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Exam Code: CTAL-TM

Exam Name: Certified Tester Advanced Level Test Management

Exam A

QUESTION 1
Consider the following scenario:
Your customer is closely involved in the development project. Requirements are communicated verbally and rarely written down. An iterative development model is being followed and time boxing is used to stay on schedule.
Which of the following statements is true? [3]

A. A requirements traceability matrix will be created at the start of each iteration.
B. Your developers are using a waterfall methodology.
C. There is a risk that the system architecture may have to be changed during the development process.
D. Testing will start when all coding is completed.

Correct Answer: C
Section:
Explanation:
In an iterative development model with close customer involvement and verbal communication of requirements, there is an inherent risk of changes in the system architecture. This is due to the evolving understanding of requirements and the potential for new requirements to emerge as the project progresses.
Reference: The ISTQB Advanced Level Test Manager syllabus emphasizes the importance of managing risks in iterative development models1.It suggests that test managers should be prepared for changes, including possible alterations to the system architecture, as part of the risk management process23. This approach ensures that the testing strategy remains flexible and responsive to changes throughout the development lifecycle.

QUESTION 2
Most managers in your company consider the efforts of your test team valuable, while others see comprehensive testing as an unnecessary cost overhead to the SDLC.
What action could the Test Manager take to quantify the value of testing to the organization? [3]

A. Develop metrics that illustrate planned and actual testing hours.
B. Review the Test Plan with the management team.
C. Determine the cost of external failures.
D. Demonstrate the role QA has in similar size organizations.

Correct Answer: C
Section:
Explanation:
Determining the cost of external failures involves analyzing the impact of defects that escape into production. This includes the direct costs associated with fixing the defects, as well as the indirect costs such as customer dissatisfaction, damage to the company's reputation, and potential loss of business. By quantifying these costs, the Test Manager can illustrate the financial benefits of comprehensive testing in preventing high-cost external failures, thereby demonstrating its value as an investment rather than a cost overhead.
Reference: The ISTQB Advanced Level Test Manager documents provide guidelines on how to establish and use metrics to measure the effectiveness and efficiency of the testing process, including the cost of quality and the Return on Investment (ROI) for testing activities. These references support the rationale behind choosing option C as the verified answer.

QUESTION 3
You have directed one of your testers to construct a 'smoke test' to execute against new builds prior to starting formal testing. This is an example of which software development lifecycle activity?

A. Project management
B. Software development and maintenance
C. Change and configuration management

D. Technical support

Correct Answer: C
Section:
Explanation:
The correct answer is C. Change and configuration management. This is because a smoke test is a type of test that checks the basic functionality and stability of a new build before proceeding to more detailed testing. A smoke test is an example of change and configuration management, which is the activity of controlling and tracking the changes made to the software and its configuration items throughout the software development lifecycle.Reference:Certified Tester Advanced Level Test Manager (CTAL-TM) - ISTQB not-for-profit association,ISTQB Test Manager Certification - ISTQB Exams Worldwide - ISTQB Official Registration,Managing the Test Team - ISTQB not-for-profit association

QUESTION 4
Your application development team is performing 'test-driven' development. This is a core principal of which software development model?

A. Sequential
B. Iterative
C. Agile
D. Spiral

Correct Answer: C
Section:
Explanation:
Test-driven development (TDD) is a core principle of Agile software development. In TDD, test cases are created before the code is written, and the code is developed to pass these tests.This approach emphasizes requirements and solutions evolving through collaborative effort and is a key practice in Agile methodologies12.
Reference: The Agile Alliance describes TDD as a style of programming tightly interwoven with coding, testing, and design, which is a fundamental aspect of Agile development3.Wikipedia also notes that TDD is related to the test-first programming concepts of extreme programming, an Agile methodology
This is because test-driven development (TDD) is a style of programming in which coding, testing, and design are tightly interwoven. TDD is a core principle of agile software development, which is an iterative and adaptive approach that values customer collaboration, working software, and responding to change.Agile AllianceReference:Certified Tester Advanced Level Test Manager (CTAL-TM) - ISTQB not-for-profit association,ISTQB Test Manager Certification - ISTQB Exams Worldwide - ISTQB Official Registration,What is Test Driven Development (TDD)? | Agile Alliance

QUESTION 5
You have been promoted to Test Manager within your company. Your new manager states that your test team utilized a risk-based test approach for the last release but in production, a number of serious failures in lightly tested areas have occurred.
What would be your first action prior to the start of the next test phase for the next release? [3]

A. Ensure you have the correct stakeholders' participation during the risk assessment process
B. Review the test cases executed from the previous release.
C. Request functional requirements be prioritized in order of importance to the stakeholder.
D. Review the production defects and determine if they are valid.

Correct Answer: A
Section:
Explanation:
The best action that the Test Manager can take prior to the start of the next test phase for the next release is to ensure that the correct stakeholders' participation during the risk assessment process. This is because the risk assessment process is crucial for identifying and prioritizing the risks that may affect the quality of the system, and allocating testing resources accordingly. The correct stakeholders are those who have the authority, knowledge, and interest in the system and its risks, and who can provide valuable input and feedback to the test team. By involving the correct stakeholders, the Test Manager can ensure that the risk-based test approach is aligned with the project objectives and the stakeholder expectations, and that the most critical areas are tested adequately.Reference:Certified Tester Advanced Level Test Manager (CTAL-TM) - ISTQB not-for-profit association,ISTQB Test Manager Certification - ISTQB Exams Worldwide - ISTQB Official Registration,Managing the Test Team - ISTQB not-for-profit association

QUESTION 6

Which work experience is likely to develop the necessary skills to effectively test a software system? [3]

A. Being a member of the production group that supported the previous release of the system
B. Being the developer of testing tools used for automation
C. Being the current Project Manager for the system
D. Being a former Test Manager

Correct Answer: B
Section:
Explanation:
Being the developer of testing tools used for automation is likely to develop the necessary skills to effectively test a software system because it involves a deep understanding of testing processes and the creation of tools that facilitate these processes. This experience provides insight into the intricacies of test automation, which is crucial for designing effective tests and ensuring thorough coverage of the system under test.

QUESTION 7
You are the Test Manager on a new project. The schedule is aggressive and will require the team to work at peak efficiency. The requirements are not well defined yet, but it is clear that the project will be using new technologies. To help the developers meet the development schedule, an offshore group will be added to the development team.
At this time there is not enough budget to add more testing resources. The project stakeholders are very concerned about the quality of delivered product and will be watching the project closely, particularly during the testing cycles. The exit criteria from the system test level require no open high priority/severity defects, 100% pass rate for all test cases covering risks that are classified as 'high' or 'very high', 90% pass rate for all 'medium' risks and 50% pass rate for all 'low' and 'very low' risks.
Given this information, which lifecycle model should you recommend? [3]

A. Spiral
B. Iterative/incremental
C. V-model
D. Waterfall

Correct Answer: B
Section:
Explanation:
An iterative/incremental lifecycle model is a type of software development lifecycle that divides the project into smaller iterations or increments, each delivering a part of the functionality and undergoing its own planning, analysis, design, implementation, and testing phases1.This model is suitable for projects that have aggressive schedules, unclear requirements, new technologies, distributed teams, and high quality expectations, as it allows for early feedback, risk reduction, parallel development, frequent delivery, and continuous improvement2. Therefore, option B is the correct answer.Option A is incorrect because a spiral model is a type of iterative/incremental model that adds risk analysis and prototyping activities to each iteration3.While this model can also handle unclear requirements, new technologies, and high quality expectations, it may not be the best choice for projects that have aggressive schedules and distributed teams, as it requires more time and communication for risk assessment and prototyping4.Option C is incorrect because a V-model is a type of sequential model that maps each development phase to a corresponding testing phase in a V-shaped diagram5. This model is suitable for projects that have clear and stable requirements, well-known technologies, co-located teams, and moderate quality expectations, as it allows for early verification, traceability, and defect prevention. However, this model may not be the best choice for projects that have aggressive schedules, unclear requirements, new technologies, distributed teams, and high quality expectations, as it does not allow for early feedback, risk reduction, parallel development, frequent delivery, and continuous improvement. Option D is incorrect because a waterfall model is a type of sequential model that follows a linear sequence of phases from requirements to deployment. This model is suitable for projects that have simple and fixed requirements, well-known technologies, co-located teams, and low quality expectations, as it allows for easy planning, management, and documentation.However, this model may not be the best choice for projects that have aggressive schedules, unclear requirements, new technologies, distributed teams, and high quality expectations, as it does not allow for early feedback, risk reduction, parallel development, frequent delivery, and continuous improvement.Reference:1: ISTQB Glossary, Iterative/incremental lifecycle model2: ISTQB Advanced Level Test Manager Syllabus, Section 1.2.13: ISTQB Glossary, Spiral model4: ISTQB Advanced Level Test Manager Syllabus, Section 1.2.15: ISTQB Glossary, V-model : ISTQB Advanced Level Test Manager Syllabus, Section 1.2.1 : ISTQB Advanced Level Test Manager Syllabus, Section 1.2.1 : ISTQB Glossary, Waterfall model : ISTQB Advanced Level Test Manager Syllabus, Section 1.2.1 : ISTQB Advanced Level Test Manager Syllabus, Section 1.2.1

QUESTION 8
When scheduling performance testing, which of the following approaches would be most advisable?

A. Starting the performance testing during unit and integration testing

B. Deferring the start of performance testing until all functional defects have been resolved
C. Leveraging end users to do unit-level performance testing and automated tools for system-level performance testing
D. Requiring all performance tests to pass before starting functional testing

Correct Answer: A
Section:
Explanation:
Performance testing is the process of determining the speed, responsiveness, and stability of a system under a given workload1.Performance testing should be started as early as possible in the software development lifecycle, preferably during unit and integration testing, to identify and resolve performance issues before they become costly or risky2.Starting performance testing early can also help to validate the performance requirements, design, and architecture of the system, as well as to optimize the performance testing strategy and scope3. Therefore, option A is the correct answer.Option B is incorrect because deferring the start of performance testing until all functional defects have been resolved can delay the detection and resolution of performance issues, increase the cost and effort of performance testing, and reduce the confidence and quality of the system4. Option C is incorrect because leveraging end users to do unit-level performance testing and automated tools for system-level performance testing can introduce inconsistency, bias, and inefficiency in the performance testing process, as well as compromise the reliability and validity of the performance test results.Option D is incorrect because requiring all performance tests to pass before starting functional testing can create unrealistic or unnecessary expectations, as well as hinder the progress and feedback of the functional testing activities.Reference:1: ISTQB Glossary, Performance Testing2: ISTQB Certified Tester - Performance Testing (CT-PT)33: ISTQB Performance Testing - TesterYou44:Performance Testing - ISTQB not-for-profit association:ISTQB - PERFORMANCE TESTING:Performance Testing - ISTQB not-for-profit association

QUESTION 9
Which of the following are primary activities in conducting product risk analysis?

A. Risk testing, risk management
B. Risk identification, risk assessment
C. Risk identification, risk testing
D. Risk management, risk assessment

Correct Answer: B
Section:
Explanation:
Product risk analysis is the process of identifying and assessing the product risks that may affect the quality or functionality of the software under test1. Product risk analysis involves two primary activities: risk identification and risk assessment.Risk identification is the activity of finding, naming, and describing the risks that might affect the software under test2.Risk assessment is the activity of estimating the impact and probability of occurrence (likelihood) of the identified risks, and prioritizing them based on these factors3. Therefore, option B is the correct answer. Option A is incorrect because risk testing and risk management are not primary activities of product risk analysis, but rather activities that follow or use the results of product risk analysis.Risk testing is the activity of designing, implementing, and executing tests based on the product risk levels to reduce the level of product risks and inform stakeholders of their status4.Risk management is the activity of planning, monitoring, and controlling the risks and the risk mitigation actions in the software project5. Option C is incorrect because risk identification and risk testing are not primary activities of product risk analysis, but rather activities that are part of product risk analysis and risk-based testing respectively.Option D is incorrect because risk management and risk assessment are not primary activities of product risk analysis, but rather activities that are part of risk management and product risk analysis respectively.Reference:1: ISTQB Glossary, Product Risk Analysis2: ISTQB Glossary, Risk Identification3: ISTQB Glossary, Risk Assessment4: ISTQB Glossary, Risk-Based Testing5: ISTQB Glossary, Risk Management :Product Risk Analysis (PRA) | TMap:Risk-Based Testing | ISTQB Glossary:Risk Analysis | ISTQB Glossary

QUESTION 10
Which of the following statements is true regarding Fault Tree Analysis?

A. It is used to determine the root cause of observed and potential failures.
B. It is used to select the pairs of items to be used in pairwise testing.
C. It is a formal technique used to identify the likely effects of risks.
D. It is used to target defect-based testing.

Correct Answer: A
Section:
Explanation:

Fault Tree Analysis (FTA) is a technique used to analyze the causes of faults (defects).The technique visually models how logical relationships between failures, human errors, and external events can combine to cause specific faults to disclose1.FTA can help to determine the root cause of observed and potential failures by tracing back the fault events to their initiating causes and identifying the combinations of events that can lead to the fault occurrence2. Therefore, option A is the correct answer. Option B is incorrect because FTA is not used to select the pairs of items to be used in pairwise testing, which is a technique to generate test cases based on the combinations of two input parameters. Option C is incorrect because FTA is not a formal technique used to identify the likely effects of risks, which are uncertain events or conditions that may have a positive or negative impact on the project objectives.Option D is incorrect because FTA is not used to target defect-based testing, which is a testing technique that uses information about the types, causes, and locations of defects discovered in previous projects to guide the selection, creation, and prioritization of test cases.Reference:1: Fault Tree Analysis | ISTQB Glossary2:Fault Tree Analysis (FTA) - Software Testing Genius: ISTQB Glossary, Pairwise Testing : ISTQB Glossary, Risk : ISTQB Glossary, Defect-Based Test Technique :Fault Tree Analysis (FTA) - Software Testing Genius:Fault Tree Analysis | ISTQB Glossary

QUESTION 11
You are managing a project that will be using a model-based testing strategy.
Which of the following is an activity that will be needed in order to implement this strategy?

A. Conduct a quality risk analysis with all affected stakeholders.
B. Conduct operational profiling to determine the expected usage of the system.
C. Select an appropriate quality standard, such as ISO 9126, to be used to guide the testing.
D. Create the test charters for the exploratory testing sessions.

Correct Answer: C
Section:
Explanation:
A model-based testing strategy is a testing strategy that uses models to represent the desired behavior and structure of the system under test, and to derive test cases, test data, test procedures, and test oracles1. A model-based testing strategy requires an activity to select an appropriate quality standard, such as ISO 9126, to be used to guide the testing.A quality standard is a set of criteria, guidelines, or characteristics that define the quality attributes of a software product, such as functionality, reliability, usability, efficiency, maintainability, and portability2.A quality standard can help to define the quality requirements, objectives, and measures for the system under test, and to evaluate the quality of the test results and the test process3. Therefore, option C is the correct answer. Option A is incorrect because conducting a quality risk analysis with all affected stakeholders is not an activity specific to a model-based testing strategy, but rather a general testing activity that can be applied to any testing strategy.A quality risk analysis is a process of identifying and assessing the quality risks that may affect the system under test, and prioritizing them based on their impact and likelihood4. Option B is incorrect because conducting operational profiling to determine the expected usage of the system is not an activity specific to a model-based testing strategy, but rather an activity related to a usage-based testing strategy. An operational profile is a statistical representation of the relative frequencies of the inputs, operations, and operating conditions of a system in its operational environment. Option D is incorrect because creating the test charters for the exploratory testing sessions is not an activity specific to a model-based testing strategy, but rather an activity related to an exploratory testing strategy.A test charter is a document that defines the scope, objective, and approach of an exploratory testing session.Reference:1: ISTQB Glossary, Model-Based Testing2: ISTQB Glossary, Quality Standard3: ISTQB Advanced Level Test Manager Syllabus, Section 1.3.14: ISTQB Glossary, Quality Risk Analysis : ISTQB Glossary, Operational Profile : ISTQB Glossary, Test Charter :Model-Based Tester - ISTQB not-for-profit association:ISTQB Model-Based Testing Certification - ISTQB Exams Worldwide - ISTQB ...:ISTQB - ABOUT MODEL-BASED TESTER EXT.:ISTQB Certified Tester -- Model-Based Tester (CT-MBT)

QUESTION 12
Which of the following is a factor that is likely to increase the test estimate?

A. Use of a new technology
B. A requirement for high level test documentation
C. Assigned personnel who are experienced on working with similar projects in similar environments
D. Static test data

Correct Answer: A
Section:
Explanation:
A test estimate is an approximation of the amount of effort, time, and resources required to perform testing activities for a software project1.A test estimate can be influenced by various factors, such as the size, complexity, and quality of the software, the scope, objectives, and approach of the testing, the skills, experience, and availability of the test team, the tools, methods, and standards used for testing, and the constraints, risks, and assumptions related to the project2. One of the factors that is likely to increase the test estimate is the use of a new technology.A new technology is a technology that is unfamiliar or unproven to the test team or the organization, such as a new programming language, framework, platform, or tool3. The use of a new technology can increase the test estimate because it may require more time and effort to learn, understand, and apply the technology, as well as to deal with potential issues, challenges, or limitations that may arise from the technology. Therefore, option A is the correct answer. Option B is incorrect because a requirement for high level test documentation is not a factor that is likely to increase the test estimate, but rather a factor that is likely to increase the test documentation effort. Test documentation is the set of documents that describe the test basis, test

objectives, test design, test procedures, test results, and test evaluation of a software project. A requirement for high level test documentation means that the test documents need to be detailed, comprehensive, and consistent, which may require more time and effort to produce, review, and maintain. However, this does not necessarily affect the test estimate, as the test documentation effort can be considered as a separate or parallel activity to the test execution effort. Option C is incorrect because assigned personnel who are experienced on working with similar projects in similar environments is not a factor that is likely to increase the test estimate, but rather a factor that is likely to decrease the test estimate. Experienced personnel are personnel who have the relevant knowledge, skills, and abilities to perform the testing activities for a software project. Assigned personnel who are experienced on working with similar projects in similar environments can decrease the test estimate because they may require less time and effort to understand, design, implement, and execute the tests, as well as to deal with potential issues, challenges, or limitations that may arise from the project. Option D is incorrect because static test data is not a factor that is likely to increase the test estimate, but rather a factor that is likely to decrease the test estimate. Test data is the data that is used as input or output for the tests. Static test data is test data that is fixed and predefined, and does not change during the test execution.Static test data can decrease the test estimate because it may require less time and effort to create, manage, and maintain, as well as to ensure the validity, reliability, and traceability of the test data.Reference:1: ISTQB Glossary, Test Estimate2: ISTQB Advanced Level Test Manager Syllabus, Section 3.1.13:What is New Technology? - Definition from Techopedia:The Impact of New Technologies on Software Testing: ISTQB Glossary, Test Documentation : ISTQB Glossary, Experienced-Based Test Technique : ISTQB Glossary, Test Data : ISTQB Glossary, Static Test Data :Test Manager - ISTQB not-for-profit association: [ISTQB Foundation Level #38 -- Test Estimation Techniques - Software Testing Mentor] : [What are the estimation techniques in software testing?]

QUESTION 13
Which testing metric identifies defect density?

A. Project
B. Product
C. Process
D. People

Correct Answer: B
Section:
Explanation:
Defect density is a testing metric that measures the number of defects identified in a component or system divided by the size of the component or system (expressed in standard measurement terms, e.g., lines-of-code, number of classes or function points)1.Defect density is a product metric, as it evaluates the quality or reliability of a software product2. Therefore, option B is the correct answer.Option A is incorrect because project metrics are metrics that measure the characteristics of the software project, such as cost, schedule, effort, scope, or resources3. Option C is incorrect because process metrics are metrics that measure the characteristics of the software process, such as effectiveness, efficiency, productivity, or maturity.Option D is incorrect because people metrics are metrics that measure the characteristics of the software personnel, such as skills, experience, motivation, or satisfaction.Reference:1: Defect Density | ISTQB Glossary2:Software Testing Metrics: What is, Types & Example3: [Project Metrics - Software Testing Fundamentals] : [Process Metrics - Software Testing Fundamentals] : [People Metrics - Software Testing Fundamentals]

QUESTION 14
The test team is using a distributed model for testing.
What is the primary factor you should consider with this model?

A. Alignment of methodologies
B. Co-location of test team
C. Provision of growth opportunities for the individual testers
D. Planned vs. actual hours

Correct Answer: A
Section:
Explanation:
A distributed model for testing is a testing model that involves testers working in different locations, time zones, or organizations, such as onshore, offshore, or nearshore1.The primary factor that you should consider with this model is the alignment of methodologies, which means that the testers follow the same or compatible testing processes, standards, tools, and techniques, regardless of their location, time zone, or organization2.The alignment of methodologies can help to ensure the consistency, quality, and efficiency of the testing activities, as well as to facilitate the communication, coordination, and collaboration among the testers3. Therefore, option A is the correct answer. Option B is incorrect because co-location of test team is not a factor that you should consider with a distributed model for testing, but rather a factor that is contrary to a distributed model for testing.Co-location of test team means that the testers work in the same physical location, which can have some advantages, such as easier communication, faster feedback, and stronger team spirit, but also some disadvantages, such as higher costs, limited resources, and less diversity4. Option C is incorrect because provision of growth opportunities for the individual testers is not a factor that you should consider with a distributed model for testing, but rather a factor that is relevant to any testing model. Provision of growth opportunities for the individual testers means that the testers are given the chance to learn new skills, gain new experiences, and

advance their careers, which can have some benefits, such as increased motivation, productivity, and retention of the testers. Option D is incorrect because planned vs. actual hours is not a factor that you should consider with a distributed model for testing, but rather a factor that is relevant to any testing model. Planned vs.actual hours is a testing metric that compares the estimated and the actual effort spent on the testing activities, which can help to measure the accuracy of the test estimation, the efficiency of the test execution, and the variance of the test schedule.Reference:1: ISTQB Glossary, Distributed Testing2:Distributed Testing - Software Testing Fundamentals3: ISTQB Advanced Level Test Manager Syllabus, Section 3.2.14:Co-located vs. Distributed Teams: What's the Difference?:How to Provide Growth Opportunities for Employees:Software Testing Metrics: What is, Types & Example

QUESTION 15
Test results are reported as 'Requirements tested, passed, and failed'.
What test strategy are you using?

A. Model-based
B. Exploratory
C. Analytical
D. Reactive

Correct Answer: C
Section:
Explanation:
An analytical test strategy is a test strategy that is based on the analysis of the factors that affect the quality of the software under test, such as the requirements, the risks, the complexity, or the criticality1.An analytical test strategy uses these factors to define the test objectives, scope, approach, and techniques, as well as to prioritize and allocate the test resources2. Reporting the test results as ''Requirements tested, passed, and failed'' implies that the testing is driven by the requirements, which are the specifications of the desired features and functions of the software under test. Testing based on the requirements is an example of an analytical test strategy, as it uses the requirements as the main factor to guide the testing activities. Therefore, option C is the correct answer. Option A is incorrect because a model-based test strategy is a test strategy that uses models to represent the desired behavior and structure of the software under test, and to derive test cases, test data, test procedures, and test oracles. A model-based test strategy does not necessarily report the test results as ''Requirements tested, passed, and failed'', as it may use other types of models, such as state diagrams, data flow diagrams, or decision tables, to generate and execute the tests. Option B is incorrect because an exploratory test strategy is a test strategy that uses the tester's knowledge, skills, and creativity to design and execute tests dynamically, without predefined test cases or test procedures. An exploratory test strategy does not report the test results as ''Requirements tested, passed, and failed'', as it does not follow a formal or structured testing process, but rather relies on the tester's intuition, experience, and feedback. Option D is incorrect because a reactive test strategy is a test strategy that uses the actual behavior and results of the software under test to design and execute tests, without prior knowledge or documentation of the software.A reactive test strategy does not report the test results as ''Requirements tested, passed, and failed'', as it does not have any requirements or specifications to compare the software against, but rather uses the software itself as the test basis.Reference:1: ISTQB Glossary, Analytical Test Strategy2: ISTQB Advanced Level Test Manager Syllabus, Section 1.1.1 : ISTQB Glossary, Requirement : ISTQB Advanced Level Test Manager Syllabus, Section 1.1.1 : ISTQB Glossary, Model-Based Testing : ISTQB Advanced Level Test Manager Syllabus, Section 1.1.1 : ISTQB Glossary, Exploratory Testing : ISTQB Advanced Level Test Manager Syllabus, Section 1.1.1 : ISTQB Glossary, Reactive Test Strategy : ISTQB Advanced Level Test Manager Syllabus, Section 1.1.1 :Test Strategy | ISTQB Glossary:Test Strategy - ISTQB not-for-profit association

QUESTION 16
Which of the following aspects should test progress metrics be mapped to?

A. Lines of code
B. Exit criteria
C. Post-implementation defect discovery rate
D. Defect resolution rate

Correct Answer: B
Section:
Explanation:
Test progress metrics should be mapped to exit criteria to ensure that the testing process aligns with the predefined standards for completion. Exit criteria typically include conditions such as coverage of test cases, pass rates, and the resolution of major defects, which are essential for determining the end of the test phase.
Reference: The ISTQB Advanced Level Test Manager syllabus includes the evaluation of exit criteria as part of the test monitoring and control process1.It is crucial for test managers to define and evaluate these criteria to ensure that the testing objectives have been met and that the product is ready for releas

QUESTION 17

Your company just won a contract to create a new sales application and has committed to a very aggressive delivery timeline. Due to the quick turnaround your primary stakeholder wants to be heavily involved in the design and is very anxious to see the outcome. Because of this, your company has decided to use a spiral development approach. You have a defined test policy and typically use an analytical approach to testing, however, this approach will not work with the development approach.
What test strategy should be utilized? [3]

A. Model-based
B. Methodical
C. Standard-compliant
D. Reactive

Correct Answer: D
Section:
Explanation:
A reactive test strategy is a test strategy that uses the actual behavior and results of the software under test to design and execute tests, without prior knowledge or documentation of the software1.A reactive test strategy should be utilized for a project that uses a spiral development approach, which is a type of iterative/incremental approach that adds risk analysis and prototyping activities to each iteration2.A reactive test strategy is suitable for a spiral development approach because it allows for flexibility, adaptability, and creativity in the testing process, as well as for early feedback, risk reduction, and continuous improvement in the software development process3. Therefore, option D is the correct answer. Option A is incorrect because a model-based test strategy is a test strategy that uses models to represent the desired behavior and structure of the software under test, and to derive test cases, test data, test procedures, and test oracles. A model-based test strategy may not work well with a spiral development approach, as it requires the availability and stability of the models, which may not be the case in a spiral development approach that involves frequent changes and refinements of the software under test. Option B is incorrect because a methodical test strategy is a test strategy that uses predefined test methods, techniques, and procedures to design and execute tests, such as equivalence partitioning, boundary value analysis, or decision table testing. A methodical test strategy may not work well with a spiral development approach, as it requires the availability and stability of the test basis, such as the requirements, specifications, or design documents, which may not be the case in a spiral development approach that involves frequent changes and refinements of the software under test. Option C is incorrect because a standard-compliant test strategy is a test strategy that follows a predefined set of standards, guidelines, or regulations to design and execute tests, such as ISO, IEEE, or CMMI.A standard-compliant test strategy may not work well with a spiral development approach, as it requires the compliance and consistency of the testing process, which may not be the case in a spiral development approach that involves frequent changes and refinements of the software under test.Reference:1: ISTQB Glossary, Reactive Test Strategy2: ISTQB Glossary, Spiral Model3: ISTQB Advanced Level Test Manager Syllabus, Section 1.1.1 :Spiral Model in Software Development Life Cycle - Software Testing Material:Spiral Model - Tools QA:Strategic Test Management - ISTQB not-for-profit association: ISTQB Glossary, Model-Based Testing : ISTQB Glossary, Methodical Test Strategy : ISTQB Glossary, Standard-Compliant Test Strategy :ISTQB Foundation Level #39 -- Test Approach and Strategy - Software Testing Mentor

QUESTION 18
Which of the following organizational structures would be considered unorthodox?

A. Developers within the same team unit test each others' code prior to handing over to a separate testing team for system testing
B. Developers and testers are integrated within the same project team, each role focusing on a different level of testing
C. After developers are done unit testing, business analysts alpha test the system before handing over to a separate testing team for system testing
D. DBAs confirm the referential integrity of the database and developers complete their unit testing before handing over to external organization for system testing

Correct Answer: C
Section:
Explanation:
The unorthodox structure mentioned in option C involves business analysts performing alpha testing. Typically, alpha testing is conducted by internal staff or a team close to the development environment, not specifically by business analysts. This step is unusual as business analysts are generally responsible for requirements analysis and ensuring that the developed system meets business needs, rather than conducting alpha testing, which is more focused on identifying bugs and issues from a user's perspective.
ISTQB Glossary, Distributed Testing
ISTQB Advanced Level Test Manager Syllabus, Section 3.2.1
Related literature on testing roles and responsibilities

QUESTION 19
The Test Manager must assemble team members that have which of the following characteristics?

A. Thrive in a routine, structured environment
B. Will not change the severity of a defect report
C. Will spark informal cross training among themselves
D. Possess identical skill sets

Correct Answer: C
Section:
Explanation:
A test manager must assemble team members that will spark informal cross training among themselves. This means that the team members are willing and able to share their knowledge, skills, and experiences with each other, and learn from each other's feedback and suggestions. This can improve the team's performance, productivity, and quality, as well as foster a collaborative and supportive culture. Cross training can also help the team members to develop new competencies, fill skill gaps, and handle different roles and tasks when needed.Top 10 Leadership Qualities to Distinguish a Test ManagerTest manager roles and responsibilities (with FAQs)Reference:
Top 10 Leadership Qualities to Distinguish a Test Manager - Software Test Professionals
Test manager roles and responsibilities (with FAQs) - Indeed

QUESTION 20
Which of the following can demotivate a tester?

A. Receiving direct and honest feedback on areas to improve
B. Working extra hours, resulting in a successful product deployment
C. When metrics indicate weaknesses in their testing
D. When testing is cut short, resulting in a high number of production defects

Correct Answer: D
Section:
Explanation:
This can demotivate a tester because it implies that the tester's work is not valued or respected by the management or the stakeholders. It also suggests that the tester's efforts and skills are wasted or ineffective, as the product quality is compromised and the customer satisfaction is reduced. Testing is cut short when there is insufficient time, budget, or resources allocated for testing, or when there is pressure to release the product without adequate testing. This can lead to frustration, dissatisfaction, and loss of confidence among the testers.Top 6 things that demotivate a developerHow to Demotivate Your Best EmployeesReference:
Top 6 things that demotivate a developer - Amsterdam Standard
How to Demotivate Your Best Employees - HBS Working Knowledge

QUESTION 21
You are the manager of a test team. You inherited most of these people from a previous manager who promoted technical skills, particularly programming skills. As a result, your people are very strong in test automation skills, white box testing and complex test design techniques. You have just been told that you can hire five new people. You want the new people to complement the existing skill sets and you want to be sure the team will have a strong mutual respect.
Given the following options, who should you hire? [3]

A. Hire all black box testers because you are severely lacking in that skill set.
B. Hire customer support people who have experience with the customer interface.
C. Hire a mix of people with strong testing and domain skills.
D. Hire college interns who can be trained by the existing people.

Correct Answer: C
Section:
Explanation:
The best option to hire new people for your test team is to hire a mix of people with strong testing and domain skills. This means that the new people have both the technical knowledge and the business understanding to test the software system effectively and efficiently. Hiring a mix of people with strong testing and domain skills can complement the existing skill sets of your test team, as well as enhance the team's diversity, creativity, and collaboration. Hiring a mix of people with strong testing and domain skills can also help the team to achieve a balance between white box and black box testing, and to cover different aspects and perspectives of the software

system.How to Build a Software Testing TeamHow to Hire a Software TesterReference:
How to Build a Software Testing Team - Testim.io
How to Hire a Software Tester - The Ultimate Guide

QUESTION 22
You have just conducted a skills assessment for your team. You decided to rate everyone from 1 to 5 in the skill areas as follows:
5 = expert
4 = proficient
3 = can use this skill effectively but will need some assistance
2 = interested in learning this skill but has only minimal knowledge
1 = not interested in learning this skill
Given these values, you have rated your team as shown in the table below for the designated skill areas:

	Mike	Greg	Lois	Steve	Fran
Programming	5	4	1	1	5
Static Analysis	4	2	2	3	4
Performance	5	1	1	2	2
Portability	1	1	4	1	4
Usability	1	5	5	4	2
Security	5	2	1	1	5
Black box techniques	1	1	4	5	1
Automation	5	3	1	1	5
Domain knowledge	2	3	1	2	2
Customer support	1	1	4	1	1

You will be starting to test a new product that is an upgrade from one of your existing end user products. Your testing will include white box,
performance, security, usability, and black box. You also have a goal to automate 100% of the smoke test and 50% of the regression tests by the end of the release.
Your team willingly shares knowledge and conducts regular lunch time cross-training sessions.
Your manager wants to know if you would like to bring in someone to help train your team in preparation for this project. In which area could you best utilize this help? [3]

A. Training in automation
B. Training in customer support
C. Training in black box techniques
D. Training in domain knowledge

Correct Answer: A
Section:
Explanation:
Based on the table, the area where your team could best utilize help is training in automation. This is because most of your team members are either not interested in learning this skill or have only minimal knowledge about it. Automation is an important skill for testing, especially for achieving your goal of automating the smoke test and the regression test. Training in automation can help your team to learn how to use various tools and frameworks to create, execute, and maintain automated test scripts. Training in automation can also improve the efficiency, effectiveness, and coverage of your testing process.Best Automation Courses & Certificates OnlineTraining - ISATop Automation Courses OnlineReference:
Best Automation Courses & Certificates Online
Training - ISA
Top Automation Courses Online

QUESTION 23
You are the Test Manager for a software house (SoftTech), who provide a core banking product to retail banks around the world to enable their customers to process payments via the Internet and telephone banking.
Your current project is to integrate SoftTech's core banking product with Welsh Bank's existing bank systems. However, Welsh Bank's systems are maintained by experienced developers and are poorly documented.
Welsh Bank has stated that this project must comply with Financial Conduct Authority (FCA) regulatory banking standards.
A specification for the 10 interfaces to Welsh Bank's existing systems has been produced by SoftTech's development team.
You have been asked to plan and conduct reviews for the system integration and support documentation of all the systems. Which of the following is the BEST approach for this project?
SELECT ONE OPTION

A. Conduct Inspections to verify that all documentation conforms to a set standard.
B. Conduct a management review to assess progress of the integration features.
C. Conduct an audit to verify that all test deliverables have been produced and signed off.
D. Conduct an informal review of the integration documentation before the systems are integrated.

Correct Answer: A
Section:

QUESTION 24
Your project manager has requested that you run management reviews in her absence. Which two of the following might you be expected to do at these reviews?
a. Check for defects in requirements documents.
b. Check the process to see if it passes the assessment.
c. Check the consistency of the project plan.
d. Check compliance by conducting evidential interviews
e. Check adequacy of management procedures.
f. Check contractual compliance for a software product Select one correct answer from the options below:

A. c and e.
B. e and f.
C. c and d.
D. a and b.

Correct Answer: A
Section:

QUESTION 25
You are monitoring the test results for the first week of system test execution to ensure they conform to the test plan objectives. You are guided by the list of test conditions and traceability matrix produced following test design. Test Plan objectives
* Approach - Risk-based and depth first
* Status reporting - Execution statuses must be either 'Passed*, 'Failed', 'Blocked' or 'Not Run'
* Traceability - Test execution results must be traceable back to the test conditions
Test Conditions

Test Condition	Risk Level
TC 1	Very High
TC 2	Medium
TC 3	High
TC 4	Low

Traceability matrix
Which one of the following is a correct statement regarding the current status of test plan objectives?

SELECT ONE OPTION

A. All the Traceability objective has been met.
B. All objectives have been met.
C. None of the objectives have been met.
D. Only Approach and Traceability objectives have been met.

Correct Answer: A
Section:

QUESTION 26
You are performing a risk assessment for a financial application using quantitative risk analysis. The following is a table describing the analysis undertaken so far:

Product Risk Item	Likelihood	Impact	Exposure	Cost of Testing
PR1	30 %	100 €		300 €
PR2	5 %	100,000 €		400 €
PR3	0.4 %	1,500 €		500 €
PR4	0.1 %	10,000 €		100 €

Which of the following statements correctly describes the outcome of the risk assessment using the 'Cost of Exposure' technique in this scenario? SELECT ONE OPTION

A. Testing for failures associated to PR4 should happen first.
B. PR3 and PR4 should be tested while PR! and PR2 should not be tested.
C. PR2 should be tested while PR1. PR3 and PR4 should not be tested
D. PR1, PR3 and PR4 should be tested while PR2 should not be tested

Correct Answer: C
Section:

QUESTION 27
You are planning the testing for an emergency product update required to correct a serious security issue and to improve system maintainability of a key product in your company's catalogue. It has been estimated that the historical cost to the company for the security issue in this system has been $375,000.
In the last year a total of 10 reported 'live' incidents were reported, resulting in a total external failure cost of S110.000 to correct.
The cost of prevention for this project has been estimated as $78,500 and from the development you have learned that the average cost of detection was $1,250 and the average cost of internal failure was $7,450
Which one of the following statements about cost of quality is TRUE? SELECT ONE OPTION

A. The historical costs of this system will be recovered in 2 years.
B. Each defect not found by testing will cost $1250.
C. Total cost of quality for this application will be $197,200.
D. Each defect found during testing offers a saving of $1300.

Correct Answer: C

Section:

QUESTION 28
Assume that you are part of a team conducting test design for a new university system that will allow students to update their own personal information. The Test Strategy states that positive and negative testing should be carried out. along with performance, security and interoperability testing against all new requirements.
The following requirements have been identified by stakeholders:
1. Students must be able to make changes to the following information:
a Name (due to marital status)
b Marital status
c. Home address
d. Home telephone number
e. Email address
f. Mobile telephone number
g. Contact details in case of emergency
2 Only Reception staff must have access to the information held.
3 The system must support 2000 concurrent users and details updated on the system within 20 seconds.
4. Interoperability of the new system with the other systems maintained by the University for student Registrations.
Test analysis for functional and non-functional testing has iust bequn and the following test conditions have been identified:

Test Condition	Description
1	Correct input of home address using valid and invalid postcodes, house names and numbers.
2	Correct input of mobile telephone numbers using a string of numerical characters, with and without spaces.
4	Name can be changed using a string of alpha characters (up to 30 characters) only when marital status is also changed.

Which one of the following is a valid test condition that is missing from the table of test conditions and has clear traceability back to the test strategy and requirements?
SELECT ONE OPTION

A. Time taken to update student information is 20 seconds or less when sup-plied correctly, or an error message is returned
B. System is compatible with market leading accessibility tools for blind or partially sighted users.
C. Correct input of home telephone numbers using a string of alpha characters only.
D. Correct input of student's date of birth details, using the format dd/mm/yyyy

Correct Answer: A
Section:

QUESTION 29
Which ONE of the following is considered to be the LEAST independent form of testing for an organisation? SELECT ONE OPTION

A. Testing is performed by a tester who is part of an independent test team.
B. Testing is performed by an organisation external to the company that has developed the code.
C. Testing is performed by a tester who is part of the development team.
D. Testing is performed by specialists from the business organisation.

Correct Answer: C
Section:

QUESTION 30
You are Test Manager on a new project and have estimated the test effort to be 500 days, assuming that you will find no more than 50 defects and 5 test iterations being required. The project manager has said the estimate is too high. Which of the following options could enable you to reduce this estimate?
SELECT ONE OPTION

A. Agree an increase in the Unit test coverage before the code is delivered to your test team.
B. Assign more test analysts to the test execution phase.
C. Increase the regression test coverage.
D. Allow more time for the developers to fix the defects found.

Correct Answer: A
Section:

QUESTION 31
Which of the following is NOT true when following the V-Model lifecycle to organise and plan testing activities? SELECT ONE OPTION

A. Test execution activities run until exit criteria have been met.
B. Reporting of all test results occurs when testing is complete for the whole project.
C. System test planning starts when project planning activities commence.
D. Test analysis activities run concurrently with specification of requirements and design.

Correct Answer: D
Section:

QUESTION 32
You have been asked to implement formal reviews at your company. From the list below, what are the correct characteristics of a formal review?
a. Entry and exit criteria have been defined.
b. Checklists created to be used by all reviewers.
c. Consistency with current project plan is checked.
d. Metrics on effectiveness will be gathered.
e. The review will be moderated by a lead auditor.

A. c, d and e.
B. b, c and e.
C. a, b and c.
D. a, b and d.

Correct Answer: D
Section:

QUESTION 33
Following identification of a number of costly system performance failures late in the development lifecycle, your organisation has introduced a more rigorous review process for system design documents and source code to enhance phase containment. There will be subsequent checks to see if the improved review process detects/prevents these types of performance defects which are likely to have the highest impact on the technical behavior of the system. You have been tasked with evaluating the current defect management tool that will be used to support the reviews and dynamic testing, to ensure that the correct defect data attributes will be captured to enable these checks to be done.

Which three of the following attributes would be MOST effective?
a) Phase of introduction
b) Severity
c) Steps to reproduce the failure
d) Resolution details
e) Phase of detection
SELECT ONE OPTION

A. a, b and e.
B. a, b and c.
C. b. c and d.
D. b, d and e.

Correct Answer: A
Section:

QUESTION 34
Which one of the following is NOT a determining factor when considering the optimal time to conduct a document review? SELECT ONE OPTION

A. Management procedures have been reviewed
B. Review time is built into the schedule.
C. The document is in a reviewable state.
D. Suitably skilled reviewers are available.

Correct Answer: A
Section:

QUESTION 35
You are a Test Manager at a company that develops mobile phone applications. Based on historical data in your company, you have calculated the following average metrics for system testing:
* for each 100 LOC (Lines Of Code). 4 test cases are executed
* each test case takes on average 15 minutes to execute and check
* for each 1000 LOC, 5 defects are found
You have used this information to create an estimate for the system testing of a new mobile phone application being developed to submit gas and electricity readings.
The application delivered for system testing has 50.000 lines of code. At the end of system testing, 250 defects are discovered.
Assume that:
* the system test of the new mobile phone application will require the same amount of effort as previous applications
* defect density = number of defects/1000 LOC
* no new tools or processes have been introduced to the test team
Based only on the given information, which one of the following statements is true about this new mobile phone application?
SELECT ONE OPTION

A. The time taken to run all the estimated tests would be 750 hours.
B. 3000 test cases will be executed during system testing and 250 defects will be found.
C. The actual number of defects found is the same as the estimated number of defects.
D. The source code contains a lower defect density than the source code of past applications

Correct Answer: C
Section: