

Sample Exam A Answers

ISTQB® Foundation Level

2018 Syllabus

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International Software Testing Qualifications Board



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Exam Working Group: 2010 – 2018

Revision History

Version	Date	Remarks
1.0	May 11, 2018	First issue
1.1	May 11, 2018	Some text in LO updated. Spelling corrected
Released v 2018	June 4, 2018	Approved by GA

Question #1 (1 Point)

Which one of the following is the BEST description of a test condition?

- a) An attribute of a component or system specified or implied by requirements documentation. attribute
- b) An aspect of the test basis that is relevant to achieve specific test objectives. test condition
- c) The capability of the software product to provide functions which meet stated and implied needs when the software is used under specified conditions. functionality
- d) The percentage of all single condition outcomes that independently affect a decision outcome that have been exercised by a test case suite.

Select one option.

FL-1.x (K1) Keywords Chapter 1

Justification

- a) Not correct – Definition of feature according to Glossary.
- b) **Correct** – From Glossary.
- c) Not correct – Definition of functionality according to Glossary.
- d) Not correct – Definition of modified condition decision coverage according to Glossary.

Question #2 (1 Point)

Which of the following statements is a valid objective for testing?

- a) To determine whether enough component tests were executed within system testing.
- b) To find as many failures as possible so that defects can be identified and corrected.
- c) To prove that all possible defects are identified.
- d) To prove that any remaining defects will not cause any failures.

Select one option.

FL-1.1.1 (K1) Identify typical objectives of testing

Justification

- a) Not correct – Component testing is not part of System testing.
- b) **Correct** – Syllabus 1.1.1
- c) Not correct – Principle #1 states that exhaustive testing is impossible, so one can never prove that all defects were identified.
- d) Not correct – To make an assessment whether a defect will cause a failure or not, one has to detect the defect first. Saying that no remaining defect will cause a failure, implicitly means that all defects were found. This contradicts Principle #1.

Question #3 (1 Point)

Which of the following statements correctly describes the difference between testing and debugging?

- a) Testing identifies the source of defects; debugging analyzes the defects and proposes prevention activities.
- b) Testing shows failures caused by defects; debugging finds, analyzes, and removes the causes of failures in the software.
- c) Testing removes faults; debugging identifies the causes of failures.
- d) Testing prevents the causes of failures; debugging removes the failures.

Select one option.

FL-1.1.2 (K2) Differentiate testing from debugging

Justification

- a) Not correct. Testing does not identify the source of defects.
- b) **Correct.** Syllabus 1.1.2: Executing tests can show failures that are caused by defects in the software. Debugging is the development activity that finds, analyzes, and fixes such defects.
- c) Not correct. Testing does not remove faults.
- d) Not correct. Testing does not directly prevent the causes of failures. Debugging does not remove the failures, only the causes of failures

Question #4 (1 Point)

Which one of the statements below describes a failure discovered during testing or in production?

- a) The product crashed when the user selected an option in a dialog box.
- b) The wrong version of one source code file was included in the build. defect
- c) The computation algorithm used the wrong input variables. defect
- d) The developer misinterpreted the requirement for the algorithm. error

Select one option.

FL-1.2.3 (K2) Distinguish between error, defect and failure

Justification

- a) **Correct** – A failure is an external manifestation of a defect. A crash is clearly noticeable by the user.
- b) Not correct – This is a defect, not a failure, since there is something wrong in the code. It may not result in a failure, for example if the changes in the source code file are only in comments.
- c) Not correct – This is a defect, not a failure, as there is a flaw in the code implementing the algorithm. If this computation is not used in a test or in production, a failure will not occur.
- d) Not correct – This is an error, not a failure. The misinterpretation of the requirement may or may not lead to a defect in the implementation of the algorithm, which in turn may or may not lead to a failure.

Question #5 (1 Point)

Which of the following statements **CORRECTLY** describes **one of the seven key principles of software testing**?

- a) By using automated testing it is possible to test everything.
- b) With sufficient effort and tool support, exhaustive testing is feasible for all software.
- c) **It is impossible to test all input and precondition combinations in a system.**
- d) The purpose of testing is to prove the absence of defects.

Select one option.

FL-1.3.1 (K2) Explain the seven testing principles

Justification

- a) Not Correct – **Exhaustive testing is impossible**, regardless of it being manual or automated.
- b) Not Correct– **Exhaustive testing is impossible**, regardless of the amount of effort put into testing.
- c) **Correct** – Syllabus 1.3: Principle #2 says **“Testing everything (all combinations of inputs and preconditions) is not feasible except for trivial cases”**.
- d) Not Correct– This statement is contradicting Principle #1 says **“Testing shows the presence of defects: Testing can show that defects are present, but cannot prove that there are no defects”**.

Question #6 (1 Point)

In what way can testing be part of Quality assurance?

- a) It ensures that requirements are detailed enough.
- b) It reduces the level of risk to the quality of the system.
- c) It ensures that standards in the organization are followed.
- d) It measures the quality of software in terms of number of executed test cases.

Select one option.

FL-1.2.2 (K2) Describe the relationship between testing and quality assurance and give examples of how testing contributes to higher quality

Justification

- a) Not correct – This is Quality assurance but not testing.
- b) **Correct** – Syllabus 1.2.2. Testing contributes to the achievement of quality in a variety of ways.
- c) Not correct – This is Quality assurance but not testing.
- d) Not correct – The quality can not be measured by counting the number of executed test cases without knowing the outcome.

Question #7 (1 Point)

Which of the below tasks is performed during the test analysis activity of the test process?

- a) Identifying any required infrastructure and tools.
- b) Creating test suites from test scripts.
- c) Analyzing lessons learned for process improvement.
- d) Evaluating the test basis for testability.

Select one option.

FL-1.4.2 (K2) Describe the test activities and respective tasks within the test process

Justification

- a) Not correct – this activity is performed during the Test design activity.
- b) Not correct – this activity is performed during the Test implementation activity.
- c) Not correct – this activity is performed during the Test completion activity.
- d) **Correct** – this activity is performed during the Test analysis activity. Syllabus 1.4.2.

Question #8 (1 Point)

Differentiate the following test work products, 1-4, by mapping them to the right description, A-D.

1. Test suite.
2. Test case.
3. Test script.
4. Test charter.



- A. A group of test scripts or test execution schedule.
- B. A set of instructions for the automated execution of test procedures.
- C. Contains expected results.
- D. An event that could be verified.

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

Select one option.

FL-1.4.3 (K2) Differentiate the work products that support the test process

Justification

Test suite: Syllabus 1.4.3 for Test implementation:

Test implementation work products also include test suites, which are groups of test scripts, as well as a test execution schedule. (1A).

Test case: Glossary, A set of input values, execution preconditions, **expected results** and execution postconditions.... (2C).

Test script: Glossary test script, A set of instructions for the automated execution of test procedures (3B).

Test charter: Glossary, A statement of test objectives, and possibly test ideas about how to test. Test charters are used in exploratory testing. (4D).

Thus:

- a) **Correct**
- b) Not correct
- c) Not correct
- d) Not correct

Question #9 (1 Point)

How can white-box testing be applied during acceptance testing?

- a) To check if large volumes of data can be transferred between integrated systems.
- b) To check if all code statements and code decision paths have been executed.
- c) To check if all work process flows have been covered.
- d) To cover all web page navigations.

Select one option.

FL-2.3.2 (K1) Recognize that functional, non-functional and white-box tests occur at any test level

Justification

- a) Not correct – Relevant for integration testing.
- b) Not correct – Relevant for component testing.
- c) **Correct** – Syllabus 2.3.5: For acceptance testing, tests are designed to cover all supported financial data file structures and value ranges for bank-to-bank transfers.
- d) Not correct – Relevant for system testing.

Question #10 (1 Point)

Which of the following statements comparing component testing and system testing is TRUE?

- a) Component testing verifies the functionality of software modules, program objects, and classes that are separately testable, whereas system testing verifies interfaces between components and interactions between different parts of the system.
- b) Test cases for component testing are usually derived from component specifications, design specifications, or data models, whereas test cases for system testing are usually derived from requirement specifications, or use cases.
- c) Component testing only focuses on functional characteristics, whereas system testing focuses on functional and non-functional characteristics.
- d) Component testing is the responsibility of the testers, whereas system testing typically is the responsibility of the users of the system.

Select one option.

FL-2.2.1 (K2) Compare the different test levels from the perspective of objectives, test basis, test objects, typical defects and failures, and approaches and responsibilities

Justification

- a) Not correct – System testing does not test interfaces between components and interactions between different parts of the system; this is a target of integration tests.
- b) **Correct** – Syllabus 2.2.1: Examples of work products that can be used as a test basis for component testing include: detailed design, code, data model, component specifications.
Syllabus 2.2.3: Examples of work products for system testing include: System and software requirement specifications (functional and non-functional), ..., use cases.
- c) Not correct – Component testing does not ONLY focus on functional characteristics.
- d) Not correct – Component testing typically is the responsibility of the developers, whereas system testing typically is the responsibility of testers.

Question #11 (1 Point)

Which one of the following is TRUE?

- a) The purpose of regression testing is to check if the correction has been successfully implemented, while the purpose of confirmation testing is to confirm that the correction has no side effects.
- b) The purpose of regression testing is to detect unintended side effects, while the purpose of confirmation testing is to check if the system is still working in a new environment.
- c) The purpose of regression testing is to detect unintended side effects, while the purpose of confirmation testing is to check if the original defect has been fixed.
- d) The purpose of regression testing is to check if the new functionality is working, while the purpose of confirmation testing is to check if the originally defect has been fixed.

Select one option.

FL-2.3.3 (K2) Compare the purposes of confirmation testing and regression testing

Justification

- a) Not correct – Confirmation testing does not check successful implementation and confirmation testing does not check for side effects.
- b) Not correct– The statement about confirmation testing should be about regression testing.
- c) **Correct** – Syllabus 2.3.4
- d) Not correct – Testing new functionality is not regression testing

Question #12 (1 Point)

Which one of the following is the BEST definition of an incremental development model?

- a) Defining requirements, designing software and testing are done in a series with added pieces.
- b) A phase in the development process should begin when the previous phase is complete.
- c) Testing is viewed as a separate phase which takes place after development has been completed.
- d) Testing is added to development as an increment.

Select one option.

FL-2.1.1 (K2) Explain the relationship between software development activities and test activities in the software life cycle

Justification

- a) **Correct**– Syllabus 2.1.1: Incremental development involves establishing requirements, designing, building, and testing a system in pieces.
- b) Not correct – This is a sequential model.
- c) Not correct – This describes the Waterfall model.
- d) Not correct – Testing alone is not an increment in the development.

Question #13 (1 Point)

Which of the following should **NOT** be a trigger for maintenance testing?

- a) Decision to test the maintainability of the software.
- b) Decision to test the system after migration to a new operating platform.
- c) Decision to test if archived data is possible to be retrieved.
- d) Decision to test after “hot fixes”.

Select one option.

FL-2.4.1 (K2) Summarize triggers for maintenance testing

Justification

- a) **Correct** – this is maintainability testing, not maintenance testing.
- b) Not correct – this is a trigger for maintenance testing, see the syllabus chapter 2.4.1: Operational tests of the new environment as well as of the changed software.
- c) Not correct – this is a trigger for maintenance testing, see the syllabus chapter 2.4.1: Testing restore/retrieve procedures after archiving for long retention periods.
- d) Not correct – this is a trigger for maintenance testing, see the syllabus chapter 2.4.1: Reactive modification of a delivered software product to correct emergency defects that have caused actual failures.

Question #14 (1 Point)

Which of the following options are roles in a formal review?

- a) Developer, Moderator, Review leader, Reviewer, Tester.
- b) Author, Moderator, Manager, Reviewer, Developer.
- c) Author, Manager, Review leader, Reviewer, Designer.
- d) Author, Moderator, Review leader, Reviewer, Scribe.

Select one option.

FL-3.2.2 (K1) Recognize the different roles and responsibilities in a formal review

Justification

- a) Not correct – Tester and developer are NOT roles as per Syllabus, section 3.2.2.
- b) Not correct – Developer is NOT a role as per Syllabus, section 3.2.2.
- c) Not correct – Designer is NOT a role as per Syllabus, section 3.2.2.
- d) **Correct** – see Syllabus, section 3.2.2.

Question #15 (1 Point)

Which of the following describes the main activities of a formal review?

- a) Initiation, backtracking, individual review, issue communication and analysis rework, follow-up.
- b) Planning, individual review, issue communication and analysis, rework, closure, follow-up.
- c) Planning, initiate review, individual review, issue communication and analysis, fixing and reporting.
- d) Individual review, issue communication and analysis, rework, closure, follow-up, root cause analysis.

Select one option.

FL-3.2.1 (K2) Summarize the activities of the work product review process

Justification

- a) Not correct – See c) for the activities in the review process.
- b) Not correct – See c) for the activities in the review process.
- c) **Correct** – According to Syllabus chapter 3.2.1: planning, initiate review, individual review, issue communication and analysis, fixing defects and report.
- d) Not correct – See c) for the activities in the review process.

Question #16 (1 Point)

Which of the review types below is the BEST option to choose when the review must follow a formal process based on rules and checklists?

- a) Informal Review.
- b) Technical Review.
- c) Inspection.
- d) Walkthrough.

Select one option.

FL-3.2.3 (K2) Explain the differences between different review types: informal review, walkthrough, technical review and inspection

Justification

- a) Not correct – Informal review does not use a formal process.
- b) Not correct – Use of checklists are optional.
- c) **Correct** – As per Syllabus 3.2.3: Formal process based on rules and checklists.
- d) Not correct – Does not explicitly require a formal process.

Question #17 (1 Point)

Which TWO of the following statements about static testing are MOST true?

- a) A cheap way to detect and remove defects.
- b) It makes dynamic testing less challenging.
- c) Early validation of user requirements.
- d) It makes it possible to find run-time problems early in the lifecycle.
- e) When testing safety-critical system, static testing has less value because dynamic testing finds the defects better.

Select two options.

FL-3.1.2 (K2) Use examples to describe the value of static testing

Justification

- a) **Correct** – Syllabus 3.1.2: Defects found early are often much cheaper to remove than defects detected later in the lifecycle.
- b) Not correct – Dynamic testing still has its challenging objectives
- c) **Correct** – Syllabus 3.1.2: Preventing defects in design or coding by uncovering omissions, inaccuracies, inconsistencies, ambiguities, and redundancies in requirements.
- d) Not correct – This is dynamic testing.
- e) Not correct – Static analysis is important for safety-critical computer systems. Syllabus 3.1.

Question #18 (1 Point)

The design of a newspaper subscriptions system is being reviewed. The expected system users are:

- Subscribers
- Technical support team
- Billing department
- Database administrator

Each type of user logs into the system through a different login interface (e.g. subscribers login via a web page; technical support via an application).

Different reviewers were requested to review the system's login flow from the perspective of the above user categories.

Which of the following **review comments** is **MOST LIKELY** to have been made by all reviewers?

- a) The login page on the web is cluttered with too much advertisement space. As a result, it is hard to find the "forgot password?" link.
- b) The login to access the billing information should also allow access to subscribers' information and not force a second login session.
- c) After logging-in to the database application, there is no log-out function.
- d) **The log in flow is un-intuitive since it requires entering the password first, before the user name can be keyed-in.**

Select one option.

FL-3.2.4 (K3) Apply a review technique to a work product to find defects

Justification

- a) Not correct – this impacts only the subscribers; possibly others but for sure not the technical support since they don't access the data via a web page.
- b) Not correct – this comment would come from the review that took the perspective of the billing department, but not from other reviewers.
- c) Not correct – this comment would come from the review that took the perspective of the database administrator, but not from other reviewers.
- d) **Correct** – **Every type of user must be authenticated before accessing to the system, so all users of the system would note (and suffer) an un-intuitive login flow.**

Question #19 (1 Point)

What is **checklist-based testing**?

- a) A test technique in which tests are derived based on the tester's knowledge of past failures, or general knowledge of failure modes.
- b) Procedure to derive and/or select test cases based on an analysis of the specification, either functional or non-functional, of a component or system without reference to its internal structure.
- c) **An experience-based test technique whereby the experienced tester uses a high-level list of items to be noted, checked, or remembered, or a set of rules or criteria against which a product has to be verified.**
- d) An approach to testing where the tester dynamically designs and executes tests based on their knowledge, exploration of the test item and the results of previous tests.

Select one option.

FL-4.x (K1) Keywords

Justification

- a) Not correct – **This is error giessing**, defined in Glossary.
- b) Not correct – **This is black-box test technique**, defined in Glossary.
- c) **Correct** – Defined in Glossary.
- d) Not correct – **This is exploratory testing**, defined in Glossary.

Question #20 (1 Point)

Which one of the following options is categorized as a **black-box test technique**?

- a) Techniques based on analysis of the architecture.
- b) Techniques checking that the test object is working according to the technical design.
- c) Techniques based on the expected use of the software.
- d) **Techniques based on formal requirements.**

Select one option.

FL-4.1.1 (K2) Explain the characteristics, commonalities, and differences between black-box test techniques, white-box test techniques and experience-based test techniques

Justification

- a) Not correct – This is a **white-box test technique.**
- b) Not correct – This is a **white-box test technique.**
- c) Not correct – This is a **experience-based test technique.**
- d) **Correct** – Syllabus 4.1.2: **Black-box test techniques (also called behavioral or behavior-based techniques)** are based on an **analysis of the appropriate test basis** (e.g. **formal requirements documents, specifications, use cases, user stories**).

Question #21 (1 Point)

The following statement refers to decision coverage:

“When the code contains only a single ‘if’ statement and no loops or CASE statements, any single test case we run will result in 50% decision coverage.”

Which of the following sentences is correct?

- a) The sentence is true. Any single test case provides 100% statement coverage and therefore 50% decision coverage.
- b) The sentence is true. Any single test case would cause the outcome of the “if” statement to be either true or false.
- c) The sentence is false. A single test case can only guarantee 25% decision coverage in this case.
- d) The sentence is false. The statement is too broad. It may be correct or not, depending on the tested software.

Select one option.

FL-4.3.2 (K2) Explain decision coverage

- a) Not correct – While the given statement is true, the explanation is not.
- b) **Correct** – Since any test will cause the outcome of the “if” statement to be either TRUE or FALSE, by definition we achieved 50% decision coverage.
- c) Not correct – A single test can give more than 25% decision coverage.
- d) Not correct – The statement is specific and always true.

Question #22 (1 Point)

Which one of the following is the **BEST** description of statement coverage?

- a) It is a metric which is used to calculate and measure the percentage of test cases that have been executed.
- b) It is a metric, which is used to calculate and measure the percentage of statements in the source code which have been executed.
- c) It is a metric, which is used to calculate and measure the number of statements in the source code which have been executed by test cases that are passed.
- d) It is a metric that give a true/false confirmation if all statements are covered or not.

Select one option.

FL-4.3.1 (K2) Explain statement coverage

Justification

- a) Not correct – Statement coverage measures the percentage of statements exercised by test cases.
- b) **Correct** – Syllabus 4.3.1: Statement testing exercises the executable statements in the code. Coverage is measured as the number of statements executed by the tests divided by the total number of executable statements in the test object, normally expressed as a percentage.
- c) Not correct – The coverage does not measure pass/fail.
- d) Not correct – It is a metric, not a true/false.

Question #23 (1 Point)

Which TWO of the following statements about the relationship between statement coverage and decision coverage are true?

- a) Decision coverage is stronger than statement coverage.
- b) Statement coverage is stronger than decision coverage.
- c) 100% statement coverage guarantees 100% decision coverage.
- d) 100% decision coverage guarantees 100% statement coverage.
- e) Decision coverage can never reach 100%.

Select two options.

FL-4.3.3 (K2) Explain the value of statement and decision coverage

Justification

See syllabus chapter 4.3.3: Achieving 100% decision coverage guarantees 100% statement coverage (but not vice versa).

Thus

- a) **Correct** – The statement is true.
- b) Not correct – The statement is false.
- c) Not correct – The statement is false.
- d) **Correct** – The statement is true.
- e) Not correct – The statement is false.

Question #24 (1 Point)

Which of the following situations is **NOT** suited for using exploratory testing?

- a) When there is time pressure, and/or the requirements are incomplete or inapplicable
- b) When the system is developed and tested incrementally.
- c) **When only new and inexperienced testers are available.**
- d) When the main part of the application can be tested only at the customer's site.

Select one option.

FL-4.4.2 (K2) Explain exploratory testing

Justification

- a) Not correct – Syllabus 4.4.2: Exploratory testing is most useful when there are few or significant time pressure on testing.
- b) Not correct – exploratory testing can be used here.
- c) **Correct** – exploratory tests should be performed by experienced testers with knowledge of similar applications and technologies. The tester needs constantly to make decisions during exploratory testing, e.g. what to test next.
- d) Not correct – exploratory testing can be used at any location.

Question #25 (1 Point)

An employee's bonus is to be calculated. It cannot be negative, but it can be calculated down to zero. The bonus is based on the length of employment.

The categories are: less than or equal to 2 years, more than 2 years but less than 5 years, 5 or more years, but less than 10 years, 10 years or longer.

What is the minimum number of test cases required to cover all valid equivalence partitions for calculating the bonus?

- a) 3.
- b) 5.
- c) 2.
- d) 4.

Select one option.

FL-4.2.1 (K3) Apply equivalence partitioning to derive test cases from given requirements

Justification

- a) Not correct – see the correct partitions in d).
- b) Not correct – see the correct partitions in d).
- c) Not correct – see the correct partitions in d).
- d) **Correct** – Partions as below:
 - 1. equivalence partition: $0 < \text{employment time} \leq 2$.
 - 2. equivalence partition: $2 < \text{employment time} < 5$.
 - 3. equivalence partition: $5 \leq \text{employment time} < 10$.
 - 4. equivalence partition: $10 \leq \text{employment time}$.

Question #26 (1 Point)

A speed control and reporting system has the following characteristics:

If you drive 50 km/h or less, nothing will happen.

If you drive faster than 50 km/h, but 55 km/h or less, you will be warned.

If you drive faster than 55 km/h but not more than 60 km/h, you will be fined.

If you drive faster than 60 km/h, your driving license will be suspended.

Which would be the most likely set of values (km/h) identified by two-point boundary value analysis?

- a) 0, 49, 50, 54, 59, 60.
- b) 50, 55, 60.
- c) 49, 50, 54, 55, 60, 62.
- d) 50, 51, 55, 56, 60, 61.

Select one option.

FL-4.2.2 (K3) Apply boundary value analysis to derive test cases from given requirements

Justification

The following partitions can be identified:

- 1. – 50 Two-point boundaries 50, 51
- 2. 51 – 55 Two-point boundaries 50, 51, 55, 56
- 3. 56 – 60 Two-point boundaries 55, 56, 60, 61
- 4. 61 – Two-point boundaries 60, 61

Thus:

- a) Not correct – Does not include all two-point boundary values. Also includes values not necessary for two-point boundary value analysis.
- b) Not correct – Does not include all two-point boundary values.
- c) Not correct – Does not include all two-point boundary values. Also includes values not necessary for two-point boundary value analysis.
- d) **Correct** – Includes all two-point boundary values

Question #27 (1 Point)

A company's employees are paid bonuses if they work more than a year in the company and achieve individually agreed targets.

The following decision table has been designed to test the logic for paying bonuses:

		T1	T2	T3	T4	T5	T6	T7	T8
Conditions									
Cond1	Employment for more than 1 year?	YES	NO	YES	NO	YES	NO	YES	NO
Cond2	Agreed target?	NO	NO	YES	YES	NO	NO	YES	YES
Cond3	Achieved target?	NO	NO	NO	NO	YES	YES	YES	YES
Action									
	Bonus payment?	NO	NO	NO	NO	NO	NO	YES	NO

Which test cases could be eliminated in the above decision table because the test case wouldn't occur in a real situation?

- a) T1 and T2.
- b) T3 and T4.
- c) T7 and T8.
- d) **T5 and T6.**

Select one option.

FL-4.2.3 (K3) Apply decision table testing to derive test cases from given requirements

Justification

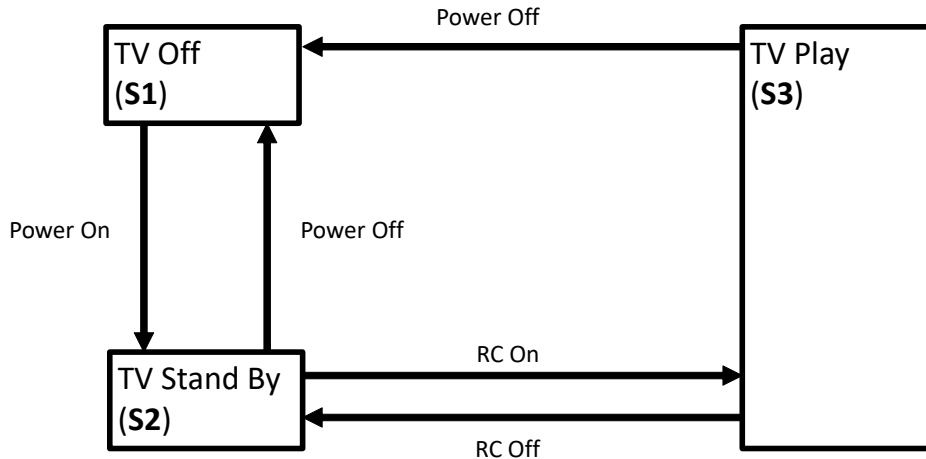
In the test cases T5 and T6 the situation described is logically impossible. If there was no agreement on targets, it's impossible to claim that the targets were reached. Since this situation can't occur, we therefore can eliminate the corresponding test cases.

Hence

- a) Not correct.
- b) Not correct.
- c) Not correct.
- d) **Correct.**

Question #28 (1 Point)

Which of the following statements about the given state transition diagram and table of test cases is **TRUE**?



Test Case	1	2	3	4	5
Start State	S1	S2	S2	S3	S3
Input	Power On	Power Off	RC On	RC Off	Power Off
Expected Final State	S2	S1	S3	S2	S1

- a) The given test cases can be used to cover both valid and invalid transitions in the state transition diagram.
- b) The given test cases represent all possible valid transitions in the state transition diagram.
- c) The given test cases represent only some of the valid transitions in the state transition diagram.
- d) The given test cases represent sequential pairs of transitions in the state transition diagram.

Select one option.

FL-4.2.4 (K3) Apply state transition testing to derive test cases from given requirements

Justification

Proposed test case cover all five possible single valid transitions in the given state diagram

(S1->S2, S2->S1, S2->S3, S3->S2, S3->S1).

- a) Not correct – because no invalid transitions are covered.
- b) **Correct** – because all valid transitions are covered.
- c) Not correct – because all valid transitions are covered.
- d) Not correct – because the order in which the test cases are run has not been specified, we don't know what pairs of transitions will occur.

Question #29 (1 Point)

A video application has the following requirement:

The application shall allow playing a video on the following display sizes:

1. 640x480.
2. 1280x720.
3. 1600x1200.
4. 1920x1080.

Which of the following list of test cases is a result of applying the Equivalence Partitioning test technique to test this requirement?

- a) Verify that the application can play a video on a display of size 1920x1080 (1 test).
- b) Verify that the application can play a video on a display of size 640x480 and 1920x1080 (2 tests).
- c) Verify that the application can play a video on each of the display sizes in the requirement (4 tests).
- d) Verify that the application can play a video on any one of the display sizes in the requirement (1 test).

Select one option.

FL-4.2.1 (K3) Apply Equivalence Partitioning technique to derive test cases from given requirements

Justification

- a) Not correct – See c).
- b) Not correct – See c).
- c) **Correct** – This is a case where the requirement gives an enumeration of discrete values. Each enumeration value is an Equivalence Class by itself, therefore each will be tested when using Equivalent Partitioning test technique.
- d) Not correct – See c).

Question #30 (1 Point)

Which of the following BEST describes how tasks are divided between the test manager and the tester?

- a) The test manager plans testing activities and chooses the standards to be followed, while the tester chooses the tools and controls to be used.
- b) The test manager plans, organizes, and controls the testing activities, while the tester specifies and executes tests.
- c) The test manager plans, monitors, and controls the testing activities, while the tester designs tests and decides about automation frameworks.
- d) The test manager plans and organizes the testing and specifies the test cases, while the tester prioritizes and executes the tests.

Select one option.

FL-5.1.2 (K1) Identify the tasks of a test manager and tester

Justification

- a) Not correct – Syllabus 5.1.2: The tester uses the tools.
- b) **Correct** – See Syllabus 5.1.2.
- c) Not correct – Deciding about automation frameworks is not a tester's task.
- d) Not correct – Test manager does not specify the test cases.

Question #31 (1 Point)

Which of the following metrics would be MOST useful to monitor during test execution?

- a) Percentage of executed test cases.
- b) Percentage of work done in test environment preparation.
- c) Percentage of planned test cases prepared.
- d) Percentage of work done in test case preparation.

Select one option.

FL-5.3.1 (K1) Recall metrics used for testing

Justification

- a) **Correct** Syllabus 5.3.1: Test case execution (e.g. number of test cases run/not run, and test cases passed/failed).
- b) Not correct – Should be monitored during test preparation.
- c) Not correct – Should be monitored during test preparation.
- d) Not correct – Should be monitored during test preparation.

Question #32 (1 Point)

Which TWO of the following can affect and be part of test planning?

- a) Budget limitations.
- b) Test objectives.
- c) Test log.
- d) Failure rate.
- e) Use cases.

Select two options.

FL-5.2.1 (K2) Summarize the purpose and content of a test plan

Justification

- a) **Correct** – When you are planning the test and there are budget limitations, prioritizing is needed; what should be tested and what should be omitted.
- b) **Correct** – See syllabus 5.2.1.
- c) Not correct – it is a part of test monitoring and control.
- d) Not correct – it is a part of test monitoring and control.
- e) Not correct – it is a part of test design.

Question #33 (1 Point)

Which of the following are typical exit criteria from testing?

- a) Reliability measures, degree of tester's independence, and product completeness.
- b) Reliability measures, test cost, availability of testable code, time to market, and product completeness.
- c) Reliability measures, test cost, schedule and unresolved defects.
- d) Time to market, residual defects, tester qualification, degree of tester independence and test cost.

Select one option.

FL-5.2.3 (K2) Give examples of potential entry and exit criteria

Justification

- a) Not correct – Degree of tester's independence does not play a role in exit criteria.
- b) Not correct – "Availability of testable code" is an entry criteria.
- c) **Correct** – See Syllabus 5.2.3.
- d) Not correct – Degree of tester's independence as well as tester qualification do not play a role in exit criteria.

Question #34 (1 Point)

Which one of the following is **NOT** included in a test summary report?

- a) Defining pass/fail criteria and objectives of testing.
- b) Deviations from the test approach.
- c) Measurements of actual progress against exit criteria.
- d) Evaluation of the quality of the test item.

Select one option.

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

Justification

- a) **Correct** – This information has been defined earlier in the test project.
- b) Not correct – This information is included in a test report; see the Syllabus chapter 5.3.2: Information on what occurred during a test period.
- c) Not correct – This information is included in a test report; see Syllabus 5.3.2: Information and metrics to support recommendations and decisions about future actions, such as an assessment of defects remaining, the economic benefit of continued testing, outstanding risks, and the level of confidence in the tested software.
- d) Not correct – This information is included in a test report; see Syllabus 5.3.2: Information and metrics to support recommendations and decisions about future actions, such as an assessment of defects remaining, the economic benefit of continued testing, outstanding risks, and the level of confidence in the tested software.

Question #35 (1 Point)

There are several test strategies. Which strategy (1-4) is characterized by which description (A-D) below?

1. Analytical.
2. Methodical.
3. Model-based.
4. Consultative.

- A. Tests are based on a state diagram of a required aspect of the product MODEL-BASED
- B. Tests are designed and prioritized based on the level of risk. ANALYTICAL
- C. Systematic use of some predefined set of test conditions. METHODICAL
- D. Tests are chosen based on the views of business domain experts. CONSULTATIVE

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

Select one option.

FL-5.2.2 (K2) Differentiate between various test strategies

Justification

Analytical: Syllabus 5.2.2, This type of test strategy is based on an analysis of some factor (e.g. requirement or risk). (1B).

Methodical: Syllabus 5.2.2, In this type of test strategy relies on making systematic use of some predefined set of tests or test conditions, (2C).

Model-based: Syllabus 5.2.2, In this test strategy, tests are designed based on some model of some required aspect of the product, ... (3A).

Consultative (or Directed): Syllabus 5.2.2, This type of test strategy is driven primarily by the advice, guidance, or instructions of stakeholders, business domain experts, or technology experts, who may be outside the test team or outside the organization itself. (4D).

Thus:

- a) Not correct.
- b) Not correct.
- c) Not correct.
- d) **Correct.**

Question #36 (1 Point)

Which one of the following is the characteristic of a metrics-based approach for test estimation?

- a) Budget which was used by a previous similar test project.
- b) Overall experience collected in interviews with test managers.
- c) Overall estimate agreed with the developers.
- d) Average of calculations collected from business experts.

Select one option.

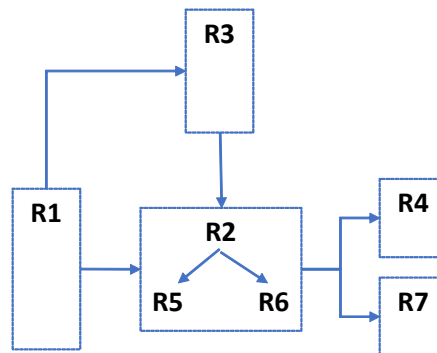
FL-5.2.6 (K2) Explain the difference between two estimation techniques: the metrics-based technique and the expert-based technique

Justification

- a) **Correct** – From Syllabus chapter 5.2.6: The metrics-based approach: estimating the testing effort based on metrics of former similar projects or based on typical values .
- b) Not correct – This is expert-based approach: estimating the tasks based on estimates made by the owners of the tasks or by experts.
- c) Not correct – This is expert-based approach: estimating the tasks based on estimates made by the owners of the tasks or by experts.
- d) Not correct – This is expert-based approach: estimating the tasks based on estimates made by the owners of the tasks or by experts.

Question #37 (1 Point)

The following diagram shows the **logical dependencies** between a set of seven requirements, where a dependency is shown by an arrow. For example, "R1 -> R3" means that R3 depends on R1.



Which one of the following options structures the **test execution schedule** according to the **requirement dependencies**?

- a) R1 → R3 → R1 → R2 → R5 → R6 → R4 → R7.
- b) R1 → R3 → R2 → R5 → R2 → R6 → R4 → R7.
- c) **R1 → R3 → R2 → R5 → R6 → R4 → R7.**
- d) R1 → R2 → R5 → R6 → R3 → R4 → R7.

Select one option.

FL-5.2.4 (K3) Apply knowledge of prioritization, technical and logical dependencies to schedule test execution for a given set of test cases

Justification

- a) Not correct – everything is dependent on R1, so any test flow that does not start with R1 is FALSE.
- b) Not correct – everything is dependent on R1, so any test flow that does not start with R1 is FALSE.
- c) **Correct** – the tests are specified in a sequence that takes the dependencies into account.
- d) Not correct – R2 is dependent on R3, so R3 should be tested before R2.

Question #38 (1 Point)

You are testing a new version of software for a coffee machine. The machine can prepare different types of coffee based on four categories. i.e. coffee size, sugar, milk and syrup. The criteria are as follows:

- Coffee size (small, medium, large),
- Sugar (none, 1 unit, 2 units, 3 units, 4 units),
- Milk (yes or no),
- Coffee flavor syrup (no syrup, caramel, hazelnut, vanilla).

Now you are writing a defect report with the following information:

Title: Low coffee temperature.

Short summary: When you select coffee with milk, the time for preparing coffee is too long and the temperature of the beverage is too low (less than 40 °C)

Expected result: The temperature of coffee should be standard (about 75 °C).

Degree of risk: Medium

Priority: Normal

What valuable information is MOST likely to be omitted in the above defect report?

- The actual test result.
- Data identifying the tested coffee machine.
- Status of the defect.
- Ideas for improving the test case.

Select one option.

FL-5.6.1 (K3) Write a defect report, covering defects found during testing.

Justification

- Not correct – the test result is given in the short summary.
- Correct** – when testing different versions of software, identifying information is necessary. Syllabus 5.6: Identification of the test item (configuration item being tested) and environment.
- Not correct – You are just writing the defect report, hence the status is automatically open.
- Not correct – This information is useful for the tester, but does not need to be included in the defect report.

Question #39 (1 Point)

Which one of the following is **MOST likely to be a benefit of using test execution tools?**

- a) It is easy to create regression tests.
- b) It is easy to maintain version control of test assets.
- c) It is easy to design tests for security testing.
- d) **It is easy to run regression tests.**

Select one option.

FL-6.1.2 (K1) **Identify benefits and risks of test automation**

Justification

- a) Not correct – The benefits are not when creating regressions tests, more in executing them.
- b) Not correct – This is done by configuration Management tools.
- c) Not correct – This needs specialized tools.
- d) **Correct** – Syllabus 6.1.2: **Reduction in repetitive manual work (e.g. running regression tests, environment set up/tear down tasks, re-entering the same test data, and checking against coding standards), thus saving time.**

Question #40 (1 Point)

Which test tool is characterized by the classification below?

1. Tool support for management of testing and testware. Configuration management tools
2. Tool support for static testing. Review tools.
3. Tool support for test execution and logging. Coverage tools.
4. Tool support for performance measurement and dynamic analysis. Monitoring tools.

- A. Coverage tools.
- B. Configuration management tools.
- C. Review tools.
- D. Monitoring tools.

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

Select one option.

FL-6.1.1 (K2) Classify test tools according to their purpose and the test activities they support

Justification

Support for management of testing and testware: Syllabus 6.1.1, Configuration management tools, (1B).

Support for static testing: Syllabus 6.1.1, Tools that support reviews, (2C).

Support for test execution and logging: Syllabus 6.1.1, Coverage tools, (3A).

Support for performance measurement and dynamic analysis: Syllabus 6.1.1, Performance testing tools/monitoring tools/dynamic analysis tools, (4D).

Thus:

- a) Not correct
- b) Not correct
- c) Not correct
- d) **Correct**