New ISTQB Advanced Syllabi

A Career Ladder for Test Managers and Testers

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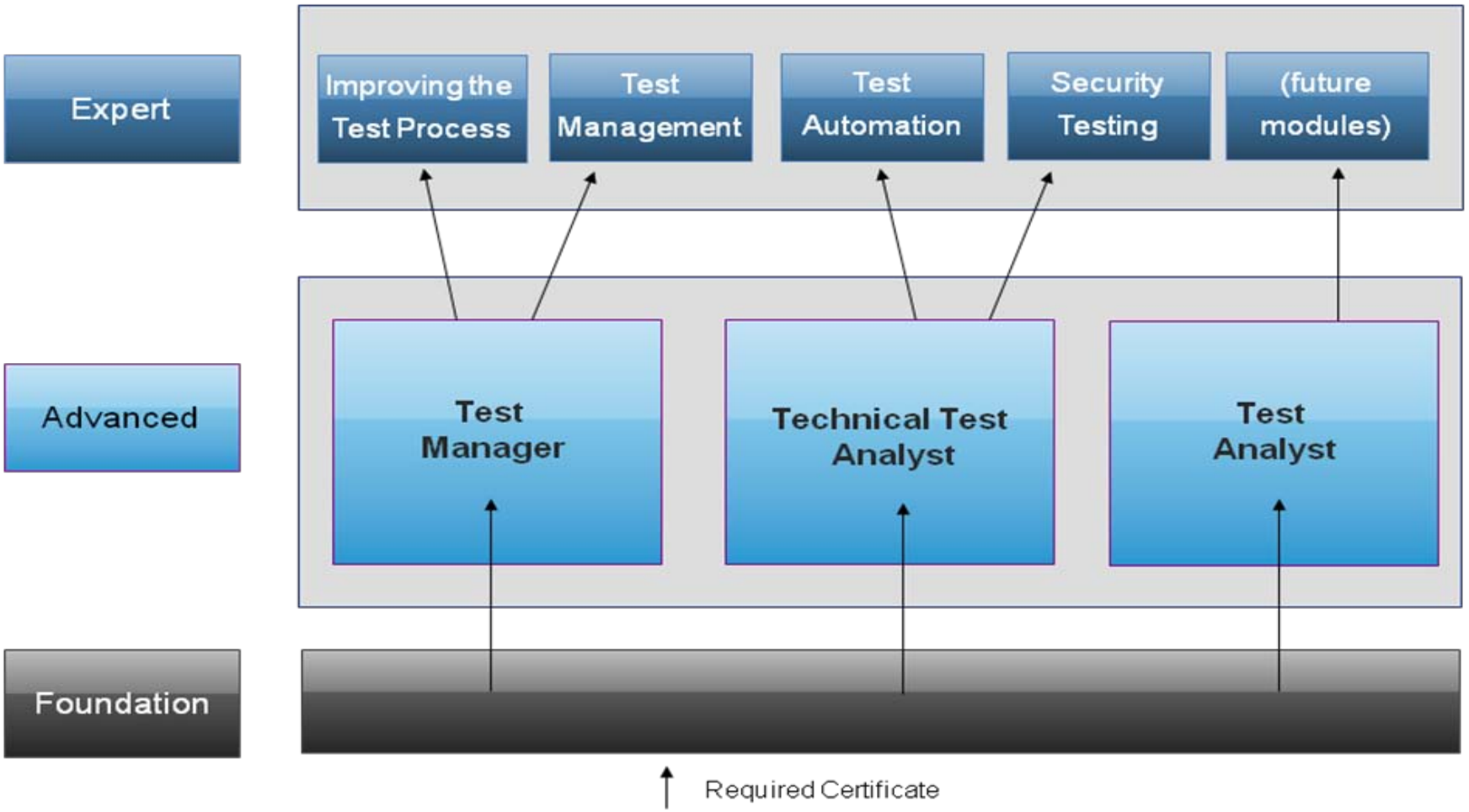
ISTQB New Advanced Syllabi

- From January 2011 to October 2012, Rex and other authors in the ALWG reworked the Advanced program
- By re-using and improving the learning objectives but completely re-writing the syllabus text, the team kept the good and fixed the bad
- The result:
  - Three separate syllabi
  - A much improved career ladder from Foundation to Expert
- Let's see how…

ISTQB Career Ladder



ISTQB New Advanced Syllabi 2012

- Developed by a team of 19 authors spanning 11 countries
- Twenty-six primary reviewers spanning 16 countries
- Final review and approval by 47 National Boards
- Distills over 2,000 person-years of experience
- The ISTQB and the authors are the source of the syllabi which is used by permission as the basis for all accredited training courses (including RBCS' courses)

Advanced Test Manager Chapters

Chapter 1: Testing Process

Chapter 2: Test Management

Chapter 3: Reviews

Chapter 4: Defect Management

Chapter 5: Improving the Test Process

Chapter 6: Test Tools and Automation

Chapter 7: People Skills - Team Composition

Sample ATM Exam Question

Assume you are the test manager for the system testing of an embedded system that is used to control a gas station fuel pump. The project will follow an Agile development lifecycle, specifically the Scrum model for project management and XP for development practices. The company is a new, underfunded start-up.

Which THREE of the following statements are true?

A. The Scrum master is a test stakeholder for this project
B. You should ensure separation between testers and other project participants
C. You should determine responsibility for hardware-software integration testing
D. You will need to plan and acquire the proper test environment
E. Test coverage traceability is not important for this or other Agile projects
F. During project inception, you should define the test charters for each sprint
G. System test execution starts when all component tests are complete

Advanced Test Analyst Chapters

Chapter 1: Testing Process

Chapter 2: Test Management: Responsibilities for the Test Analyst

Chapter 3: Test Techniques

Chapter 4: Testing Software Quality Characteristics

Chapter 5: Reviews

Chapter 6: Defect Management

Chapter 7: Test Tools

Learning Objectives

- The Foundation and Advanced exams are based on learning objectives, which state what you should be able to do
- The learning objectives are at four levels of increasing sophistication
  - K1: remember basic facts, techniques, and standards
  - K2: understand the facts, techniques, and standards and how they inter-relate
  - K3: apply facts, techniques, and standards to your projects
  - K4: analyze facts, techniques, and standards, and adapt or select them for your project
- For the Advanced exams, each Advanced syllabus is implicitly covered at the K1 level
- Each syllabus (test manager, test analyst, technical test analyst) has its own set of K2, K3, and K4 learning objectives defined for each chapter

Advanced Syllabi by the Numbers

- ATM
  - Pages: 84
  - K2 LOs: 34
  - K3 LOs: 12
  - K4 LOs: 10
- ATA
  - Pages: 64
  - K2 LOs: 22
  - K3 LOs: 11
  - K4 LOs: 9
- ATTA
  - Pages: 53
  - K2 LOs: 17
  - K3 LOs: 14
  - K4 LOs: 4

Advanced Exams

- ATM exam
  - 180 minutes
  - 65 questions
  - Minimum questions per chapter: 13, 25, 6, 4, 3, 4, 7
  - Points: 115
  - Points to pass: 75
- ATA exam
  - 180 minutes
  - 60 questions
  - Minimum questions per chapter: 9, 3, 31, 4, 4, 4
  - Points: 120
  - Points to pass: 78
- ATTA exam
  - 120 minutes
  - 45 questions
  - Questions per chapter: 2, 9, 7, 12, 5, 10
  - Points: 80
  - Points to pass: 52

Advanced Exam Questions

- K1 LOs are covered implicitly within higher level questions
- K2 questions included, but one point only
- K3 and K4 questions score two or three points
- Many exam questions consider a scenario
  - Scenario described
  - Sequence of questions about scenario asked
  - Simulates real-world use of various advanced testing concepts
- The Foundation syllabus is also examinable
- Cross-section questions, including joining Foundation and Advanced sections, are allowed

Sample ATA Exam Question

A requirements specification makes the following statement:

> The system shall allow a customer to order quantities from 1 to 100, inclusive, provided that the total order amount will not exceed the customer's credit limit. After checking the quantity, the system will check each transaction to ensure the credit limit is not exceeded.

Assume you want to minimize the number of tests while also covering high and low valid quantities, invalid quantities, and valid and invalid (over limit) transactions. Design a set of tests that does so. What number of tests is required?

A. 3

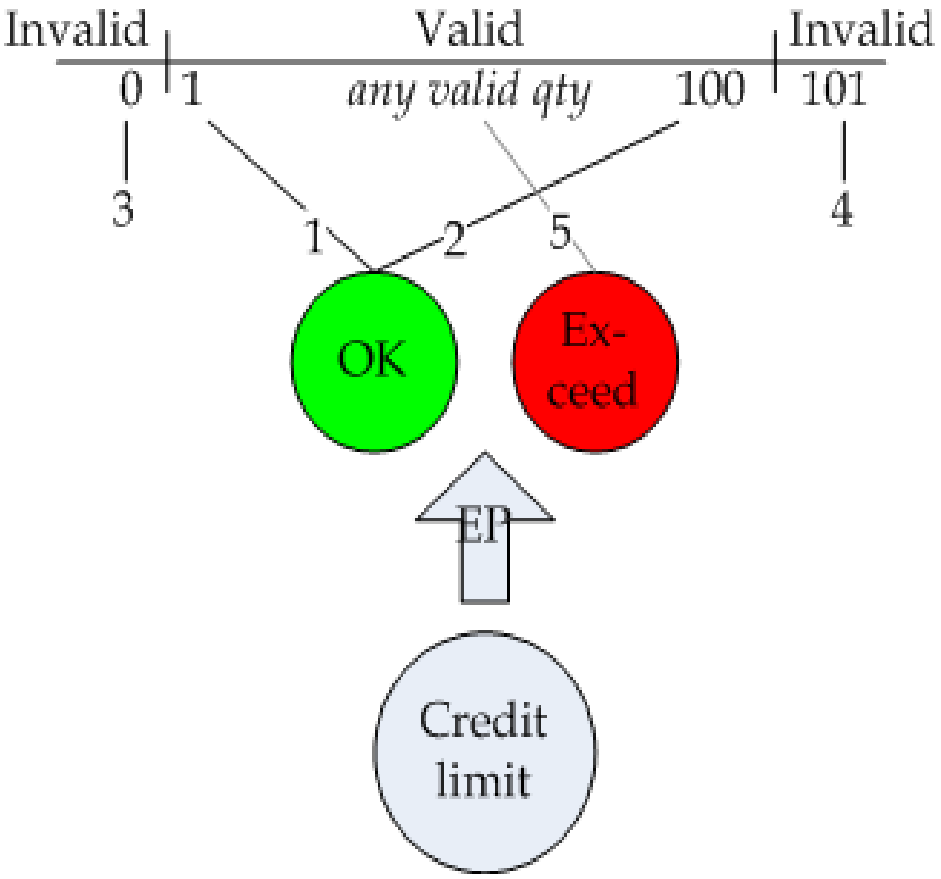
B. 4

C. 5

D. 6

Sample ATA Exam Question Solution

- The figure at right shows the derivation of five tests using equivalence partitioning and boundary value analysis
- Notice that the extreme boundary values on the invalid quantity partitions are omitted, because the question called only for the minimum and maximum valid values



Advanced Technical Test Analyst Chapters

Chapter 1: The Technical Test Analyst's Tasks in Risk-Based Testing

Chapter 2: Structure-Based Testing

Chapter 3: Analytical Techniques

Chapter 4: Quality Characteristics for Technical Testing

Chapter 5: Reviews

Chapter 6 Test Tools and Automation

Advanced Training Courses

- Must cover all content and learning objectives defined for the syllabus
- Duration is five days (ATM), four days (ATA), and three days (ATTA)
- No core module or overlap is allowed
- Must include real-world examples for all K2, K3, and K4 learning objectives
- Must include realistic exercise for all K3 and K4 learning objectives (which must be done in class for live, instructor-led courses)

Requirements for Advanced Certificates

- To earn a certificate, one must:
  - Hold a Foundation Level certificate issued by an ISTQB-recognized Exam Board or Member Board
  - Have appropriate experience in software testing or development, between 2-5 years, depending on degree held and certificate(s) sought
  - Subscribe to the Code of Ethics in the Foundation syllabus
- Accredited training is recommended but not required
- 2007 certificates are still recognized

Conclusion

- The new ISTQB Advanced syllabi are out now
- We kept the good stuff and fixed the broken stuff
- The 2007 syllabus exams sunset in June
- The 2012 syllabi exams are available now
- RBCS training courses are available for both 2007 and 2012 syllabi

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