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General

1.1 Purpose

This document contains publicly-available information about ISTQB® Exams (Foundation, Agile and Specialist Extensions, Advanced and Expert), including details on their structure, passing scores, question types, etc.

1.2 Document Responsibility

The ISTQB® Examination Working Group is responsible for this document.

1.3 Revision History

Date	Version	Name	Comment
June 22 nd , 2011	0.1	Patricia Alves & Stuart Reid	Compile Public Version
November 1 st , 2012	0.2	Debra Friedenber	Updates for new 2012 AL exam structure
November 10 th , 2018	0.3	Debra Friedenber	Comments from EWG incorporated.
February 10 th , 2013	0.4	Debra Friedenber	Updates for new Modularized EL exam structure
February 10 th , 2013	1.0	Debra Friedenber	EWG Feedback incorporated. Version for GA vote.
September 18 th , 2018	2.0	Beata Karpinska & Klaus Skafe	Updated according to revised exam rules and recommendations. Version for GA vote.

Glossary

Commonly used terms:

Term	Definition
CTFL	Certified Tester Foundation Level.
CTAL	Certified Tester Advanced Level.
CTEL	Certified Tester Expert Level.
Business Outcome	A specific statement of what can be expected from a person who achieves Certification in a particular subject area, (e.g., an Advanced Test Manager), and will outline the benefits for companies who are considering the development of specific testing skills at this level.
Educational or Learning aims	The ISTQB® educational aims describe the long term goals for the learners. They are defined for the scheme as a whole as well as for each level within the scheme.
Learning Objective	Learning objectives describe the gain on cognitive competence to be achieved in relation to given content.

Exam question	An individual component of the examination which is used to assess the knowledge of a candidate's understanding of the syllabus material and achievement of Learning Objectives. Synonym used in other ISTQB® documents and the ISTQB® process glossary: Exam item
Examination / Exam	An assessment intended to measure a candidate's (test-taker's) knowledge, skill, and competence related to an ISTQB® syllabus. (ISO 17024: Mechanism that is part of the evaluation, which measures a candidate's competence by one or more means such as written, oral, practical and observational. (Procedure))
Essay question	A type of exam question which requires the candidate to consider a scenario or problem statement and respond with a detailed written response; used in the assessment of Expert Level certifications only.
MC question (MC) or Multiple-Choice question	A type of exam question which consists of a problem and a list of suggested solutions (options). Both single-answer and multiple-answer (Pick-N) versions of this question type may be used in ISTQB® exams. Synonym used in other ISTQB® documents and the ISTQB® process glossary: MC item
Scenario	A detailed description of a situation which includes necessary background information for a series of examination questions.

Exam Structure and Rules

1.4 Generic Exam Rules

- Examinations will be based on the relevant, approved syllabus.
- Answers to exam questions may require the use of material based on more than one section of the syllabus being examined. Advanced and Expert level exam questions may require the knowledge of lower examination levels.
- All learning objectives in the syllabus are examinable.

1.5 The Foundation Level Exam Rules

1.5.1 The Foundation Level examination

- 1.5.1.1 The Foundation Level examinations shall be based on the Foundation Level syllabus. Answers to examination questions may require the use of material from more than one section of this syllabus.
- 1.5.1.2 All learning objectives in the syllabus are examinable.
- 1.5.1.3 The time allowed for the examination is 60 minutes, if given in the candidate's native language. If the candidate's native language is not the examination language, the time allowed is 75 minutes.

1.5.2 General Foundation Level Exam Structure

- 1.5.2.1 The examination shall comprise 40 multiple-choice questions.
- 1.5.2.2 The number of points available in an examination is 40.
- 1.5.2.3 Each correctly answered question is worth one point.

1.5.3 Passing Score

- 1.5.3.1 A score of at least 65% (26 or more points) is required to pass.

1.5.4 The Foundation Level Specialist and Agile Examinations General Structure and Rules

- 1.5.4.1 Each Foundation Level Specialist and Agile topic (e.g. Foundation Agile Testing) constitutes a separate syllabus and each will have an exam structure tailored for that specific syllabus.
- 1.5.4.2 Answers to questions may rely on concepts introduced in the ISTQB® Foundation Level Syllabus.

1.6 The Advanced Level Exam Rules

1.6.1 The Advanced Level examinations

1.6.1.1 The Advanced Level examinations shall be based on the Advanced Level syllabi modules. Answers to examination questions may require the use of material from more than one section of this syllabus. The exam questions may require the knowledge of Foundation examination level.

1.6.1.2 All learning objectives in the syllabus are examinable.

1.6.2 Passing Score

1.6.2.1 A score of at least 65% is required to pass.

1.6.3 Advanced Level Exam Structure

1.6.3.1 Each examination module (i.e. Test Manager, Test Analyst and Technical Test Analyst) shall comprise a set of multiple-choice questions, as indicated in the table at 1.6.3.2:

1.6.3.2 The exam questions will be distributed in line with the Learning Objectives.

Module	Number of MC questions	Total possible MC points	Passing Score	Exam Length (in minutes)	Exam Length + 25% (in minutes)
Advanced Test Manager	65	115	75	180	225
Advanced Test Analyst	60	120	78	180	225
Advanced Technical Test Analyst	45	80	52	120	150

1.6.3.3 The points available for a question should reflect the difficulty of the question. A K2 question is allocated 1 point, while a K3 question may score 1, 2 or 3 points, and K4 questions may score either 2 or 3 points.

1.6.4 The Advanced Level Specialist examination

Specific Rules:

1.6.4.1 All questions shall assess at least one Learning Objective from the Specialist Advanced Syllabus under examination. Questions may include supporting material at the K1 level from the rest of the syllabus. Where questions address more than one LO, then the question will primarily address the highest K-Level LO.

1.6.4.2 The exam structure for the Specialist Advanced Level examination is provided in the following table. Each of the exams includes mandatory questions targeted to specific Learning Objectives as well as a specified number of questions based on “selectable” Learning Objectives.

1.6.4.3 General Structure:

Module	Number of MC questions	Total possible MC points	Passing Score	Exam Length (in minutes)	Exam Length + 25% (in minutes)
Advanced Security Tester	45	80	52	120	150
Advanced Test Automation Engineer	40	75	49	90	113

1.7 The Expert Level Exam Rules

1.7.1 Expert Level Exam Structure

1.7.1.1 The exam consists of two sections:

- Multiple-choice component
- Essay-style component.

1.7.1.2 Exam duration

The following durations apply to all Expert Level exams:

- Multiple-choice section: 45 minutes
- Essay section: answering: 90 minutes
- Total exam duration: 135 minutes
- Extension for non-native speakers: 34 minutes

1.7.1.3 Passing Score

Candidates must score 75% or above overall to pass the exam.

1.7.1.4 Essay Exam Component

The following rules apply to the essay section of the exam:

- An exam consists of three essay questions.
- Each essay can consist of one or more questions/tasks.
- Two of the three essay questions must be answered.
- Each question is nominally allocated 45 minutes.
- If all three essay questions are answered only the best two marks are counted.
- Each essay must have a defined scoring guideline.

1.7.1.5 General Structure

The following apply to the individual Expert Level exams, which are based on the individual Expert Level syllabus parts:

Module	Number of MC questions	Total possible MC points	Number of Essay questions	Total possible Essay points	Total possible points	Passing Score
Expert Level Improving the Test Process						
Part 1: Assessing Test Processes	25	35	2 out of 3	50 points (per essay question)	135	102
Part 2: Implementing Test Process Improvement	25	35	2 out of 3	50 points (per essay question)	135	102
Expert Level Test Manager						
Part 1: Strategic Test Management	14	35	2 out of 3	50 points (per essay question)	135	102
Part 2: Operational Test Management	14	35	2 out of 3	50 points (per essay question)	135	102
Part 3: Managing the Test Team	16	35	2 out of 3	50 points (per essay question)	135	102

Question Writing Recommendations – General

1.8 General Rules for All Question Types

- The ability to answer one question shall not be dependent on the answer from another question.
- Questions shall not require specialized domain-specific knowledge unless included in the syllabus.

1.9 Rules and Recommendations for Multiple Choice Questions

1.9.1 Basic concepts

1.9.1.1 The ISTQB® allows four different types of multiple-choice questions – Type A, Pick-N, Matching, and Roman. Each is discussed in detail below.

1.9.1.2 A multiple-choice question consists of two parts:

Stem – contains a *question phrase* and sufficient information to select the correct response option(s). A *problem statement* or a *scenario* may enhance the stem.

Response Options – for Type A, Matching, and Roman questions, there shall be one correct response option, while for Pick-N questions there shall be two correct response options. Incorrect or clearly inferior response options are known as distracters.

1.9.2 Usage

Multiple choice questions are used to assess Knowledge levels K1 through K4.

1.9.3 Multiple Choice Question Structure

1.9.3.1 Type A

Type A multiple choice questions include a stem and a single correct option. A limited amount of information is presented in the stem, and a set of 4 response options are presented to the candidate.

Type A Example:

Level: K1

What does a tester do during "Static testing"?

- a) Reviews requirements and compares them with the design.
- b) Runs the tests on the exact same setup each time.
- c) Executes test to check that the hardware has been set up correctly.
- d) Runs the same tests multiple times, and checks that the results are statistically meaningful.

Select ONE option

a) is correct answer

1.9.3.2 Roman Type

Within the stem of Roman type questions, the candidate is presented with several statements, each preceded by a Roman numeral. The candidate must then select the correct combination of statements from the choices provided in the set of 5 statements. In the solution, each statement must appear in at least two answers and not more than three answers, in its correct truth value. For example, if statement X is True, it must be categorized as true in two or three of the answers; if it is False, it must be categorized as false in two or three of the answers. By using this technique, we avoid that the exam taker can figure out which option is correct, by just knowing that one statement has a truth value.

Roman Type Example:

Level K2

When should regression testing normally be performed?

- i. Every week
 - ii. After the software has changed
 - iii. When the environment has changed
 - iv. On the same day, each year
 - v. After the software is released
- a) ii, iii true, i, iv, v false
 - b) i, iii, v true, ii, iv false
 - c) i, iv true, ii, iii, v false
 - d) ii, iv, v true, i, iii false

Select ONE option

b) is the correct answer

1.9.3.3 Matching Type

Matching type questions are used to measure the candidate's ability to identify the relationship or association between related items.

This format provides a way for candidates to connect a word, sentence or phrase in one list to a corresponding word, sentence or phrase in the second list.

In order to receive credit for a matching question, candidates must match each of the given items in the first list to their corresponding items in the second list and select the single correct answer from the set of four options.

The items in the first list are labeled with numbers and the items in the second list are labeled with letters. There shall be four items in each list.

Matching Type Example:

Level: K2

Which general testing principles are characterized by the description below?

1. Early testing
 2. Defect clustering
 3. Pesticide paradox
 4. Absence-of-errors fallacy
-
- A. Testing should start at the beginning of the project
 - B. Conformance to requirements and fitness for use
 - C. A small number of modules contain the majority of defects
 - D. Test cases must be regularly reviewed and revised
-
- a) 1A, 2B, 3C and 4D
 - b) 1A, 2C, 3D and 4B
 - c) 1B, 2C, 3A and 4D
 - d) 1A, 2D, 3B and 4C

Select ONE option

b) is the correct answer

1.9.3.4 Pick-N Type

For a Pick-N type question, the candidate is presented with a list of 5 options from which two options should be selected.

Scoring for a Pick-N-type question is the same as for other MC types, e.g. if the 2 selected options are correct, the candidate is awarded the full number of points assigned to the question, otherwise no points are awarded.

Pick-N Type Example:

Level: K2

Which 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.

Correct options are a) & c).

1.10 Rules and Recommendations for Scenarios

1.10.1 Basic concepts

A scenario is a detailed description of a problem or situation, which includes enough background information to answer one or more exam questions. In general, a scenario is written to provide context for a group of questions, with the scenario appearing before those questions.

1.10.2 Usage

Scenarios can be used to support any ISTQB® question type and must be used as problem statements for Essay questions.

1.10.3 Scenario Structure

The structure of the scenario is described in Table 1 below. Each of the elements should be considered when constructing the scenario and its associated questions:

Table 1 Structure of the Scenario

Elements of a Scenario	Description
Environment/Background Information	➔ Description of the organizational environment (Organization; System, ...) ➔ Information on the economic situation (Competitors; Regulations, ...) ➔ Information on the people involved in the situation, including their roles or functions, knowledge, communication style and behavior. ➔ Constraints such as schedule, time budget, methods, techniques ➔ Any other supplementary information that is required for a complete answer.
Situation	Describes the problem that needs to be solved, or the specific situation, which is to be considered for each task.

Note: The structure of the scenario for MC and Essay questions is the same.

1.10.4 Scenario Rules

A scenario shall include all the information needed to understand the tasks / questions associated with it, either directly or by inference. In cases where a scenario is used as background information for multiple questions, additional information may be included as part of the individual questions' stems.

1.10.5 Example Scenario

Scenario Description: (K4 question):

A major retail company has a purchasing system supporting several distributed purchasing centers.

The purchasing system consists of 4 site servers and a central server. The central management information system (MIS) server consolidates inventory levels, calculates purchasing demands and generates daily management reports. The site servers upload client data (clients in Figure 1) daily to the Central MIS server using batch processing.

The number of site servers is expected to triple over the next 5 years as a result of mergers and acquisitions. The existing system architecture cannot handle the existing load and a major upgrade is planned.

A draft test strategy is in place for the system upgrade project. None of the testing team members have experience in using automated tools and the current test case library contains no automated scripts.

The project team is using the V model and the draft test strategy includes 4 levels of testing: component, integration, system and user acceptance testing. Each level has a level test plan.

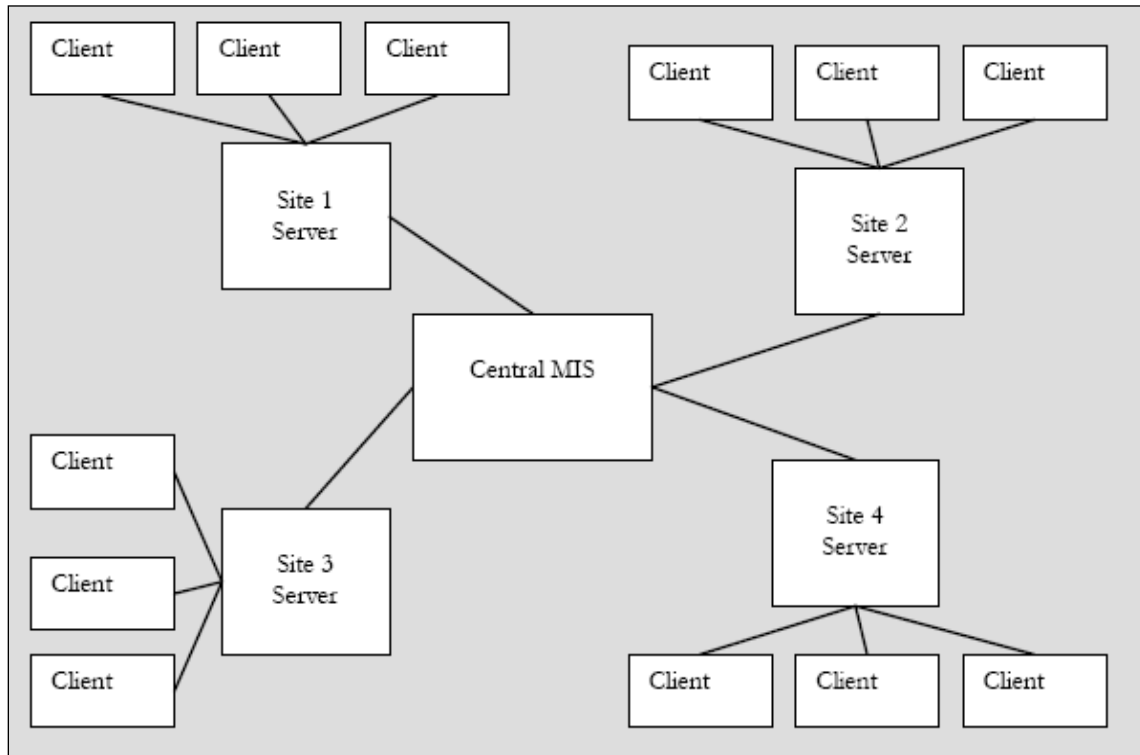


Figure 1

Consider the following list of tools:

- a) Incident management tool
- b) Configuration management tool
- c) Code instrumented
- d) Test driver
- e) Static analyzer

You are a Test Manager responsible for system level testing. Which is the most effective combination of tools for you to use on this project? Select **2** tools.

Correct options are a) & b)

1.11 Rules and Recommendations for Essay Questions

1.11.1 Basic concepts

Candidate assessment by Essay question is an integral part of Expert level exams. Essay questions are used to assess a candidate's knowledge of complex learning objectives – where there are potentially several reasonable approaches and solutions which can best be presented and discussed in an essay format.

The objective of an Essay question is to assess the candidate's knowledge and understanding of the subject matter related to defined learning objectives; including:

1. The candidate's ability to analyze and respond to a realistic situation.
2. The candidate's ability to justify the response.

1.11.2 Usage

Essay questions shall be used to assess knowledge levels K5 and K6 and may be used to assess learning objectives at the K4 level.

1.11.3 Essay Question Structure

Table 2 Structure of an Essay question

Elements of an Essay Question	Description
Scenario	→ The scenario, describing the realistic situation to be analyzed by the candidate (see Table 1 Structure of a Scenario).
Question (s) / Tasks and Instructions	→ The question shall be directly related to the Learning Objective(s) that are being assessed. → Each question will generally be comprised of multiple parts each of which shall have its own description. → The question is often expressed as a task for the candidate to complete.

Appendix A: Learning Objectives/Levels of Knowledge (K-levels)

1.11.4 Knowledge Level definitions

The following objective-level definitions shall apply to all ISTQB® syllabi. Question writers should refer to the keywords below as an aid to creating and reviewing questions at the appropriate cognitive level.

Level 1: Remember (K1)

The candidate will recognize, remember and recall a term or concept.

Keywords: Acquire, arrange, count, define, describe, draw, duplicate, find, identify, know, label, list, match, memorize, name, order, outline, quote, recall, recite, recognize, record, relate, remember, repeat, reproduce, retrieve, select, sequence, show, state, tell, and write.

Example:

Can recognize the definition of “failure” as:

- “non-delivery of service to an end user or any other stakeholder” or
- “actual deviation of the component or system from its expected delivery, service or result”

Level 2: Understand (K2)

The candidate can select the reasons or explanations for statements related to the topic, and can summarize, differentiate, classify and give examples for facts (e.g., compare terms), testing concepts and test procedures (explaining the sequence of tasks).

Keywords: Abstracting, categorize, classify, classifying, compare, comparing, conclude, construct models, contrast, convert, defend, demonstrate, describe, differentiate, discuss, distinguish, draw, estimate, exemplify, exemplifying, explain, explaining, express, extend, find more information about, generalize, give example(s), identify, illustrate, indicate, infer, inferring, interpret, interpreting, locate, map, paraphrase, predict, put into your own words, recognize, report, represent, restate, review, rewrite, select, summarize, summarizing, tell, translate, visualize.

Examples:

Explain the reason why tests should be designed as early as possible:

- To find defects when they are cheaper to remove
- To find the most important defects first

Explain the similarities and differences between integration and system testing:

- Similarities: testing more than one component, and can test non-functional aspects
- Differences: integration testing concentrates on interfaces and interactions whereas system testing concentrates on whole-system aspects, such as end to end processing

Level 3: Apply (K3)

The candidate can select the correct application of a concept or technique and apply it to a given context. K3 is normally applicable to procedural knowledge. There is no creative act involved such as evaluating a software application or creating a model for a given software. When we have a given model and cover the procedural steps to create test cases from the model in the syllabus, then it is K3.

Keywords: Apply, apply a procedure, calculate, change, choose, classify, compute, demonstrate, develop, discover, employ, execute, exhibit, follow a procedure, illustrate, implement, interpret, interview, manipulate, modify, operate, organize, practice, predict, prepare, produce, put into practice, relate, restructure, schedule, select, show, sketch, solve, transfer, translate, use, write

Example:

- Can identify boundary values for valid and invalid partitions
- Use the generic procedure for test case creation to derive the test cases from a given state transition diagram in order to cover all transitions

Level 4: Analyze (K4)

The candidate can separate information related to a procedure or technique into its constituent parts for better understanding and can distinguish between facts and inferences. Typical application is to analyze a document, software or a project situation and propose appropriate actions to solve a problem or accomplish a task.

Keywords: Analyze, appraise, attribute, breakdown, calculate, categorize, characterize, choose, classify, compare, contrast, construct, coordinate, create, criticize, debate, deconstruct, deduce, derive, design, detect, diagram, differentiate, discover, discriminate, dissect, distinguish, examine, experiment, find coherence, focus, generate, hypothesize, identify, illustrate, infer, inquire, inspect, integrate, interpret, investigate, judge, model, monitor, organize, outline, parse, plan, point out, probe, produce, question, relate, research, scrutinize, select, separate, structure, subdivide, survey, synthesize, test

Example:

- Analyze product risks and propose preventive and corrective mitigation activities
- Describe which portions of an incident report are factual and which are inferred from results

Level 5: Evaluate (K5)

The candidate may make judgments based on criteria and standards. He detects inconsistencies or fallacies within a process or product, determines whether a process or product has internal consistency and detects the effectiveness of a procedure as it is being implemented (e.g., determine if a scientist's conclusions follow from observed data).

Keywords: Appraise, argue, assess, attach, check, choose, compare, conclude, consider, contrast, coordinate, criticize, critique, decide, deduce, defend, describe, detect, discriminate, estimate, evaluate, explain, infer, interpret, judge, justify, measure, monitor, predict, prioritize, prove, rank, rate, relate, select, summarize, support, validate, value

Example:

- Judge whether a specific review process has been effectively and efficiently applied in a given situation
- Evaluate the test results and problem reports and propose a recommendation to the stakeholder whether further testing is required
- Evaluate whether a given set of test cases has achieved a coverage level
- Monitor the risk mitigation activities, propose improvements (includes summarizing results)

Level 6: Create (K6)

The candidate puts elements together to form a coherent or functional whole. Typical application is to reorganize elements into a new pattern or structure, devise a procedure for accomplishing some task, or invent a product (e.g., build habitats for a specific purpose).

Keywords: Arrange, assemble, categorize, collect, combine, compare, comply, compose, construct, create, derive, design, develop, devise, discuss, document, explain, formulate, generalize, generate, hypothesize, integrate, invent, make, modify, organize, originate, perform, plan, predict, prepare, produce, propose, rearrange, reconstruct, relate, reorganize, report, revise, rewrite, schematize, set up, summarize, support, synthesize, tell, write.

Example:

- Generate an appropriate risk management process that includes both rigorous and informal elements
- Create the test approach for a project that considers the context of the company's policy, project / product, test objectives, risks and timeline to form a dynamic strategy to balance an analytical strategy
- Construct a review process from the elements of different review types to form an effective process for the organization