



American Software Testing Qualifications Board, Inc.

ISTQB Certification in the U.S.A.



SAMPLE QUESTIONS by K-Value

The Foundation Level exam contains questions on three levels of knowledge:

- * **K1: remember, recognize, recall**
- * **K2: understand, explain, give reasons, compare, classify, categorize, give examples, summarize**
- * **K3: apply, use**

Following are 5 sample questions for each K-value.

**There is exactly one correct answer to each question.
Answers follow at the end, along with a citation of the section of the Foundation Level syllabus where the answer can be found.**

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SAMPLE K - 1 QUESTIONS

1. **Which of the following statements describes a key principle of software testing?**
 - A. Automated tests allow better statements of confidence about the quality of software products.
 - B. For a software system, it is normally impossible to test all the input and output combinations.
 - C. Exhaustive software testing is, with enough effort and tool support, feasible for all software.
 - D. The purpose of software testing is demonstrating the absence of defects in software products.

2. **Which of the following are Black Box test design techniques?**
 - I. Boundary value analysis
 - II. Branch condition testing
 - III. Equivalence partitioning
 - IV. State transition testing.
 - A. I, II, III and IV
 - B. I and III
 - C. III and IV
 - D. I, III and IV

3. **Which of the following is a valid objective of an incident report?**
 - A. Prove that the tester is contributing to the quality of the system.
 - B. Provides test management ideas for test process improvement.
 - C. Gives a statistical way to determine which modules to redesign.
 - D. Provides developers a way to critique their individual work processes.

4. **Which of the following are good candidates for manual static testing?**
 - A. Requirement specifications, test plan, code, memory leaks.
 - B. Requirement specifications, test cases, user guides.
 - C. Requirement specifications, user guides, performance.
 - D. Requirement specifications, website, code, use cases.

5. **What is integration testing?**
 - A. Integration of automated software test suites with the application under test.
 - B. Testing performed to expose faults in the interaction between components and systems.
 - C. Testing to verify that a component is ready for integration with the rest of the system.
 - D. Testing to verify that the test environment can be integrated with the product.

SAMPLE K-2 QUESTIONS

1. **A test case has which of the following elements?**
 - A. A test environment description and test instructions.
 - B. A set of inputs, execution preconditions, and expected outcomes.
 - C. A test plan, test inputs, and logging instructions.
 - D. Execution instructions and a function description to determine correct outcome.

2. **In any software development life cycle (SDLC) model, which of the following are characteristics of good testing?**
 - I. Providing complete test coverage of all branches of the system code.
 - II. Having a corresponding testing activity for each development activity.
 - III. Testers should be involved in reviewing documents as soon as drafts are available.
 - IV. Each test level has test objectives specific to that level.
 - A. II, III and IV
 - B. I and III
 - C. I, III and IV
 - D. I and II

3. **Which of the following are success factors for reviews?**
 - I. Clear objectives for each review.
 - II. Checklists and/or roles are used to increase effectiveness of defect identification.
 - III. There is an emphasis on process improvement.
 - IV. People issues and psychological aspects are not reviewed.
 - A. I and III
 - B. II, III and IV
 - C. I, II and III
 - D. IV

4. **Which of the following could be a disadvantage of independent testing?**
 - A. Developer and independent testing will overlap and waste resources.
 - B. Communication is limited between independent testers and developers.
 - C. Independent testers are too slow and delay the project schedule.
 - D. Developers can lose a sense of responsibility for quality.

5. **Which of the following might be a concern of a test group relying on a test design tool?**
 - A. The tool may not generate sufficient tests for verifying all aspects of the test object.
 - B. The tool's playback function may not work the same for all testers' workstations.
 - C. The tool might take too much time to run, putting the schedule at jeopardy.
 - D. The tool's test logs may require that the test group upgrade the server memory

SAMPLE K-3 QUESTIONS

1. Company ABC is going to provide their employees with a bonus which will be based on the employee's length of service in the company. The bonus calculation will be zero if they have been with the company for less than two years, 10% of their salary for more than two but less than five years, and 25% for five to ten years, 35% for ten years or more. The interface will not allow a negative value to be input, but it will allow a zero to be input.

How many equivalence partitions are needed to test the calculation of the bonus?

- A. Two equivalence partitions.
 - B. Three equivalence partitions.
 - C. Four equivalence partitions.
 - D. Five equivalence partitions.
2. For the following piece of code, how many test cases are needed to get 100% statement coverage?

Procedure X

```
Read (Color) // Input color from user
IF (Color == "Red") THEN
    Call Roses(Color)
ELSEIF (Color == "Blue") THEN
    Call Violets(Color)
ELSE
    PRINT "User is no Shakespeare"
SaveToDatabase(Color)
End Procedure X
```

- A. 5
 - B. 3
 - C. 1
 - D. 2
3. Given the following code snippet, how many test cases would we need to get 100% decision coverage? Each of the following functions simply prints and returns:

```
-----
PrintOutHeader;
PrintOutSalutation;
PrintOutMainBody;
PrintOutSignature;
-----
```

- A. 0
- B. 1
- C. 2
- D. 4

4. A simplified state transition table is being used to model a bank's ATM login behavior. Three states have been identified:

Waiting for Customer
 PIN processing
 ATM Processing

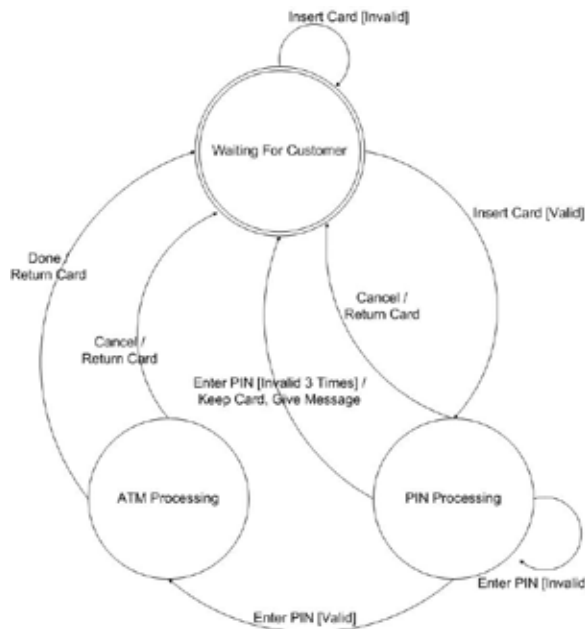
The following events have been identified (note that some have multiple conditions possible: noted in brackets):

Insert Card [Valid and Invalid]
 Cancel (2 Actions possible: ATM Returns card to customer, ATM Keeps card)
 Enter PIN [Valid, Invalid]
 Done (Action: ATM Returns card to customer)

Like most ATMs, inputting the incorrect PIN 3 times causes the ATM to keep the card and output a message that the card can be picked up the next day at the home bank.

For final regression testing, you are required to test to the level of coverage exercising all transitions. Assume that each test case begins at State 1 (Waiting for Customer.) A test case must end when it arrives back at State 1. ATM operation may be cancelled at the PIN processing state or at the ATM Processing state.

Based on the following state-transition diagram, what is the minimum number of test cases need to provide this level of coverage?



- A. 5
- B. 4
- C. 3
- D. 7

5. A piece of code for an operating system contains 1,200 lines of code. The code contains a single IF statement that contains only an error display. There are no other conditional constructs in the code.

How many test cases are required if the test organization requires the system to be tested to the 50% decision coverage limit and to 100% statement coverage?

- A. 1
- B. 2
- C. 4
- D. 1,200

ANSWERS

SYLLABUS REFERENCE

K-1

- | | | |
|----|---|---------------|
| 1. | B | Section 1.3 |
| 2. | D | Section 4.3 |
| 3. | B | Section 5.6 |
| 4. | B | Section 3.1 |
| 5. | B | Section 2.2.2 |

K-2

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|----|---|---------------|
| 1. | B | Section 4.1 |
| 2. | A | Section 2.1.3 |
| 3. | C | Section 3.2.4 |
| 4. | D | Section 5.1.1 |
| 5. | A | Section 6.1.4 |

K-3

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|----|---|---------------|
| 1. | C | Section 4.3.1 |
| 2. | B | Section 4.4.1 |
| 3. | B | Section 4.4.2 |
| 4. | A | Section 4.3.4 |
| 5. | A | Section 4.4.1 |