added to new releases of a project you are working on as Test Manager.

You have identified as one of the main project risks, that the requirements specification will still be incomplete when your team starts the test design and implementation phase.

Some requirements will most likely be completed too late to allow a proper test preparation. You and your test team have already worked on several similar past projects in the same organization.

Which one of the following options would you expect to be the most effective at mitigating this risk?

K4 3 credits

Options:

A- Don't prepare any test and just run the regression test suite to check that the new features don't introduce regression

B- Make reasonable assumptions about the missing details and design lightweight tests that can be easily updated during test execution

C- Don't design any test until the test execution starts, then communicate that test execution is blocked due to incomplete requirements

D- Even if there are only few details missing, escalate the risk to the project manager without preparing any tests

Answer:

B

Question 5

In the test strategy document your organization declares:

- To adopt a V-model development lifecycle, with three formal levels of testing. unit, integration and system testing

- To use a blended risk-based and regression-averse testing strategy for each level of testing The following is an excerpt of the "approach" section for the system test plan document of a new project:

"Testing will only use manual tests. Due to the short period of time for test execution, the following activities will be performed in parallel with test execution: Test planning, test analysis and test design.

Basic metrics will be taken for test effort (i.e. person-hours), test cases executed (passed/failed), and incidents (no more metrics, such as code coverage, will be collected)." In the system test plan, no deviations from the test strategy are described. Based only on the given information, which of the following statements is true?

K4 3 credits

Options:

A- The approach described in the system test plan document is consistent with the test strategy

B- The approach described in the system test plan document is consistent with the risk-based testing strategy, but it is inconsistent with the regression testing strategy

C- The approach described in the system test plan document is consistent with the regression testing strategy, but it is inconsistent with the risk-based testing strategy

D- The approach described the system test plan document is inconsistent with both the risk-based and regression testing strategies

Answer:

D

Question 6

Assume you are currently working on a project developing a system where functional

requirements are very well specified. Unfortunately non-functional requirements do almost not exist.

You are the Test Manager. You have to choose a technique for test selection that allows testing of non-functional characteristics, especially reliability.

Which of the following techniques for test selection do you expect being most useful in this scenario?

K2 1 credit

A- A model-based technique based on the creation of operational profiles

B- Ambiguity reviews

C- Test condition analysis

D- Cause-effect graphing

Answer:

A

Question 7

Question Type: **MultipleChoice**

Which of the following statements about management of product quality risks in mature organizations with respect to the lifecycle, is true?

K2 1 credit

Options:

A- Mature organizations address product quality risks associated to non-functional characteristics only during the system test phase

B- Mature organizations are aware that the contribution of testing to analysis of product quality risks is very important. The analysis should occur throughout the entire lifecycle

C- Mature organizations don't waste time identifying the sources of risks. They only focus on identifying product quality risks

D- Mature organizations are aware that risk management of product quality risks only occurs during testing

Answer:

B

Question 8

Which of the following statements describing how identified product quality risks should be mitigated and managed, is true?

K2 1 credit

Options:

A- The extent of re-testing and regression testing activities should be based on the risk level

B- The identification of new risks, the re-assessment of the level of existing risks and the evaluation of the effectiveness of risk mitigation activities should only occur at the very beginning of a project

C- Risk mitigation of product quality risks can be effective only after starting test execution

D- The priority of the development and execution of tests should not be based on the risk level but only on the likelihood

Answer:

A

Question 9

Question Type: **MultipleChoice**

You are working on a project to develop an authentication system for an e-commerce website. This system provides two features: Registration and authentication. Two different development teams develop these two features.

There is a high likelihood that the delivery of the authentication feature to the test team will be three weeks later. To complete the registration the user must provide the following registration inputs: Name, surname, birth date, fiscal code and he/she can select a username and a password. A registered user can be a special user or a normal user. To be identified as a special user, he/she must also provide, during the registration process, a voucher possibly received from the IT department.

Access is granted only if a user is registered and the password is correct: In all other cases access is denied. If the registered user is a special user and the password is wrong, a special warning is shown on the system console. You are currently performing a quality risk

analysis using FMEA .

Based only on the given information, which of the following is NOT a product risk that could be identified during the quality risk analysis?
K4 3 credits

Options:

A- The late delivery of the authentication feature to the test team causes delays in the start of test execution and this could result in a shorter test period

B- The authentication system denies access for a special user with a wrong password, but doesn't display a special warning on the system console

C- The authentication system grants access to a normal user with a wrong password

D- The authentication system grants access to a special user with a wrong password

Answer:

A

Question 10

You are performing a quality risk analysis for a CSCI (Computer Software Configuration Item) used to implement a CBIT (Continuous Built-In Test) module of a safety-critical system. During the quality risk analysis you are trying to identify the ways in which failures of the CBIT module can occur, for each of them trying to determine the potential causes and likely effects, and the risk level (calculated as the product of three factors: severity, occurrence and detection). Which of the following risk analysis techniques are you working with? K2 1 credit

Options:

A- A lightweight product risk analysis technique

B- Failure Mode and Effect Analysis

C- Wide Band Delphi

D- Cost of Exposure

Answer:

B

Question 11

Question Type: **MultipleChoice**

Assume you are managing the system testing phase of a project.

The system test execution period is scheduled to twenty weeks.

All tests are manual tests. You are following a risk-driven test approach.

During the last staff meeting the project manager tells you new deadlines that will not allow completion of all the system tests.

Which of the following would you expect to be the best way to respond to this situation? K2 1 credit

Options:

A- Prioritize executing the tests for the highest product risks and track these risks

B- Remove testers from your test team, so that they can be assigned to other projects

C- Automate all remaining tests

D- No action is needed, test as much as possible in the remaining time period

Answer:

A