



CTFL 4.0

Chapter 5

- Summary -
- Questions & Answers -
- Exam Questions Distribution -

Swipe for more



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Examinable Learning Objectives :

Level 1 : Remember (K1)

- The candidate will remember, recognize and recall a term or concept.
- Action verbs : Identify, recall, remember, recognize.
- Example : Identify typical test objectives.

Level 2 : Understand (K2)

- The candidate can select the reasons or explanations for statements related to the topic, and can summarize, compare, classify and give examples for the testing concept.
- Action verbs : Classify, compare, contrast, differentiate, distinguish...
- Example : Explain the activities of the review process.

Level 3 : Apply (K3)

- The candidate can carry out a procedure when confronted with a familiar task, or select the correct procedure and apply it to a given context.
- Action verbs : Apply, implement, prepare, use.
- Example : Apply test case prioritization.

Chapter 5 Question Distribution in the Exam :

- There is a total of **9 questions** required for Chapter 5 :

K1 = 1 question

K2 = 5 questions

K3 = 3 questions

- Number of points for this chapter = 9



Question Distribution	K-Level	Number of Questions per LO (group)*	Suggested Points per Question	Probability of Appearance in the exam
Chapter 5				
FL-5.1.2	K1	1	1	0.25
FL-5.1.6				0.25
FL-5.2.1				0.25
FL-5.3.1	K2	1	1	0.25
FL-5.1.1				0.5
FL-5.1.3				0.5
FL-5.1.7	K2	1	1	1
FL-5.2.2				0.3
FL-5.2.3				0.3
FL-5.2.4	K2	1	1	0.3
FL-5.3.2				0.5
FL-5.3.3				0.5
FL-5.4.1	K2	1	1	1
FL-5.1.4				1
FL-5.1.5				1
FL-5.5.1	K3	3	1	1

Summary of Chapter 5

5.1. Test Planning

5.1.1 (K2) Exemplify the purpose and content of a test plan

- The purpose of a test plan is to document the means and schedule for achieving test objectives, ensure that the performed test activities meet the established criteria, ensure that testing adheres to the existing test policy and test strategy (or explain why it deviates from them), and also serve as a means of communication.
- Test plan content includes: context of testing (scope, objectives...), stakeholders (roles, responsibilities...), communication (forms, frequency of communication...), risk register, test approach (test levels, types, techniques, entry and exit criteria...), budget and schedule.

5.1.2 (K1) Recognize how a tester adds value to iteration and release planning

- **Release planning** : We define the product backlog, write testable user stories and acceptance criteria, estimate test effort for user stories, determine the test approach, and participate in project and quality risk analysis.
- **Iteration planning** : Testers perform a detailed risk analysis of user stories, determine their testability, break user stories into tasks, and estimate test effort for all testing tasks.

5.1.3 (K2) Compare and contrast entry criteria and exit criteria

- **Entry criteria (Definition of Ready)**: Preconditions for undertaking a given activity. Entry criteria include: resource availability, testware availability, and the initial quality level of a test object (for example, smoke tests have passed).
- **Exit criteria (Definition of Done)**: What must be achieved to declare an activity completed. Typical exit criteria include: measures of thoroughness (coverage level, number of unresolved defects, defect density, number of failed test cases), Completion criteria (all regression tests are automated, static testing is performed, defects found are reported). Running out of time or budget can also be considered valid exit criteria.

5.1.4 (K3) Use estimation techniques to calculate the required test effort

- **Estimation based on ratios** : If the previous project's development-to-test ratio was 3:2 and the current project's development effort is expected to be 600 person-days, then the test effort can be estimated as: $600 \times (2/3) = 400$ person-days. (This is an example to understand !)

- **Wideband Delphi** : An expert-based technique where experts make experience-based estimations. Each expert estimates the effort, the results are collected, and if there are deviations, the process is repeated until a consensus is reached. Planning poker is a variant of Wideband Delphi.
 - **Three-point estimation** : Three estimations are made by the experts: the most optimistic estimation (a), the most likely estimation (m) and the most pessimistic estimation (b). The final estimate (E) = $(a + (4 \times m) + b)/6$
- This part (5.1.4) is better understood with exam questions practice!

5.1.5 (K3) Apply test case prioritization

- **Risk-based prioritization**: The order of execution is based on the results of risk analysis. Test cases covering the most important risks are executed first.
- **Coverage-based prioritization**: The order of execution is based on coverage. Test cases achieving the highest coverage are executed first.
- **Requirements-based prioritization**: The order of execution is based on the priorities of the requirements traced back to the corresponding test cases.

→ This part (5.1.5) is better understood with exam questions practice!

5.1.6 (K1) Recall the concepts of the test pyramid

- The test pyramid model shows that different tests have different granularity.
- Tests in the bottom layer are small, isolated, fast, and check a small piece of functionality, unlike those in the top layer.

5.1.7 (K2) Summarize the testing quadrants and their relationships with test levels and test types

- **Quadrant Q1 (Technology, Team)**: Component (unit) and component integration tests.
- **Quadrant Q2 (Business, Team)**: Functional tests, user story tests, API testing, UX testing.
- **Quadrant Q3 (Business, Product)**: Exploratory testing, usability testing, user acceptance testing.
- **Quadrant Q4 (Technology, Product)**: Smoke tests, non-functional tests (except usability testing).

5.2 Risk Management

5.2.1 (K1) Identify risk level by using risk likelihood and risk impact

- **Risk likelihood** : Probability of the risk occurrence.
- **Risk impact (harm)** : The consequence of this occurrence.
- **Risk level** = Risk likelihood × Risk impact.

5.2.2 (K2) Distinguish between project risks and product risks

- **Project risks**: Organizational issues (delays in work product deliverables, inaccurate estimates), people issues (insufficient skills, conflicts, communication problems...), technical issues (scope creep, poor tool support), supplier issues (third-party delivery failure, bankruptcy of the supporting company...).

- **Product risks:** Missing or incorrect functionality, incorrect calculations, poor architecture, inefficient algorithms, security vulnerabilities, etc. Product risks result in negative consequences, such as user dissatisfaction, revenue, trust, and reputation loss, third-party damages, high maintenance costs, criminal penalties, physical damage, injuries, or even death.

5.2.3 (K2) Explain how product risk analysis may influence thoroughness and test scope

- Product risk analysis consists of risk identification and risk assessment.
- Risk identification means generating a comprehensive list of risks.
- Risk assessment involves categorizing identified risks, determining their risk likelihood, risk impact, and level, prioritizing them, and proposing ways to handle them.
- Product risk analysis results are used to: determine the scope (rigor) of testing to be carried out, determine the test levels and test types, determine test techniques and the coverage to be achieved, estimate test effort, prioritize testing to find critical defects as early as possible and to determine if any additional activities to reduce risk can be employed.

5.2.4 (K2) Explain what measures can be taken in response to analyzed product risks

- Product risk control consists of risk mitigation and risk monitoring.
- Risk mitigation involves actions needed to reduce the risk level.
- Risk monitoring ensures that mitigation actions are effective.
- When a risk has been analyzed, several responses are possible: risk mitigation, risk acceptance, risk transfer, or a contingency plan.

5.3 Test Monitoring, Test Control and Test Completion

5.3.1 (K1) Recall metrics used for testing

- **Project progress metrics:** task completion, resource usage, test effort.
- **Test progress metrics:** test case implementation progress, test environment preparation progress, number of test cases run divided by number of test cases not run, number of passed test cases divided by number of failed test cases, test execution time.
- **Product quality metrics:** availability, response time, mean time to failure.
- **Defect metrics:** number & priorities of defects found divided by the number of fixed defects, defect density, defect detection percentage.
- **Risk metrics:** residual risk level.
- **Coverage metrics:** requirements coverage, code coverage.
- **Cost metrics:** cost of testing, organizational cost of quality.

5.3.2 (K2) Summarize the purposes, content, and audiences for test reports

- Test completion reports summarize a specific stage of testing.
- Test progress reports are generated on a regular basis (daily, weekly, etc.).

- **Test progress reports include:** test period, test progress (ahead or behind schedule), impediments for testing and their workarounds, test metrics, new and changed risks, and testing planned for the next period.
- **Test completion reports** (when a project, test level, or test type is complete and exit criteria are met): it uses test progress reports and other data. It includes: test summary, testing and product quality evaluation, deviations from the test plan, testing impediments and their workarounds, unmitigated risks, defects not fixed, and lessons learned.

5.3.3 (K2) Exemplify how to communicate the status of testing

- The best means of communication are: verbal communication, dashboards (CI/CD dashboards, task boards, burn-down charts), electronic communication (email, chat, conferences), online documentation, and formal test reports.

5.4 Configuration Management

5.4.1 (K2) Summarize how configuration management supports testing

- Configuration management (CM) ensures that all configuration items are uniquely identified, version controlled, and tracked for changes.
- CM ensures that all documentation and software items are referenced unambiguously in test documentation.
- Automated CM is normally included in DevOps pipelines.
- CM records the items that a complex configuration item consists of.
- CM provides a discipline for identifying, controlling, and tracking work products (test plans, test strategies, test conditions, test cases, test scripts, test results, test logs, and test reports)

5.5 Defect Management

5.5.1 (K3) Prepare a defect report

- A defect report includes: unique identifier, title & short summary of the anomaly, date of the anomaly, issuing organization, author, identification of the test object and test environment, context of the defect (test case being run, SDLC phase, test data being used, etc.), description of the failure (to enable reproduction), any relevant test logs, database dumps, screenshots, or recordings, expected and actual results, severity of the defect, priority to fix, status of the defect (open, deferred, duplicate, closed, rejected, etc.), references (to the test case, requirements, etc.)
- Defect reports provide those responsible for resolving reported defects with sufficient information to resolve the issue. They also:
 - Provide a means to track the quality of the work products.
 - Offer insights for improvement of the development and test process.

→ This part (5.5.1) is better understood with exam questions practice!

Swipe for the questions part



Questions from Chapter 5 in the ISTQB exam

5.1.1 (K2) Exemplify the purpose and content of a test plan

Consider the following part of a test plan.

Testing will be performed using component testing and component integration testing. The regulations require to demonstrate that 100% branch coverage is achieved for each component classified as critical.

Which part of the test plan does this part belong to?

- a) Communication
- b) Risk register
- c) Context of testing
- d) Test approach

Select ONE option.

a) Is not correct. The paragraph contains information on test levels and exit criteria, which are part of the test approach	FL-5.1.1
b) Is not correct. The paragraph contains information on test levels and exit criteria, which are part of the test approach	
c) Is not correct. <u>The paragraph contains information on test levels and exit criteria, which are part of the test approach</u>	
d) Is correct. The paragraph contains information on test levels and exit criteria, which are part of the test approach	

Which of the following is NOT a purpose of a test plan?

- a) To define test data and expected results for component tests and component integration tests
- b) To define as exit criteria from the component test level that “100% statement coverage and 100% branch coverage must be achieved”
- c) To describe what fields the test progress report shall contain and what should be the form of this report
- d) To explain why system integration testing will be excluded from testing, although the test strategy requires this test level

Select ONE option.

<p>a) Is correct. The test plan may include test data requirements (as part of the test approach), but not the detailed test data for test cases. Test data is part of the test cases, not the test plan. Also, it is usually impossible to define such data when the test plan is created, because it is not exactly known what the components will look like</p> <p>b) Is not correct. One of the purposes of a test plan is to help ensure that the performed test activities will meet the established criteria, by including entry criteria and exit criteria. The code coverage criteria are an example of such criteria for the component test level</p> <p>c) Is not correct. Documentation templates are typical content of a test plan. This helps to facilitate communication between the stakeholders by defining a standard way of communicating or reporting</p> <p>d) Is not correct. One of the purposes of a test plan is to demonstrate that testing will adhere to the existing test policy and test strategy, or to explain why the testing will deviate from them. This is an example of explaining the deviation, regarding the test levels that will be (or will not be) followed</p>	FL-5.1.1
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You are working in a team of testers who are all writing test cases. You have noticed that there is a significant inconsistency with the length and amount of detail in the different test cases. Where should the criteria for test case writing be documented?

- a. The test plan
- b. The test approach
- c. The test case template
- d. The project plan

A is correct. The level of detail and structure for the test documentation should be included in the test plan as part of the criteria for the performance of testing activities.

5.1.2 (K1) Recognize how a tester adds value to iteration and release planning

How do testers add value to iteration and release planning?

- a) Testers determine the priority of the user stories to be developed
- b) Testers focus only on the functional aspects of the system to be tested
- c) Testers participate in the detailed risk identification and risk assessment of user stories
- d) Testers guarantee the release of high-quality software through early test design during the release planning

Select ONE option.

<p>a) Is not correct. <u>Priorities for user stories are determined by the business representative</u> together with the development team</p> <p>b) Is not correct. Testers focus on both <u>functional</u> and <u>non-functional</u> aspects of the system to be tested</p> <p>c) Is correct. According to the syllabus, this is one of the ways testers add value to iteration and release planning</p> <p>d) Is not correct. Early test design is not part of release planning. Early test design does not automatically guarantee the release of quality software</p>	FL-5.1.2
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5.1.3 (K2) Compare and contrast entry criteria and exit criteria

Which TWO of the following options are the exit criteria for testing a system?

- a) Test environment readiness
- b) The ability to log in to the test object by the tester
- c) Estimated defect density is reached
- d) Requirements are translated into given/when/then format
- e) Regression tests are automated

Select TWO options.

<p>a) Is not correct. Test environment readiness is a resource availability criterion; hence <u>it belongs to the entry criteria</u></p> <p>b) Is not correct. This is a resource availability criterion; hence <u>it belongs to the entry criteria</u></p> <p>c) Is correct. <u>Estimated defect density</u> is a measure of diligence; hence <u>it belongs to the exit criteria</u>.</p> <p>d) Is not correct. Requirements translated into a given format result in testable requirements; hence it belongs to the entry criteria</p> <p>e) Is correct. <u>Automation of regression tests</u> is a completion criterion; hence <u>it belongs to the exit criteria</u></p>	FL-5.1.3
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Your team follows the process that uses the DevOps delivery pipeline. The first three steps of this process are:

- (1) Code development
- (2) Submit code into a version control system and merge it into the “test” branch
- (3) Perform component testing for the submitted code

Which of the following is BEST suited to be the entry criterion for step (2) of this pipeline?

- a) Static analysis returns no high severity warnings for the submitted code
- b) System version control reports no conflicts when merging code into the “test” branch
- c) Component tests are compiled and ready to be executed
- d) Statement coverage is at least 80%

Select ONE option.

<p>a) Is correct. This is something that can (and should) be checked <u>before</u> the code is submitted to version control</p> <p>b) Is not correct. This is something that can be checked <u>after step (2)</u> is performed, because merge conflict reporting can be done <u>after</u> the code is submitted and merged</p> <p>c) Is not correct. This fits better as the entry criterion for step (3)</p> <p>d) Is not correct. This fits better as the exit criterion for step (3)</p>	FL-5.1.3
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Which of the following BEST define EXIT criteria in a testing project?

- a) The budget is approved
- b) Budget runs out
- c) Test basis is available
- d) Test cases achieved at least 80% statement coverage
- e) All test analysts are ISTQB certified at the Foundation Level

Select TWO options.

<p>a) Is not correct. The approval of the budget is an example of an entry criterion. It would make no sense to approve the budget for some activity that has already been done</p> <p>b) Is correct. Running out of budget can be viewed as a valid exit criterion</p> <p>c) Is not correct. Availability of resources is an example of an entry criterion for testing</p> <p>d) Correct. Coverage is a measure of thoroughness, so it is a typical exit criterion</p> <p>e) Is not correct. This is an example of an entry criterion, checked before the project starts</p>	FL-5.1.3
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Which of the following is an example of a good exit criterion from system testing?

- a. All tests should be completed
- b. The project budget should be spent
- c. All defects should be fixed
- d. All severity 1 defects must be resolved

D is correct. This is measurable and clear.

A is not correct because completed is not a clear term and this might not be a reasonable goal and "should" is not a clear goal.

B is not correct because spending the budget is generally not the goal and you wouldn't expect the budget to be spent when system testing is done because that leaves no money for acceptance testing or roll out.

C is not correct because this is a "should" and also probably is not realistic.

5.1.4 (K3) Use estimation techniques to calculate the required test effort

Your team uses the three-point estimation technique to estimate the test effort for a new high-risk feature. The following estimates were made:

- Most optimistic estimation: 2 person-hours
- Most likely estimation: 11 person-hours
- Most pessimistic estimation: 14 person-hours

What is the final estimate?

- 9 person-hours
- 14 person-hours
- 11 person-hours
- 10 person-hours

Select ONE option.

In the three-point estimation technique
 $E = (\text{optimistic} + 4 \times \text{most likely} + \text{pessimistic})/6$,
 $E = (2 + (4 \times 11) + 14)/6 = 10$.
Hence d is correct.

FL-5.1.4

The team wants to estimate the time needed for one tester to execute four test cases for a software component. The team has gathered the following measures of the effort used to execute a single test case:

- Best-case scenario: 1 hour
- Worst-case scenario: 8 hours
- Most likely scenario: 3 hours

Given that the three-point estimation technique is being used, what is the final estimate of the time needed to execute all four test cases?

- 14 hours
- 3.5 hours
- 16 hours
- 12 hours

Using the three-point estimation technique, the final estimate (E) is calculated as:

$$E = (a + 4 \times m + b) / 6,$$

where a is the most optimistic estimate, m is the most likely estimate, and b is the most pessimistic estimate.

Thus:

- a) Is correct. In this case, the estimate for executing a single test case is:

$$E = (1h + 4 \times 3h + 8h) / 6 = 3.5 \text{ hours}$$

So, the total time needed for the tester to execute 4 test cases is:

$$3.5h \times 4 = 14 \text{ hours}$$

- b) Is not correct
c) Is not correct
d) Is not correct

FL-5.1.4

Your team uses planning poker to estimate the test effort for a newly required feature. There is a rule in your team that if there is no time to reach full agreement and the variation in the results is small, applying rules like “accept the number with the most votes” can be applied.

After two rounds, the consensus was not reached, so the third round was initiated. You can see the test estimation results in the table below.

	Team members' estimations						
Round 1	21	2	5	34	13	8	2
Round 2	13	8	8	34	13	8	5
Round 3	13	8	13	13	13	13	8

Which of the following is the BEST example of the next step?

- a) The product owner has to step in and make a final decision
- b) Accept 13 as the final test estimate as this has most of the votes
- c) No further action is needed. Consensus has been reached
- d) Remove the new feature from the current release because consensus has not been reached

Select ONE option.

a) Is not correct. This should be a team activity and not overruled by one team member	FL-5.1.4
b) Is correct. If test estimates are not the same, but the variation in the results is small, applying rules like “accept the number with the most votes” can be applied	
c) Is not correct. There is no consensus yet as some say 13, others say 8	
d) Is not correct. A feature should not be removed only because the team cannot agree on the test estimates	

You want to estimate the test effort for the new project using estimation based on ratios. You calculate the test-to-development effort ratio using averaged data for both development effort and test effort from four historical projects similar to the new one. The table shows this historical data.

Project	Development effort (\$)	Test effort (\$)
P1	800,000	40,000
P2	1,200,000	130,000
P3	600,000	70,000
P4	1,000,000	120,000

The estimated development effort for the new project is \$800,000. What is your estimate of the test effort in this project?

- a) \$40,000
- b) \$80,000
- c) \$81,250
- d) \$82,500

Select ONE option.

The average development effort is \$900,000 and the average test effort is \$90,000 (calculated from the four projects).

The average test-to-development effort ratio is 1:10 (\$90,000 : \$900,000), which means that historically, on average, the test effort is 10% of the development effort.

So if the development effort is estimated to be \$800,000, the estimated test effort is estimated as:

$$10\% * \$800,000 = 0.1 * \$800,000 = \$80,000.$$

Thus:

- a) Is not correct
- b) Is correct
- c) Is not correct
- d) Is not correct

Your team is using Planning Poker to estimate the effort for a story.

	Developer Vote	Tester Vote
First vote	3	8
Second vote	5	8
Third vote	5	5

Although three votes were taken to reach consensus, how many story points should be allocated to the story?

- a. 10 because that's the sum of the points
- b. 8 because that was the highest number
- c. 3 because that was the lowest number
- d. 5 because that was the consensus

D is correct. Voting should continue until consensus is reached and that number should be used to assign the points to the story.

5.1.5 (K3) Apply test case prioritization

You are testing a mobile application that allows users to find a nearby restaurant based on the type of food they want to eat. Consider the following list of test cases, priorities (i.e., a smaller number means a higher priority), and dependencies:

Test case number	Test condition covered	Priority	Logical dependency
TC 001	Select type of food	3	none
TC 002	Select restaurant	2	TC 001
TC 003	Get direction	1	TC 002
TC 004	Call restaurant	2	TC 002
TC 005	Make reservation	3	TC 002

Which of the following test cases should be executed as the third one?

- a) TC 003
- b) TC 005
- c) TC 002
- d) TC 001

Select ONE option.

Test TC 001 must come first, followed by TC 002, to satisfy dependencies. Afterwards, TC 003 to satisfy priority and then TC 004, followed by TC 005. Hence: a) Is correct. b) Is not correct. c) Is not correct. d) Is not correct.	FL-5.1.5
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The table shows the traceability matrix from test cases to requirements. "X" means that a given test case covers the corresponding requirement.

	Req1	Req2	Req3	Req4	Req5	Req6	Req7
TC1	X		X	X			X
TC2	X				X		X
TC3					X	X	
TC4		X					

You want to prioritize the test cases following the additional coverage prioritization technique.

You execute all four test cases.

Which test case should be executed as the LAST one?

- a) TC1
- b) TC2
- c) TC3
- d) TC4

Select ONE options.

TC1 achieves the highest coverage (4/7 – Req1, Req3, Req4 and Req7), so should be executed first.

Req2, Req5 and Req6 are still not covered.

The next test case that achieves the highest additional coverage of the remaining requirements is TC3, covering 2 out of these 3 requirements (Req5 and Req6). So, TC3 should be executed as the second one.

Now the only requirement still not covered is Req2, which is covered by TC4. Therefore, TC4 should be executed as the third test case.

So, the last test case executed will be TC2.

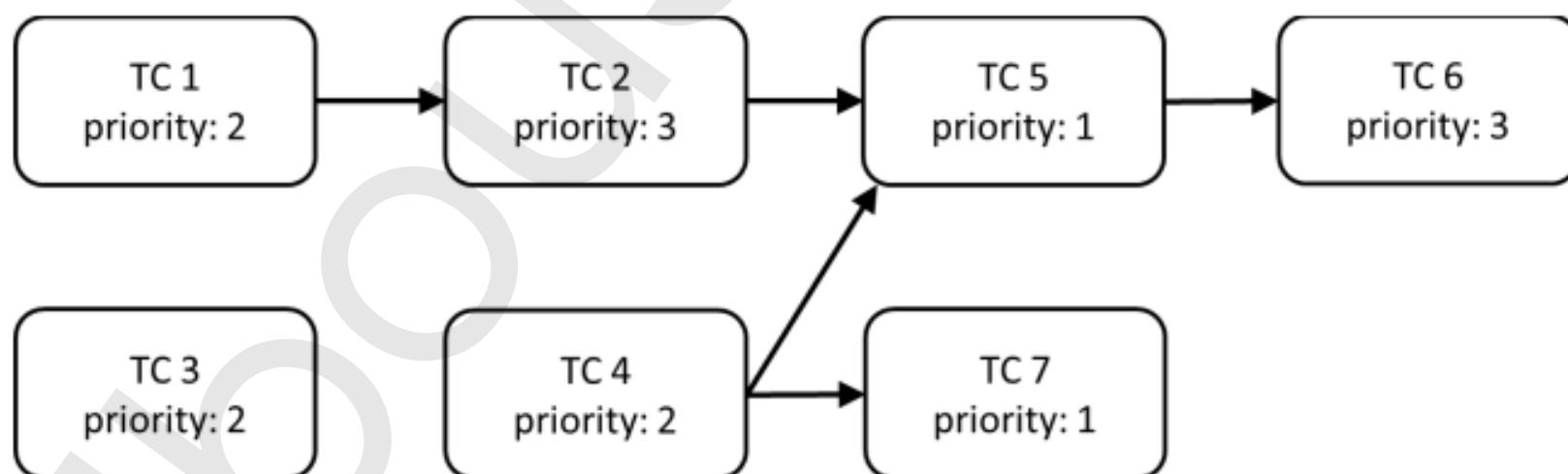
Thus:

- a) Is not correct
- b) Is correct
- c) Is not correct
- d) Is not correct

You are preparing a test execution schedule for executing seven test cases TC 1 to TC 7.

The following figure includes the priorities of these test cases (1=highest priority, 3 = lowest priority).

The figure also shows the dependencies between test cases using arrows. For instance, the arrow from TC 4 to TC 5 means that TC 5 can only be executed if TC 4 was previously executed.



Which test case should be executed sixth?

- a) TC 3
- b) TC 5
- c) TC 6
- d) TC 2

Select ONE option.

We want to run test cases according to their priorities, but we also need to consider the dependencies.

If we only consider priorities, we want to first run TC 5 and TC 7 (highest priority), then TC 1, TC 3, and TC 4, and finally TC 2 and TC 6 (lowest priority).

However, in order to run TC 7, we need to first run TC 4.

In order to run TC 5, we need to run TC 4 and TC 2, but TC 2 is blocked by TC 1, which should be run prior to TC 2.

So, in order to run priority 1 test cases as early as possible, the first five test cases should be: TC 4 - TC 7 - TC 1 - TC 2 - TC 5.

Next, we need to run TC 3, because it has higher priority than TC 6.

Thus the full schedule will be TC 4 – TC 7 – TC 1 – TC 2 – TC 5 – TC 3 – TC 6.

So, the sixth test case will be TC 3.

Thus:

- a) Is correct
- b) Is not correct
- c) Is not correct
- d) Is not correct

You are testing a web application that allows users to SEARCH for products, VIEW product details, ADD products to a shopping cart, and place an ORDER.

You have prepared the following seven test cases, all of which you want to execute. The tests should be executed in the best order, based on test priority.

	Test	Priority (1 = higher priority)
TC1	SEARCH for product A	4
TC2	SEARCH for product B	4
TC3	VIEW product A details	3
TC4	VIEW product B details	2
TC5	ADD product A to a shopping cart	3
TC6	ADD product B to a shopping cart	1
TC7	place an ORDER	5

You also identified the following logical dependencies between test cases:

- SEARCH functionality must be tested before VIEW functionality can be tested.
- VIEW functionality must be tested before ADD functionality.
- ADD functionality must be tested before ORDER functionality.

Which test case should be executed as the fourth one?

- a) TC3
- b) TC1
- c) TC7
- d) TC2

Select ONE option.

FL-5.1.5

The logical dependencies mean that for each product you have to run SEARCH → VIEW → ADD before running ORDER. You can add more products (using the same flow), before you run ORDER.
Based on this, TC1 or TC2 must be executed first, otherwise no progress can be made.

The first priority should be given to VIEW and ADD product B, as its test cases (TC6, TC4) are assigned with higher priority.

So, the first 3 test to execute are TC2 -> TC4 -> TC6

Now we need consider whether to run TC7 and then the entire flow for product A or run the TCs for product A first. Is TC7 has lower priority than the other tests, they should be tested first.

Therefore, the entire flow should be:

TC2 -> TC4 -> TC6 -> TC1 -> TC3 -> TC5 -> TC6

- a) Is not correct. TC1 must be executed before TC3
- b) Is correct
- c) Is not correct. As shown above, TC7 is the last to be executed.
- d) Is not correct. Product B must be executed before product A

Consider the following test cases that are used to test an accounting system:

Test ID	Name	Dependency	Priority
1	Purchase Item	None	2
2	Receive Invoice	Test 1	3
3	Receive Goods	Test 1	2
4	Send Payment	Test 2	3
5	Report Payments	Test 4	1

Given this information, what is the proper order in which to execute these test cases?

- a. 5, 1, 3, 2, 4
- b. 1, 2, 4, 5, 3
- c. 1, 3, 2, 4, 5
- d. 3, 4, 5, 1, 2

B is correct. The goal is to run the highest priority tests as soon as possible. Dependency has to be considered in order for the tests to actually be executed. In order to get the highest priority test run as soon as possible, the correct order is as follows: test 1 has to go first since everything else is dependent on it. Then we need to do 2 so we can do 4 and 5 (the highest priority test) and then 3 is last because 5 is not dependent on it.

A is not correct because 5 cannot be run first.

C is not correct because it does not run 5 as soon as possible; it defers it until after 3 is run.

D is not correct because 3 can't be run first as it requires 1 and 2.

FL-5.1.5

You have been given the following set of test cases to run. You have been instructed to run them in order by risk and to accomplish the testing as quickly as possible to provide feedback to the developers as soon as possible.

Given this information, what is the best order in which to run these tests?

Test Case ID	Duration	Risk Priority	Dependency
1	30 mins	Low	6
2	10 mins	Medium	none
3	45 mins	High	1
4	30 mins	High	2
5	10 mins	Medium	4
6	15 mins	Low	2

- a. 2, 4, 5, 6, 1, 3
- b. 4, 3, 2, 5, 6, 1
- c. 2, 5, 6, 4, 1, 3
- d. 6, 1, 3, 2, 4, 5

A is correct because it addresses the highest risk and fastest tests first. It runs a fast medium test before a slow and more dependent high-risk test because this will give feedback to the developers more quickly.

5.1.6 (K1) Recall the concepts of the test pyramid

Which of the following is TRUE regarding the test pyramid?

- a) It emphasizes having far more tests at the lower test levels
- b) It suggests that each low-level test checks a large part of the functionality
- c) It describes distribution of test types across SDLC
- d) It has no impact on the construction of automated tests

Select ONE option.

<p>a) Is correct. The test pyramid emphasizes having a larger number of tests at the lower test levels</p>	FL-5.1.6
<p>b) Is not correct. It is not true that near the top of pyramid, test automation should be more formal</p>	
<p>c) Is not correct. Usually component testing and component integration testing are automated using API-based tools</p>	
<p>d) Is not correct. For system testing and acceptance testing, the automated tests are typically created using GUI-based tools</p>	

What does the test pyramid model show?

- a) That tests may have different priorities
- b) That tests may have different granularity
- c) That tests may require different coverage criteria
- d) That tests may depend on other tests

Select ONE option.

<ul style="list-style-type: none">a) Is not correct. The test pyramid model does not provide information about test prioritiesb) Is correct. The test pyramid model shows that different tests have different levels of granularityc) Is not correct. The test pyramid model is independent of coverage criteriad) Is not correct. Test pyramid model does not show any relations between different tests	FL-5.1.6
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5.1.7 (K2) Summarize the testing quadrants and their relationships with test levels and test types

Consider the following test categories (1-4) and agile testing quadrants (A-D):

1. Usability testing
 2. Component testing
 3. Functional testing
 4. Reliability testing
-
- A. Agile testing quadrant Q1: technology facing, supporting the development team
 - B. Agile testing quadrant Q2: business facing, supporting the development team
 - C. Agile testing quadrant Q3: business facing, critique the product
 - D. Agile testing quadrant Q4: technology facing, critique the product

How do the following test categories map onto the agile testing quadrants?

- a) 1C, 2A, 3B, 4D
- b) 1D, 2A, 3C, 4B
- c) 1C, 2B, 3D, 4A
- d) 1D, 2B, 3C, 4A

Select ONE option.

<p>Usability testing is in Q3 (1 – C) Component testing is in Q1 (2 – A) Functional testing is in Q2 (3 – B) Reliability testing is in Q4 (4 – D) Hence a is correct.</p>	FL-5.1.7
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How can the testing quadrants be beneficial for testing?

- a) They help in test planning by dividing the test process into four stages, corresponding to the four basic test levels: component, integration, system, and acceptance testing
- b) They help in assessing the high-level coverage (e.g., requirements coverage) based on low-level coverage (e.g., code coverage)
- c) They help non-technical stakeholders to understand the different types of tests and that some test types are more relevant to certain test levels than others
- d) They help agile teams to develop a communication strategy based on classifying people according to four basic psychological types, and on modelling the relations between them

Select ONE options.

<ul style="list-style-type: none">a) Is not correct. Testing quadrants have nothing to do with describing the relationships between test levelsb) Is not correct. Testing quadrants cannot help in assessing any type of coveragec) Is correct. Testing quadrants allow managers and other stakeholders to understand the relationships between test types, the activities they support (team support or product critique), and the viewpoint they are focused on (business- or technology-facing)d) Is not correct. Testing quadrants is not a psychological model	FL-5.1.7
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What is the relationship between the testing quadrants, test levels and test types?

- a) Testing quadrants represent particular combinations of test levels and test types, defining their location in the software development lifecycle
- b) Testing quadrants describe the degree of granularity of individual test types performed at each test level
- c) Testing quadrants assign the test types that can be performed to the test levels
- d) Testing quadrants group test levels and test types by several criteria such as targeting specific stakeholders

Select ONE option.

<ul style="list-style-type: none">a) Is not correct. Testing quadrants group test levels and test types separately according to several criteria. They do not represent any combinations of test levels and test types and they are not related to any location within a software development lifecycle. Both test levels and test types are treated separately in the testing quadrants modelb) Is not correct. Testing quadrants group test levels and test types according to several criteria. They do not describe the degree of granularity of individual test types performed at each test level. Such a model, regarding the test levels, is called the test pyramidc) Is not correct. The statement is wrong, because in general any test type can be performed at any test leveld) Is correct. The testing quadrants group test levels, test types, activities, test techniques and work products in Agile software development. In this model, tests can be business facing or technology facing. Tests can support the team (i.e., guide the development) or critique the product (i.e., measure its behavior against expectations). The combination of these two viewpoints determines the four quadrants	FL-5.1.7
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According to the testing quadrants model, which of the following falls into quadrant Q1 ("technology facing" and "support the team")?

- a) Usability testing
- b) Functional testing
- c) User acceptance testing
- d) Component integration testing

Select ONE option.

<ul style="list-style-type: none">a) Is not correct. Usability testing is business facing testing that critiques the product (Q3)b) Is not correct. Functional testing is business facing testing (Q2)c) Is not correct. User acceptance testing is business facing testing that critiques the product (Q3)d) Is correct. Component integration testing is technology facing testing that supports the team (guides the development) (Q1)	FL-5.1.7
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You are working on a project and have determined that exploratory testing is the best test technique to apply. Which testing quadrant are you using?

- a. Q1
- b. Q2
- c. Q3
- d. Q4

C is correct. Exploratory testing belongs to quadrant 3.

Unit tests belong in which testing quadrant?

- a. Q1
- b. Q2
- c. Q3
- d. Q4

A is correct. Unit, or component, tests belong to quadrant 1.

5.2.1 (K1) Identify risk level by using risk likelihood and risk impact

During risk analysis the team considered the following risk: "The system allows too high a discount for a customer". The team estimated the risk impact to be very high.

What can one say about the risk likelihood?

- a) It is also very high. High risk impact always implies high risk likelihood
- b) It is very low. High risk impact always implies low risk likelihood
- c) One cannot say anything about risk likelihood. Risk impact and risk likelihood are independent.
- d) Risk likelihood is not important with such a high-risk impact. One does not need to define it.

Select ONE option.

a) Is not correct. Risk impact and risk likelihood are independent	FL-5.2.1
b) Is not correct. Risk impact and risk likelihood are independent	
c) Is correct. Risk impact and risk likelihood are independent	
d) Is not correct. We need both factors to calculate risk level	

For a given risk, its risk level is \$1,000 and its risk likelihood is estimated as 50%.

What is the risk impact?

- a) \$500
- b) \$2,000
- c) \$50,000
- d) \$200

Select ONE options.

Risk assessment can use a quantitative or qualitative approach, or a mix of them. In the quantitative approach the risk level is calculated as the multiplication of risk likelihood and risk impact. So, Risk level = Risk likelihood * Risk impact Then, Risk impact = Risk level / Risk likelihood. In our case, Risk impact = \$1,000 / 50% = \$1,000 / 0.5 = \$2,000.	FL-5.2.1
Thus: <ul style="list-style-type: none">a) Is not correctb) Is correctc) Is not correctd) Is not correct	

5.2.2 (K2) Distinguish between project risks and product risks

The following list contains risks that have been identified for a new software product to be developed:

- i. Management moves two experienced testers to another project
- ii. The system does not comply with functional safety standards
- iii. System response time exceeds user requirements
- iv. Stakeholders have inaccurate expectations
- v. Disabled people have problems when using the system

Which of them are project risks?

- a) i, iv are project risks
- b) iv, v are project risks
- c) i, iii are project risks
- d) ii, v are project risks

Select ONE option.

i. Project risk ii. Product risk iii. Product risk iv. Project risk v. Product risk Hence a is correct.	FL-5.2.2
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Which of the following are product risks?

- a) Scope creep
- b) Poor architecture
- c) Cost-cutting
- d) Poor tool support
- e) Response time too long

Select TWO options.

a) Is not correct. Scope creep is an example of a project risk related to technical issues b) Is correct. Poor architecture is an example of a product risk since it refers to a product characteristic c) Is not correct. Cost-cutting is an example of a project risk, related to organizational issues d) Is not correct. Poor tool support is an example of a project risk related to technical issues e) Is correct. Response time too long is an example of a product risk since it refers to a product characteristic	FL-5.2.2
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Which of the following is a project risk?

- a. A defect that is causing a performance issue
- b. A duplicate requirement
- c. An issue with a data conversion procedure
- d. A schedule that requires work during Christmas shutdown

D is correct, this is a risk to the entire project.

A, B and C are product risks.

Which of the following is a project risk?

- a. A module that performs incorrect calculations due to a defect in a formula
- b. A failed performance test
- c. An issue with the interface between the system under test and a peripheral device
- d. A problem with the development manager which is resulting in his rejecting all defect reports

D is a project risk. The other three are product risks.

5.2.3 (K2) Explain how product risk analysis may influence thoroughness and test scope

Which of the following is an example of how product risk analysis influences thoroughness and scope of testing?

- a) The test manager monitors and reports the level of all known risks on a daily basis so the stakeholders can make an informed decision on the release date
- b) One of the identified risks was "Lack of support of open-source databases", so the team decided to integrate the system with an open-source database
- c) During the quantitative risk analysis, the team estimated the total level of all identified risks and reported it as the total residual risk before testing
- d) Risk assessment revealed a very high level of performance risks, so it was decided to perform detailed performance efficiency testing early in the SDLC

Select ONE option.

a) Is not correct. This is an example of a risk monitoring activity, not risk analysis	FL-5.2.3
b) Is not correct. This is an example of an architectural decision, not related with testing	
c) Is not correct. This is an example of performing a quantitative risk analysis and is not related to thoroughness or scope of testing	
d) Is correct. This shows how risk analysis impacts the thoroughness of testing (i.e., the level of detail)	

Which of the following is an example of how product risk analysis may influence the thoroughness and scope of testing?

- a) Continuous risk monitoring allows us to identify emerging risk as soon as possible
- b) Risk identification allows us to implement risk mitigation activities and reduce the risk level
- c) The assessed risk level helps us to select the rigor of testing
- d) Risk analysis allows us to derive coverage items

Select ONE option.

<ul style="list-style-type: none">a) Is not correct. Risk monitoring is part of risk control, not risk analysisb) Is not correct. Risk identification itself does not allow us to implement risk mitigation activities. The mitigating actions are defined during the risk control phasec) Is correct. This is an example of how risk analysis influences the thoroughness and scope of testingd) Is not correct. Coverage items are derived using test techniques, not through risk analysis	FL-5.2.3
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5.2.4 (K2) Explain what measures can be taken in response to analyzed product risks

During a risk analysis the following risk was identified and assessed:

- Risk: Response time is too long to generate a report
- Risk likelihood: medium; risk impact: high
- Response to risk:
 - An independent test team performs performance testing during system testing
 - A selected sample of end users performs alpha and beta acceptance testing before the release

What measure is proposed to be taken in response to this analyzed risk?

- a) Risk acceptance
- b) Contingency plan
- c) Risk mitigation
- d) Risk transfer

Select ONE option.

<ul style="list-style-type: none">a) Is not correct. We do not accept the risk; concrete actions are proposedb) Is not correct. No contingency plans are proposedc) Is correct. The proposed actions are related to testing, which is a form of risk mitigationd) Is not correct. Risk is not transferred but mitigated	FL-5.2.4
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Given the following risks:

1. Ineffective loop implementation causes long system responses
2. Consumers change their preferences
3. Flooding of the server room
4. Patients above a certain age receive inaccurate reports

And the following mitigation activities:

- A. Risk acceptance
- B. Performance testing
- C. Using boundary value analysis as the test technique
- D. Risk transfer

Which of the following BEST matches the risks with the mitigation activities?

- a) 1C, 2D, 3A, 4B
- b) 1B, 2D, 3A, 4C
- c) 1B, 2A, 3D, 4C
- d) 1C, 2A, 3D, 4B

Select ONE option.

Considering each of the listed risks and their mitigations:

1. Long system responses (1) can be tested in performance testing (B)
2. Changes of consumers' preferences (2) are usually out of our control, so usually we accept this risk (A)
3. Flooding of the server room (3) can cause significant loss, so we should transfer the risk, e.g., by buying an insurance policy (D)
4. That patients above a certain age receive inaccurate reports (4) suggests a potential boundary problem, which can be effectively detected with techniques like BVA (C)

FL-5.2.4

Thus:

- a) Is not correct
- b) Is not correct
- c) Is correct. The correct combinations of risk and mitigation are: 1B, 2A, 3D and 4C
- d) Is not correct

5.3.1 (K1) Recall metrics used for testing

Which TWO of the following options are common metrics used for reporting on the quality level of the test object?

- a) Number of defects found during system testing
- b) Total effort on test design divided by the number of designed test cases
- c) Number of executed test procedures
- d) Number of defects found divided by the size of a work product
- e) Time needed to repair a defect

Select TWO options.

<p>a) Is correct. <u>The number of defects found is related to the test object quality</u></p> <p>b) Is not correct. <u>This is the measure of the test efficiency not the test object quality</u></p> <p>c) Is not correct. <u>The number of test cases executed does not tell us anything about the quality; test results might do</u></p> <p>d) Is correct. <u>defect density is related to the test object quality</u></p> <p>e) Is not correct. <u>Time to repair is a process metric. It does not tell us anything about the product quality</u></p>	FL-5.3.1
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Which of the following is a product quality metric?

- a) Mean time to failure
- b) Number of defects found
- c) Requirements coverage
- d) Defect detection percentage

Select ONE option.

<p>a) Is correct. Product quality metrics measure quality characteristics. Mean time to failure measures maturity, so it is a product quality metric</p> <p>b) Is not correct. This is an example of a defect metric, not a product quality metric</p> <p>c) Is not correct. This is an example of a coverage metric, not a product quality metric</p> <p>d) Is not correct. This is an example of a defect metric, not a product quality metric</p>	FL-5.3.1
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A metric that tracks the number of test cases passed is gathered during which activity in the test process?

- a. Planning
- b. Implementation
- c. Execution
- d. Reporting

C is correct. Test execution metrics are gathered during the Test Execution activity. These metrics are used in reporting.

5.3.2 (K2) Summarize the purposes, content, and audiences for test reports

Which of the following pieces of information contained in a test progress report is the LEAST useful for business representatives?

- a) Impediments to testing
- b) Branch coverage achieved
- c) Test progress
- d) New risks within the test cycle

Select ONE option.

<p>a) Is not correct. Impediments to testing can be high level and business-related, so this is an important piece of information for business stakeholders</p> <p>b) Is correct. Branch testing is a technical metric used by developers and technical testers. This information is of no interest to business representatives</p> <p>c) Is not correct. Test progress is project related, so it may be useful for business representatives</p> <p>d) Is not correct. Risks impact product quality, so it may be useful for business representatives</p>	FL-5.3.2
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Which of the following is NOT a valid purpose for a test report?

- a) Tracking test progress and identifying areas that require further attention
- b) Providing information on the tests executed, their results, and any issues or defects found
- c) Providing information about each defect, such as the steps to reproduce it
- d) Providing information on testing planned for the next period

Select ONE options.

<p>a) Is not correct. Tracking test progress and identifying areas that require further attention is an example of supporting the ongoing control of testing. This is one of the purposes of test reports</p> <p>b) Is not correct. Providing information on the tests executed, their results, and any issues or defects found is an example of summarizing the test activities performed at a given test level. This is one of the purposes of test reports</p> <p>c) Is correct. Providing information about defects is the purpose of a defect report, not a test report</p> <p>d) Is not correct. Providing information on testing planned for the next period is one of the purposes of test reports</p>	FL-5.3.2
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Which of the following activities in the test process makes the MOST use of test progress reports?

- a) Test design
- b) Test completion
- c) Test analysis
- d) Test planning

Select ONE option.

<ul style="list-style-type: none">a) Is not correct. Test progress reports are mostly used <u>during test monitoring and control, and test completion</u>, not during test designb) Is correct. A test completion report is prepared <u>during test completion, when a project, test level, or test type is complete and when, ideally, its exit criteria have been met</u>. This report uses information from <u>test progress reports and other data</u>c) Is not correct. Test progress reports are mostly used <u>during test monitoring and control, and test completion</u>, not during test analysisd) Is not correct. <u>Test progress reports are most used during test monitoring and control, and test completion, not during test planning</u>	FL-5.3.2
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Which of the following variances should be explained in the Test Summary Report?

- a. The variances between the weekly status reports and the test exit criteria
- b. The variances between the defects found and the defects fixed
- c. The variances between what was planned for testing and what was actually tested
- d. The variances between the test cases executed and the total number of test cases

C is correct. The variances or deviations between the test plan and the testing that was actually done must be explained in the test summary report.

A is not correct because if the weekly status reports have been tracking incorrectly to the test exit criteria, something is wrong and should have been caught a lot earlier.

B is not correct because this information should be included in the test summary report, but a variance is expected.

D is not correct because this should be tracked in the metrics section of the report rather than as a variance.

5.3.3 (K2) Exemplify how to communicate the status of testing

Which work product can be used by an agile team to show the amount of work that has been completed and the amount of total work remaining for a given iteration?

- a) Acceptance criteria
- b) Defect report
- c) Test completion report
- d) Burndown chart

Select ONE option.

- | | |
|---|----------|
| <ul style="list-style-type: none">a) Is not correct. <u>Acceptance criteria</u> are the conditions used to decide whether the user story is ready. They cannot show work progressb) Is not correct. <u>Defect reports</u> inform about the defects. They do not show work progressc) Is not correct. <u>Test completion report</u> can be created after the iteration is finished, so it will not show the progress continuously within an iterationd) Is correct. <u>Burndown charts</u> are a graphical representation of work left to do versus time remaining. They are updated daily, so they can continuously show the work progress | FL-5.3.3 |
|---|----------|

You are a member of a test team located in North America, developing a product for a client located in Europe. The team is agile and follows the DevOps approach and uses a continuous integration/continuous delivery pipeline.

Which of the following is the LEAST effective way to communicate test progress to the customer?

- a) Face-to-face
- b) Dashboards
- c) Email
- d) Video conferencing

Select ONE option.

- | | |
|--|----------|
| <ul style="list-style-type: none">a) Is correct. The client is in a different location and time zone, so it may be difficult to communicate face-to-faceb) Is not correct. <u>Dashboards</u> are usually available to any user at any time, so the difference in time zones will not be as much of a hindrance to communication as verbal, face-to-face communicationc) Is not correct. Although the time difference between Europe and America is several hours, and this may cause some inconvenience, it's certainly not as great as with communicating face-to-faced) Is not correct. <u>Video conferencing</u> tools are a convenient means of communication. Although communication between Europe and America during working hours usually requires one party to connect in the very early or very late hours, this is not as much of an inconvenience as verbal, face-to-face communication | FL-5.3.3 |
|--|----------|

You have just completed testing on a major ERP implementation. The project has taken two years and is now ready for final approval before go-live. What test documentation should be produced at this time?

- a. Formal test summary report
- b. Testing team task board
- c. Email to the team congratulating them on their success
- d. Burn down chart

A is correct. At this point in the project, the formal test summary report should be prepared.

B and D are used for information communication during the project work.

C might be premature as final approval has not yet been obtained and this is not test documentation.

5.4.1 (K2) Summarize how configuration management supports testing

You need to update one of the automated test scripts to be in line with a new requirement. Which process indicates that you create a new version of the test script in the test repository?

- a) Traceability management
- b) Maintenance testing
- c) Configuration management
- d) Requirements engineering

Select ONE option.

a) Is not correct. <u>Traceability is the relationship between two or more work products, not between different versions of the same work product</u>	FL-5.4.1
b) Is not correct. <u>Maintenance testing is about testing changes; it is not related closely to versioning</u>	
c) Is correct. <u>To support testing, configuration management may involve the version control of all test items</u>	
d) Is not correct. <u>Requirements engineering is the elicitation, documentation, and management of requirements; it is not closely related to test script versioning</u>	

The user reported a software failure. An engineer from the support team asked the user for the software version number where the failure was observed. Based on the version number, the team reassembled all the files that made up the release. This later allowed a developer to perform analysis, find the defect, and fix it.

Which of the following enabled the above activity to be performed by the team?

- a) Risk management
- b) Test monitoring and control
- c) Whole-team approach
- d) Configuration management

Select ONE options.

<p>a) Is not correct. Risk management consists of risk analysis and risk control. Neither of these activities supports the reassembly of the files that made up the release, because these activities deal with risks, not with configuration items</p> <p>b) Is not correct. Test monitoring is concerned with gathering information about testing. This information is used to assess test progress and to measure whether the test exit criteria or the test tasks associated with the exit criteria are satisfied, such as meeting the targets for coverage of product risks, requirements, or other acceptance criteria. Test control uses the information from test monitoring to provide, in the form of control directives, guidance and the necessary corrective actions to achieve the most effective and efficient testing. None of these activities deal with the management of configuration items</p> <p>c) Is not correct. The whole-team approach builds on the tester's skill to work effectively in a team context and to contribute positively to the team goals. So, it focuses on team-related issues, not on configuration items</p> <p>d) Is correct. Configuration management provides a discipline for identifying, controlling, and tracking work products. Configuration management keeps a record of changed configuration items when a new baseline is created. Using configuration management, it is possible to revert to a previous baseline in order to reproduce previous test results</p>	FL-5.4.1
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Which of the following is NOT an example of how configuration management supports testing?

- a) All commits to the repository are uniquely identified and version controlled
- b) All changes in the test environment elements are tracked
- c) All requirement specifications are referenced unambiguously in test plans
- d) All identified defects have an assigned status

Select ONE option.

<p>a) Is not correct. When a user reports a software failure, thanks to the unique identification of commits, it is possible to reassemble the files from the software version which was used by the user (as well as the corresponding versions of the test scripts) and thus reproduce the failure and locate the defect faster</p> <p>b) Is not correct. If a change to the test environment causes unexpected issues during testing, configuration management allows testers to roll back to a previous version of the environment. This ensures that testing can continue without being affected by the change</p> <p>c) Is not correct. Configuration management ensures that all identified documentation (e.g., requirement specifications) and software items are referenced unambiguously in test documentation (e.g., test plans)</p> <p>d) Is correct. This is ensured by the defect management, not configuration management process</p>	FL-5.4.1
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Which of the following BEST describes an example of how configuration management (CM) supports testing?

- a) Having the version number of the environment, the CM tool can retrieve the version numbers of libraries, stubs and drivers used in that environment
- b) Having a record of the values of the test inputs, the CM tool can execute the test cases for these configurations and calculate test coverage
- c) Having data about the date of purchase of a software license, the CM tool automatically generates information about the fact that the product license is coming to an end
- d) Having the version number of the test case, the CM tool can automatically generate test data for this test case

Select ONE option.

a) Is correct. For a complex configuration item (e.g., a test environment), CM records the items it consists of, their relationships, and versions	FL-5.4.1
b) Is not correct. CM tools do not execute test cases and do not calculate coverage	
c) Is not correct. A CM tool is not a license management tool	
d) Is not correct. CM tools do not generate test data	

You are working on a project that is releasing software to the test team in iterations. In iteration 3 you identified a failure. The developer found and fixed the defect and released the fix in iteration 4. You confirmed the fix and closed the defect report. You are now testing iteration 7 and the failure has occurred again. You have talked to the developer and he doesn't know how or when the failure came back and has asked you to investigate.

How can configuration management help you gather more information on this failure?

- a. You can see what changed in iteration 4 to fix the problem
- b. You can reload and retest iterations 5 and 6 to see where the problem was re-introduced
- c. You can review all the code changes that have occurred since iteration 4 to see what might have broken it
- d. You can improve the regression testing to ensure the failure is caught earlier

B is correct. Because you have configuration management, you should be able to obtain and reinstall the code from iterations 5 and 6 and see where the problem was re-introduced.

A is not correct as that would have helped with the initial confirmation test and maybe regression testing, but it doesn't help with the current problem.

C is the responsibility of the developer.

D is a good idea but won't help with the current situation.

If the developers are releasing code for testing that is not version controlled, what process is missing?

- a. Configuration management
- b. Debugging
- c. Test and defect management
- d. Risk analysis

A is correct. Configuration management is missing if the code is not being properly versioned and tracked.

5.5.1 (K3) Prepare a defect report

You received the following defect report from the developers stating that the anomaly described in this test report is not reproducible.

Application hangs up

2022-May-03 – John Doe – Rejected

The application hangs up after entering “Test input: \$ä” in the Name field on the new user creation screen. Tried to log off, log in with test_admin01 account, same issue. Tried with other test admin accounts, same issue. No error message received; log (see attached) contains fatal error notification. Based on the test case TC-1305, the application should accept the provided input and create the user. Please fix with high priority, this feature is related to REQ-0012, which is a critical new business requirement.

What critical information is MISSING from this test report that would have been useful for the developers?

- a) Expected result and actual result
- b) References and defect status
- c) Test environment and test item
- d) Priority and severity

Select ONE option.

<ul style="list-style-type: none">a) Is not correct. The expected result is “the application should accept the provided input and create the user”. The actual result is “The application hangs up after entering “Test input. \$ä””.b) Is not correct. There is a reference to the test case and to the related requirement and it states that the defect is rejected. Also, the defect status would not be very helpful for the developersc) Is correct. We do not know in which test environment the anomaly was detected, and we also do not know which application (and its version) is affectedd) Is not correct. The defect report states that the anomaly is urgent, that it is a global issue (i.e., many, if not all, test administration accounts are affected) and states the impact is high for business stakeholders	FL-5.5.1
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Consider the following defect report for a Book Lending System.

Defect ID: 001 | **Title:** Unable to Return a Book

Severity: High | **Priority:**

Environment: Windows 10, Google Chrome

Description: When attempting to return a book using the Book Return feature, the system does not register the return and the book remains checked out to the user.

Steps to Reproduce:

Login to the Book Lending System as a user who has checked out a book.

Click on the "Book Return" button for the book that has been checked out.

System does not register the return and the book remains checked out.

Expected Result: The book should be returned and no longer appear as checked out to the user.

Actual Result: The book remains checked out to the user and is not registered as returned in the system.

Attachments: [empty list]

Which of the following is MOST likely to help the developer reproduce the failure quickly?

- a) Adding information about which users and which books the issue affects to the "Description" section
- b) Filling in the missing value for the "Priority" field
- c) Adding memory dumps and database snapshots taken after each step described in the "Steps to Reproduce" section to the "Attachments" section.
- d) Repeating the same test case for different environments and writing defect reports for each of them separately

Select ONE options.

- a) Is correct. Adding this information allows the developer to use the same input data, so it is more likely they will be able to reproduce the failure quickly and so identify the defect faster
- b) Is not correct. Adding the value of Priority will not help in reproducing the defect itself
- c) Is not correct. Although some of this information may be of value, adding the memory dumps and database snapshots after each step will be too much, because most of these artefacts will contain useless information for the developer, and make the report less readable. It will also require the developer to spend a lot of time analyzing this information, which will lengthen the repair process
- d) Is not correct. The question was about helping the developer to reproduce the defect observed for a specific environment configuration

FL-5.5.1

You have received the following description section in a defect report:

The report executed per the attached steps, but the data was incorrect. For example, the information in column 1 was wrong. See the attached screenshot. This report is critical to the users and they will be unable to do their jobs without this information.

What is the biggest problem with this defect report?

- a. The developer won't know how important the problem is
- b. The developer won't know how to repeat the test
- c. The developer won't be able to see what the tester is saying is wrong
- d. The developer won't know what the tester expected to see

D is correct. From this information, the developer only knows the tester thinks the information is wrong, but it's not clear what was expected.

A is incorrect because, although vague, the incident report seems to indicate this is an important problem.

B is incorrect because the steps are attached (or so it says).

C is incorrect because the screen shot should indicate column 1 that is wrong.

You have been testing software that will be used to track credit card purchases. You have found a defect that causes the system to crash, but only if a person has made and voided 10 purchases in a row. What is the proper priority and severity rating for this defect?

- a. Priority high, severity high
- b. Priority high, severity low
- c. Priority low, severity low
- d. Priority low, severity high

D is correct. This is not likely to happen, so the urgency to fix it is low but it does crash the system so the impact to the system is high so the severity should be high.

Conclusion

In this document :

- **We identified the examinable learning objectives.**
- **We presented the probability of questions for each part of chapter 5.**
- **We summarized chapter 5.**
- **We provided section-wise questions and their answers for chapter 5.**

If you need any assistance or have questions, feel free to reach out! 😊



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