Test Analyst, Advanced Level
Exam ID: A
Sample Exam – Questions

International
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Qualifications Board

Sample Exam - Questions

ISTQB® Test Analyst Syllabus

Advanced Level

Exam ID: A

Version 2019 1.0

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Revision History

Version	Date	Remarks
2.0	October 5th , 2019	V2019 EWG - Complete Exam Set document.
V2019 1.0	December 19th, 2019	Revisions made by AELWG to enable launch of V2019 Added appendix to include LOs not covered in the sample exam.

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Introduction

The sample questions and answer sets in this document have been created by a team of subject matter experts and experienced question writers with the aim of assisting ISTQB® Member Boards and Exam Boards in their question writing activities.

These questions cannot be used as-is in any official examination, but they should serve as guidance for question writers. Given the wide variety of formats and subjects, these sample questions should offer many ideas for the individual Member Boards on how to create good questions and appropriate answer sets for their examinations.

The questions are organized in the following way:

- Question number
- Assigned points
- Question

The answers and justifications to the questions are contained in a separate document.

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Questions

Question #1 (1 Point)

Which of the following statements is TRUE with respect to when the test analyst should become involved during different software development lifecycle models?

- a) In sequential V-model projects the test analyst should start test analysis concurrently with coding.
- b) In sequential V-model projects the test analyst should start test analysis concurrently with requirement specification.
- c) There are no differences in the moment of involvement for test analysts for the various software development lifecycles.
- d) In Agile projects the test analyst should start test analysis and design concurrently with coding.

Select ONE option.

Question #2 (1 Point)

Which of the following answers describes the most appropriate and complete set of activities for the Test Analyst to focus on during test analysis and design?

- a) Analyze the test basis, select test case design techniques, create high level test conditions for risk mitigation, create test cases to achieve desired coverage of the test basis, create risk mitigation test cases.
- b) Analyze risks, create test conditions to address risks, create high level test cases to meet test conditions for risk mitigation, create all low-level test cases.
- c) Select test case design techniques, create high level test cases to meet test conditions, create high level test cases to mitigate risks, create low level tests cases to achieve desired coverage.
- d) Analyze the test basis, identify test conditions at appropriate levels to address the test basis, add test conditions for risk mitigation, select test case design techniques to achieve desired coverage, design test cases.

Select ONE option.

Question #3 (1 Point)

Which of the following statements does NOT give a good reason why test cases should be reviewed and understood by stakeholders?

- a) Customer and users review the test cases in order to verify them against requirements, business processes and business rules.
- b) The test manager reviews the test cases in order to control the work of the test analyst and to create the organization's test strategy.
- c) Testers review test cases written by other testers in order to ensure that the test cases are consistent, understandable and executable by testers other than the author.
- d) Developers review test cases written by testers in order to align their understanding of requirements with the testers' and to align component testing with system testing.

Select ONE option.

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Question #4 (3 Points)

Scenario: Health Insurance

The IT department of insurance company SecureLife has started a project IQ (Improved Quality) to implement a new health insurance application to make it possible to create online transactions for health insurance claims raised by employees and members of companies or associations having health insurance agreements. In the new application, it will be possible to make registration of all the information about the employees, their age, health conditions, etc. The project also has to fulfill the demands of the people doing insurance calculation, actuaries and the demands from public legislation.

The project team for IQ have testers who are business users with lots of domain knowledge but without much formal test training.
At the same time another project, HIPPOS (Health Insurance Product Public Order Sales), has been started by the marketing department of SecureLife with the purpose of launching a new Internet application that will allow potential buyers of health insurance to use a small calculator to calculate insurance premiums and possible bonus deductions based on age and different health parameters. This application will also allow individual customers to order Health Insurance Products online.
The marketing tool and web pages of project HIPPO will be developed and tested by SecureLife's Agile development team, which have worked together for the last three years with the marketing department, developing marketing web applications. The Agile team consists of well-trained testers and developers. They have implemented test automation for regression testing and they have check lists of common defects and common security problems which they use in their retrospectives.

As senior Test Analyst in SecureLife you have been asked to suggest options to the two projects, IQ and HIPPOS, regarding the level of detail and documentation required for test cases in the two projects.

Which of the following are the BEST options?

a) In project HIPPOS the test cases should be written at a high level allowing the testers flexibility in varying the details to achieve higher coverage.
b) In project IQ the test cases should be written at a high level. The testers are business users and they know their business rules and calculations so no need for detailed documentation.
c) In both project IQ and HIPPOS the test cases must be written as low-level test cases, with thorough documentation and detailed procedures.
d) In project IQ the test cases should be written at a low level with documented procedures and traceability to requirements.
e) In project HIPPOS the test cases should be written at a low level with documented procedures and audit trails.

Select TWO options.

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Question #5 (3 Point)

An e-commerce company has started a project to implement an electronic trading platform that allows traders a direct access to Fixed Income OTC (over-the-counter) markets, called B-OTC.

Using B-OTC, traders will be able to submit orders online to these markets to get a faster order execution. B-OTC will process an order through different phases:

- a validation phase of the order
- a price determination phase where several markets are examined looking for the best price
- an execution phase where the order is completed

The requirements specification for B-OTC is very clear, detailed and exhaustive.

B-OTC must be compliant to several regulations and an audit of the tests is mandatory.

The testers are domain experts without specific knowledge of formal testing.

Based only on the given information, which of the following statements best describes the level of detail and documentation required for the test cases in this scenario?

a) Low-level test cases should be written with detailed test procedures and documentation. Traceability from the low-level test cases to the requirements should be also assured
b) High-level test cases should be written because the testers are domain experts without a proper knowledge of formal testing
c) High-level test cases should be written because logical test cases provide a better reproducibility than concrete test cases
d) High-level test cases should be written without spending time on documentation. Traceability should be assured by using test case naming conventions

Select ONE option.

Question #6 (1 Point)

Which of the following statements is INCORRECT regarding test implementation activities?

a) Test Analsts may create data to be used with keyword-driven automation testing
b) If a risk-based test strategy is being used, risk priority order may dictate the execution order for the test cases
c) When creating the test execution schedule, manual and automated test execution are considered to be independent activities.
d) Test Analysts must verify the procedures that gather data for evaluating current status against exit criteria

Select ONE option

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Question #7 (2 Points)

A project to develop a foreign exchange Automated Teller Machine for an airport has been planned and a risk assessment has shown that there are 3 key risks:

There is a risk that usability will be a problem for visually impaired users because the operation requires viewing several screens in sequence with relatively small text. This has been assessed as medium likelihood with high impact.

There is a risk that response will be relatively slow because the foreign exchange rates will be checked before each transaction; this has been assessed as medium likelihood with medium impact.

There is a risk that accuracy of calculations could lead to cumulative errors. This has been assessed as low likelihood with high impact.

The test strategy currently requires performance testing during system test, usability testing during User Acceptance Test and accuracy tests at every test level. The project schedule is under time pressure.

Which of the following possible risk mitigation actions should be prioritized highest?

   a) Review the calculation algorithms and work with specialists to define a data set for calculation tests.
   b) Defer usability testing until UAT and recruit visually impaired testers to join the UAT team.
   c) Involve visually impaired users in the review of the user interface design.
   d) Spend time with developers to identify operational scenarios to test performance.

Select ONE option.

Question #8 (3 Points)

A company has set up an employee wellness program and combined it with the premium for health insurance:

The program has the following rules:

   1) Employees who don't consume more than 20 units of alcohol per week get $30 off their contribution
   2) Employees who fill in a "health risk assessment" will be rewarded with a $25 reduction in premium.
   3) Employees who participate in a yearly health control at the company a) receive a $50 reduction in their premium for having a BMI of 27.5 or less, and a $25 reduction for having a BMI below 30.
       and b) if they are non-smokers, they receive an additional $50 reduction in their premium, and those that have joined a stop-smoking class receive a $25 reduction. Smokers pay an additional premium of $75.

How many test cases are needed to achieve 100% test coverage of equivalence partitions of the valid input parameters, when testing this specification by applying the equivalence partitioning test design technique?

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a) 4 test cases
b) 8 test cases
c) 3 test cases
d) 10 test cases

Select ONE option.

Question #9 (3 Points)

You are working on a customer loyalty application for a restaurant. Customers earn points by spending money on food. There are four categories for awards that are based on the number of points earned.

- Casual: 1 - 40 points
- Regular: 41 - 150 points
- Frequent: 151 - 300 points
- Elite: more than 300 points

Existing tests cases have already covered the point values 12, 150, 151, 152 and 301.

Using two-value boundary analysis, you need to achieve 100 per cent coverage for the Regular and Frequent partitions.

What is the percentage of coverage you have already achieved with existing test cases?

a) 33%
b) 50%
c) 66%
d) 75%

Select ONE answer

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Question #10 (3 Points)

Consider an application that calculates the reimbursements of medical visits for patients having a medical insurance. The medical insurance deductible is defined as the amount of money that the insured patients have to pay before the insurance company begins to pay out benefits. Thus, no charges are reimbursed to the patient until the deductible has been met. There are two types of reimbursable visits: Doctor's Office Visits and Hospital Visits.
The reimbursement for Doctor's Office visits is 33%.
The reimbursement for Hospital visits depends on the type of the specialist visits; four categories (V1, V2, V3, V4) for specialist visits exist and the associated reimbursements are defined as follows:

       - for V1 reimburse 50%
       - for V2 reimburse 66%
       - for V3 reimburse 70%
       - for V4 reimburse 90%

You decide to model this scenario using a decision table with 3 conditions C1, C2 and C3 where:

       C1 can assume two values: Y, N (Y=Deductible met, N=Deductible not met)
       C2 can assume two values: D, H (D=Doctor's Office visit, H= Hospital Visits)
       C3 can assume four values: V1, V2, V3, V4 (categories for specialist visits)

and with 6 actions:

       A1 = No reimbursement
       A2 = Reimburse 33%
       A3 = Reimburse 50%
       A4 = Reimburse 66%
       A5 = Reimburse 70%
       A6 = Reimburse 90%

What is the MINIMUM number of test cases to cover the full decision table?

    a)   14
    b)   8
    c)   6
    d)   16

Select ONE option.

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Question #11 (3 Points)

Consider the following specification for a train ticket application:

- If you want to take a train after 9AM you get the ticket at the "Super-Saver" price.
- If you want to take a train before 6AM you get the ticket at a "Saver" price.
- At other times of the day you pay the standard price.
- If you have a Railcard you get a 25% rebate for all tickets except "Super Saver"

Using decision table testing, how many test cases are required to cover all non-redundant and feasible decision rules?

a) 3 test cases
b) 8 test cases
c) 4 test cases
d) 5 test cases

Select ONE option.

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Question #12 (3 Points)

The following state transition diagram describes the behavior of a generic scheduler of an OS (Operating System) both for short- and medium-term scheduling:
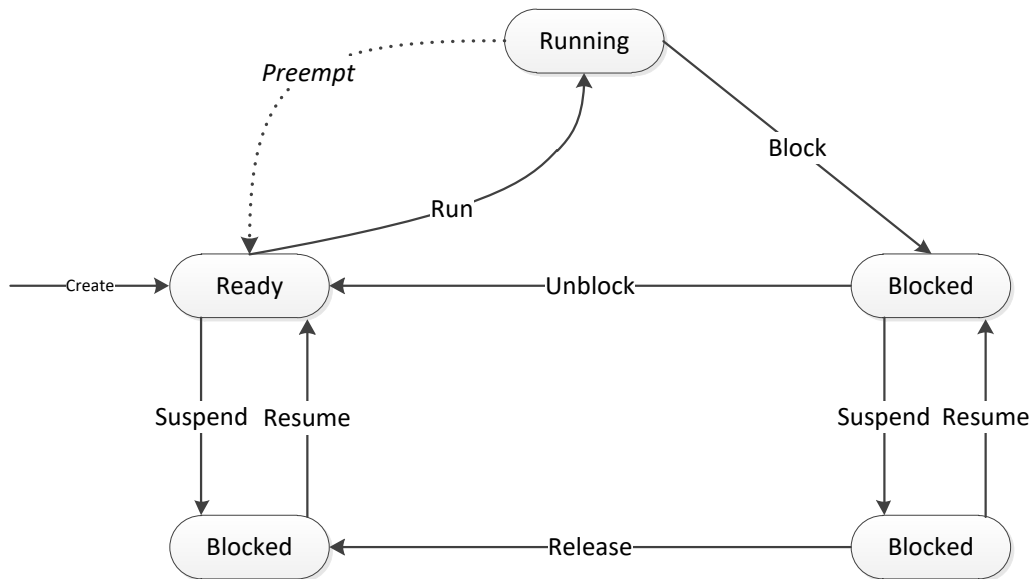
The above scheduler can be preemptive or non-preemptive: a preemptive scheduler has the transition represented by the dotted transition "preempt" whereas the non-preemptive scheduler doesn't. For the non-preemptive scheduler, a running process P issues an I/O request, the process blocks and, when the P's request is satisfied, P is moved from blocked to ready. A preemptive scheduler, may preempt the running process P and then resume moving it directly from running to ready.
At some later time the operating system looks for a ready job to run and picks P.
The lower part of the diagram represents the medium-term scheduling (suspend and resume transitions). Assume a test always starts and may only end in the "Ready" state, and so a test input consists of a sequence ("Ready", event, next state, …, event, "Ready").

What is the MINIMUM number of tests needed to cover every unique sequence of 5 states/4 events (starting and ending in the "Ready" status), for both the non-preemptive and the preemptive scheduler?
   a) 4 for the non-preemptive; 4 for the preemptive
   b) 1 for the non-preemptive; 4 for the preemptive
   c) 1 for the non-preemptive; 1 for the preemptive
   d) 1 for the non-preemptive; 2 for the preemptive

Select ONE answer

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Question #13 (3 Points)

A GPRS mobile devices operate in one of three states: IDLE, STANDBY, and READY.

A device in the IDLE state is unregistered with the network and therefore unreachable. In the power-saving STANDBY state a device periodically listens for network "wake up" messages and upon receiving such a message from the network, the device moves to the READY state. In this state, a device constantly monitors the air interface for incoming packets. When packets are not received for a number of seconds, a device goes back to the STANDBY state to conserve power.

The following figure depicts a state transition diagram for this device:
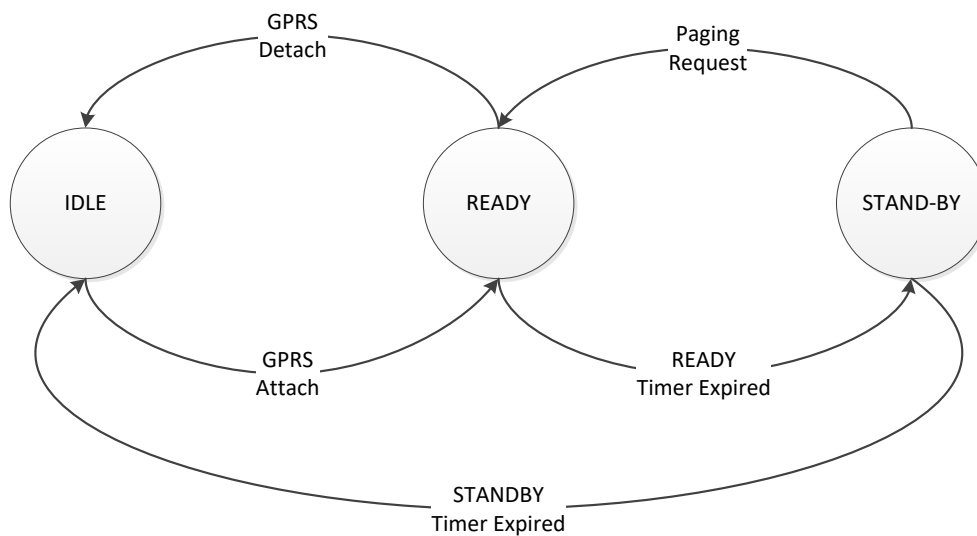
A test always starts and ends in the IDLE state, but reaching IDLE does not require compulsory stop (the test may continue). So, a test input consists of a sequence of events (E1, E2, ..., En), where E1="GPRS Attach" and En can be "GPRS Detach" or "STANDBY Timer Expired"."

What is the MINIMUM number of tests needed to cover every unique sequence of UP TO 5 states/4 events?

    a) 3
    b) 4
    c) 2
    d) 1

Select ONE option

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Question #14 (1 Point)

Which of the following statements does NOT describe the use of classification trees to support black-box test techniques

    a) classification trees support the identification of equivalence partitions
    b) classification trees support the identification of parameter combinations which are incompatible
    c) classification trees support the identification of rules to be used in a decision table
    d) classification trees support pairwise testing

Select ONE option

Question #15 (3 Points)

A company offering house insurance policies has several policy options. They depend on the following factors:

Building type: house, semi-detached, apartment building, cottage

Material: wood, concrete, brick, mixed

Location: city, suburb, countryside, wilderness

You are testing the system and using the pairwise technique for creating test cases.

Using the pairwise technique, how many test cases are required to achieve coverage?

    a) 16
    b) 12
    c) 256
    d) 4

Select ONE option.

Question #16 (3 Points)

Consider a multi-language web application that shall:

    - support three different languages: English, French and Japanese

    - run on three different browsers: IE8, IE7, Firefox 11

    - run on three different operating systems: Windows XP, Windows Vista, Windows7

You have been asked to test the correct behavior of this application for all the possible combinations of languages, browsers and operating systems.

Due to the restricted amount of time you decide to apply the pairwise testing technique for creating test cases.

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Using the pairwise technique, what is the MINIMUM number of test cases needed to achieve a full 2-wise coverage?

    a) 3
    b) 6
    c) 9
    d) 27

Select ONE option.

Question #17 (3 Points)

Easytravel is a card which is used for paying for journeys on buses and subways. The user can store credit to the card at the Easytravel Loading Machines and the system automatically deducts the fee of the journey while the user shows the card to the card reader on a bus or at the subway station.

You are a member of the Easytravel project team and the following user story has been given to you for reviewing.

USE CASE: ADD TO EASYTRAVEL BALANCE FROM CREDIT CARD
Use case ID: UC-201201
Purpose: User is increasing the balance on their Easytravel card.
Actors: user, system

Pre-conditions: User has a valid Easytravel card and a credit card.

Main scenario:

User	System
1. User sets the Easytravel card on the reading plate of the Easytravel Loading Machine.	2. The system asks what the user wishes to do: (Exception E1) • query card balance (→separate use case) • add to balance of the card • check latest card transactions (→separate use case)
3. User chooses "Add balance"	4. System asks the amount. (Exception E1)
5. User selects the amount.	6. System asks for the payment method: (Exception E1) • cash (→separate use case) • credit card
7. User selects credit card.	8. System asks the user to insert credit card into the credit card reader. (Exception E1)

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9. User inserts the credit card.	10. System shows the amount to be charged from the credit card and asks for confirmation. (Exception E2)
11. User confirms the amount.	12. System makes the credit card transaction and adds the amount to the Easytravel card balance.
13. User removes the credit card and the Easytravel card.	14. System prints out a receipt of the transaction.
	15. System returns to the main screen.

Exceptions:

Exception	Action
E1	User can stop the process by removing the Easytravel card from the reading plate.
E2	If the user does not accept the amount to be charged, they can cancel the operation by pressing the Cancel button on the credit card reader.

End-result: User's Easytravel card balance has been increased with the selected amount and the equal amount has been charged to the credit card.

How many test cases are required to achieve the minimum coverage for this use case?

   a) 2 test cases
   b) 1 test cases
   c) 9 test cases
   d) 6 test cases

Select ONE option.

Question #18 (3 Points)

TS is a skills portal which is made available to all of a company's IT professionals. Individual IT professionals first discuss their training needs with their manager and as a result may receive a voucher from the manager for any of the course types provided at the company. The IT professional uses TS and their voucher to select a specific course and make a reservation.

USE CASE: COURSE REGISTATION
Use Case ID: UC-15504
Purpose: Enable IT professionals to select and reserve a course for which they have been given a voucher.

Actors: IT Professional (ITP); TS Skills Portal (SP)

Pre-conditions: none

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Main scenario:

Main scenario step	Action
1	The ITP launches SP.
2	SP's home page is show and requests a voucher code from the ITP
3	The ITP enters the voucher code (Exception E1)
4	SP lists the the dates, locations and current number of registered participants for the course indicated in the voucher code. (Exception E2)
5	The ITP selects a date and location
6	SP shows an overview of the selected course's contents
7	The ITP confirms selection of this course by pressing the „Register" button
8	SP places the ITP onto the list of participants and a message shown "You are registered for the course". SP updates the participants list.
9	The ITP logs out

Alternative flow steps

Alternative scenario step	Action
2a	The ITP may log out from the application's home page
8a	If the course already has 12 participants SP places the ITP onto a waiting list and a message shown "you are on the waiting list". SP updates the waiting list.

Exceptions:

Exception	Action
E1	If an invalid voucher code is entered , SP shows a message "Voucher not known – please try again " is issued. SP returns to the home page (step 2).

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E2	If no courses are available SP shows a message "sorry- no courses available – please log out and talk to your manager ". SP returns to the home page (step 2)

How many test cases are required to achieve the minimum coverage for this use case?

    a) 1
    b) 2
    c) 4
    d) 3

Select ONE option.

Question #19 (3 Points)

A new mobile app is to be developed for managing the membership of a soccer club which runs several teams. One of the key objectives of the club owners is to replace the outdated manual method required for registration of new members. The functionality of the app is to remain relatively simple because not all users will be familiar with modern user interfaces. The club owners have therefore placed particular emphasis on the ease with which users can navigate between the various screens and the usability of the application. An objective is also to manage the numbers of players who can register for a particular team. Limits are therefore to be enforced which may result in applicants being placed on a waiting list.

Which of the following test case design techniques would together give the best chance of achieving acceptable test coverage in the available time frame?

    a)   State transition testing
    b)   Decision table testing
    c)   Boundary value analysis
    d)   Use case testing
    e)   Pairwise testing

Select TWO options.

Question #20 (3 Points)

A system is being specified for use by automotive dealers. The system will provide the ability to configure a vehicle's optional characteristics (e.g. engine size, external trim, color), visualize the configured vehicle and generate the retail price of the vehicle. An existing system can provide a visual model of any single configuration, but it does not enable the user to modify the configuration in the same session. This system is being used as a development prototype from which it is expected that the required functionality can be generated more quickly than working from scratch, and time scales have been adjusted for a rapid delivery.

Which of the following test case design techniques would together give the best chance of achieving acceptable test coverage in the available time frame?

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a) State transition testing
b) Classification tree
c) Boundary value analysis
d) Use case testing
e) Equivalence partitioning

Select TWO options.

Question #21 (1 Point)

Which of the following statements BEST explains experience-based testing?

a) If the testers are experienced and have good knowledge of the system under test, experience-based techniques are a viable alternative to more formal techniques if there are problems with the quality of the documentation or if the project is under a tight schedule.
b) Experience-based techniques should generally be used if there are no suitable formal techniques or if it takes too much time and effort to use them.
c) Experience-based techniques rely on the tester's knowledge and experience and can therefore be used to increase the test coverage as the tester knows which areas need more testing.
d) If checklists are used, experience-based testing can be more systematic and efficient and can replace black-box test techniques.

Select ONE option.

Question #22 (2 Points)

You are a Test Analyst on a new project. The requirements documents are on a very high level, containing little detail about the problem the software should address. As a result, your manager has decided that exploratory testing will be a primary test technique used for this project. You have been given the task of specifying, executing, and recording the test sessions.

Which of the options below define what you will need or will use for these tasks.

a) Use debriefing sessions with the test manager or a test lead to record the results of the test sessions.
b) Log defects into the defect management system but do not record a pass/fail for the exploratory session because duplicating the results could be difficult.
c) Ask end users to execute some ad-hoc testing and note down their actions for future use as exploratory sessions.
d) Procure domain knowledge to be applied during the exploratory session.
e) Record the results in email and send the email to the test manager and test lead.

Select TWO options.

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Question #23 (1 Point)

Which of the following describes typical characteristics of defect-based test techniques?

- a) Defect-based techniques are based on the analysis and classification of previously found defects.
- b) Defect-based techniques are mainly used at the component test level.
- c) Defect-based techniques concentrate on defects found during the analysis of the documentation of a system.
- d) Defect-based techniques are a sub-category of black-box test techniques.

Select ONE option.

Question #24 (3 Points)

The marketing department of insurance company, SecureLife, has started a project called HIPPOS (Health Insurance Product Public Order Sales). The purpose of the project is to create a new Internet application where potential customers can calculate insurance premiums and bonuses based on age and different health factors.

The new application will also make it possible for individual customers to order health insurance products online.

The tool and web page created by project HIPPOS will be developed and tested by SecureLife's Agile development team. The Agile development team has worked together for the last three years with the marketing department, developing web applications. The Agile team consists of well-trained testers and developers. They have implemented test automation for configuration and regression testing and they have built taxonomies of common defects and common security problems.

In Project HIPPOS the Product Owner from Marketing has presented the following requirements to the Agile team before the first release planning meeting

User Story 1 (US1) : The Web health insurance calculator shall calculate according to the rules of calculation described by the actuary and insurance calculation business section

User Story 1 (US2): The user interface of the Web Health Insurance Order application shall follow the same standards as the other marketing web applications and use a predefined setup of page frames and dialogs having been used during the last two years.

User Story 1 (US3): The Web applications shall support the latest 3 versions of different types of web browsers Internet Explorer, Google Chrome, Firefox, and Safari.

User Story 1 (US4): Security must be at the same level as for other marketing web applications.

The Agile team has been asked to prepare a testing strategy. The Product Owner asks the team to present their proposal for the use of testing techniques at the release planning meeting.

Which of the following proposals best supports the given scenario?

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a) The Agile team will use defect-based testing as the primary test technique for user stories US1 to US4. For user story US1 equivalence partitioning and boundary value analysis will also be used and an additional black-box test technique will be used for user story US4.

b) The Agile team will use exploratory testing and defect-based testing as the primary testing techniques for user stories US1 to US4. For user story US1 decision table testing will also be used. Adaptability testing for user story US3 and attack-based testing using a checklist will be used extra for user story US4.

c) The Agile team will use exploratory testing for user stories US1 to US4. For user story US1 the black-box test technique decision and branch testing will also be used. Adaptability testing will be used for user story US3 and attack-based testing will also be used for user story US4.

d) The Agile team will use black-box techniques as the primary testing techniques for user stories US1 to US4. For user story US1 state transition testing and boundary value analysis will also be used and exploratory testing will also be used in addition for user story US4.

Select ONE option.

Question #25 (1 Point)

You are working on a project testing an application that handles foreign currency exchange transactions. Much of the software which handles calculations and money transfers has been re-used from a similar application which has been used for over 3 years by the experienced company. Several new functions are to be added to the new application to improve user experience and display better graphical information. The users have not been fully involved in the definition of these new aspects and new functions have therefore been implemented according to the developer's expectations.

Which of the following quality characteristics would you focus on the MOST when testing the new application?

a) Functional correctness.
b) Functional completeness.
c) Replaceability
d) Functional suitability.

Select ONE option.

Question #26 (1 Point)

You work for a project which uses an Agile approach in the telecommunications branch. The application develops a new interface to allow customers to modify their mobile phone plan directly via the web application. You are performing system tests and work particularly on the screen used to change the mobile phone plan.

The user story you are testing is:

US-34: As a customer, I want to be able to select a new mobile phone plan online so that I can change it.

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As part of these tests, you and the product owner invite a business expert to perform an exploratory test on this screen and indicate if they have any comments on the proposed solution.

What kind of test are you performing?

    a) Functional correctness testing
    b) Accessibility testing
    c) Functional completeness testing
    d) Functional appropriateness testing

Select ONE option.

Question #27 (1 Point)

Which of the following statements is correct regarding quality sub-characteristics and the defects they target?

    a) Functional completeness testing discovers indications that the system will not be able to meet the needs of the user in a way that will be considered acceptable.
    b) Functional reliability testing ensures that the functions are available when called.
    c) Functional appropriateness may focus on the coverage of high-level business cases by the implemented functionality.
    d) Functional correctness testing involves detecting incorrect handling of data or situations.

Select ONE option.

Question #28 (1 Point)

Assume you work for a company that has developed a software component to help users trade currencies. A new software version of the component is being developed. The main feature of this version is the ability to calculate different amounts of commission depending on the volume of the trades. In addition, different categories of users (beginner, intermediate, expert) are defined and different functions are provided to them according to their category.

You are the test analyst responsible for creating functional suitability tests.

Which of the following statements correctly defines the level in the software development lifecycle in which relevant tests should first be performed?

    a) Testing that commissions have been calculated correctly for low-volume trades should be performed during component testing.
    b) Testing the suitability of functions assigned to different user categories should be performed during acceptance testing.
    c) The interoperability of the new functions with other trading systems should be conducted in system testing.
    d) Testing that commissions have been calculated correctly for high-volume trades may be best performed during system testing.

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e) Required coverage of high-level business cases should be determined in system integration testing.

Select TWO options.

Question #29 (1 Point)

Functional appropriateness testing is usually conducted during

    a) component and integration testing
    b) integration and system testing
    c) system and user acceptance testing
    d) acceptance testing, especially alpha and beta testing

Select ONE answer

Question #30 (1 Point)

Which of the following statements is correct regarding usability testing?

    a) The usability should be verified against the requirements and validated by the real users
    b) Validation of the usability requirements should be done after release to enable real users to participate.
    c) Heuristic evaluation can be used to survey the users and find usability problems
    d) Usability can be verified by running a comparison with the existing unacceptable product .

Select ONE option.

Question #31 (1 Point)

Assume you work for a company that has developed a software component to help users securely and easily manage all the passwords they have defined for different websites. This component is integrated into hundreds of websites, used by millions of people world-wide.

A new software version of the component is being developed. The main feature of this version is the integration with a specific operating system that does not currently support this component.

Which of the following does not qualify as a interoperability defect?

    a) Passwords are not saved for all websites which integrate with the component.
    b) 5% of the websites do not run on a specific operating system.
    c) Passwords are truncated on some browsers.
    d) Saving the passwords becomes too complicated for some users.

Select ONE option.

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Question #32 (1 Point)

You work as a Test Analyst in the team developing a system for managing rented electric scooters. The system consists of the following three parts:

1) A client application for mobile phones working in both Android and iOS systems with the following basic functionalities:

   a) The ability to register in the system

   b) For registered users

      i) information about the nearest free charged scooter - using the GPS system,

      ii) the possibility of reserving a scooter for 15 minutes

      iii) information about the account balance

      iv) possibility of paying the fee by card payment (Visa, Mastercard, ...)

   c) The target group of users of this application are people aged 18 -35.

2) Scooter control application:

   a) Information about the batteries charge

   b) current location of the scooter using the GPS system

   c) assigning state: free / reserved / in use

3) A server application that supervises the work of the whole:

   a) customer data and the status of their accounts

   b) location of all scooters

   c) scooters charging priority

Which quality characteristic represents the highest risk, and should be tested first?

   A. usability
   B. interoperability
   C. security
   D. performance

Select ONE answer.

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Question #33 (1 Point)

Which of the following statements define types of defect you would NOT typically consider in portability testing?

- a) An application does not function correctly in all intended target environments.
- b) Software cannot be installed for particular configurations.
- c) Users with disabilities cannot interact with the application.
- d) Certain software components within a system cannot be exchanged for others.
- e) Incorrect data exchange between interacting components.

Select TWO options.

Question #34 (3 Points)

The HeatWell mobile application shall enable home owners to control and monitor the heating of their home. The following requirements have been identified as the most important for the HeatWell app:

Requirement 1: The user must be provided with an interface with which they can easily set required heating times and temperatures, and monitor the temperature in different parts of the house.

Requirement 2: An efficiency function shall calculate the energy consumed and help the user to optimize their needs.

You are the Test Analyst on the HeatWell team. Which of the following test conditions would you consider to be the most appropriate for verifying the functional and/or non-functional quality characteristics of the HeatWell app?

- a) The user can install the app on an Android device
- b) The user can effectively set target temperatures with a minimum number of steps
- c) The efficiency function accurately calculates heat consumption
- d) Energy consumption data can be saved on the HeatWell database server for iOS and Android devices
- e) Monitoring data can be displayed for the previous 30 days

Select TWO options.

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Question #35 (3 Points)

You are a Test Analyst working on a brand-new project.

The customer is a state social welfare administration that wants to improve its website. The website will contain information, news, and documentation on social welfare. It will allow any citizen to interact online in order to view their current status and ongoing and past reimbursements.

A team of business analysts, requirement engineers and user experience specialists have worked with the client to gather a comprehensive list of the requirements for the new website, based on the existing website, new needs, new best practices and user feedback.

The project follows the V-model as software development lifecycle.

The requirements have been reviewed and approved by all the stakeholders.

You now have to start the tests design based on requirements and a draft of detailed specifications.

Here is a selection of some requirements:

R003 – The entire website must be accessible to users with visual disabilities, according to WCAG 2.0.

R004 – The website must work properly on the devices presently utilized by users of the existing website, covering at least 80% of these users.

R005 – The response time of the website must not exceed 5 seconds under the load created by 5.000 simultaneous users.

R006 – The new system must keep all the non-technical data used in the previous system.

R007 – Only the owner and authorized state agents must be able to access personal data in the system.

Which of the above requirements you should consider, according to your responsibilities, for your test design?

A. R003, R005, R006
B. R003, R004
C. R003, R004, R007
D. R004, R006, R007

Select ONE option

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Question #36 (2 Points)

You are reviewing the following requirements specification document:

Document: Req. spec 101-A	
Object: Transaction screen	
Author: Susie Specifier	Date written: 2019-03-15
Version: 0.23	System: Bookkeeping TA-AB1
Subsystem: 2a15	Use cases applicable to project?: Yes
Description: User must be able to browse customer's transactions on the customer's account. It must be possible to view the transactions either chronologically from the oldest to the newest or the opposite way, or by their transaction ID. A maximum of 20 transactions should be visible on the screen at one time and the user must be able to scroll forward and backward. The field containing the detailed transaction information must be long enough to contain the name of the transaction counterparty (maximum 20 characters), their ID number (6 digits) and the transaction identifier (8 digits). It must be possible to change between the Transaction screen and User information screen with the "Swap screen" –button. The layout of the Transaction screen is described in more detail in a separate document. • The retrieval time of new data must be less than 3 seconds per screen. The number of simultaneous users will vary between 20 and 40 and is expected to increase to 60 within a year. • More details about the performance requirements can be found in a separate performance requirements specification document.	

The following is the checklist you are using for this review:

1. Is each requirement testable?
2. Does each requirement have acceptance criteria listed?
3. Is a use case calling structure available (if applicable)?
4. Are the requirements uniquely identified?
5. Is the specification versioned?
6. Is there traceability visible from each requirement to the business/marketing requirements?
7. Is there traceability between the requirements and the use cases (if applicable)?

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You are reviewing the specification above with the provided checklist. Assume you have access to the document that provides more information about the screen layout. Which of the items on the checklist are NOT met by the specification?

    a) 1, 2, 3
    b) 4, 6, 7
    c) 3, 5, 7
    d) 4, 5, 6

Select ONE option

Question #37 (2 Points)

You are a Test Analyst assigned to a project for the development of a new online banking application. You were asked to participate to the requirements review. For your individual preparation you are given a checklist to help you to check basics rules in requirements writing.

The following is one of the requirements:

R034 – Even a person unfamiliar with software applications must be able to make a bank transfer.

The following is an extract of the checklist:

    I.   The requirement must be testable
    II.   The requirement must have an identifier
    III.   The requirement must always show its version number
    IV.   The requirement must show traceability to one or more business/marketing requirements

Without further information on this requirement, which of the four checklist items are actually respected by this particular requirement?

    A.   All the items are respected.
    B.   I and II are respected.
    C.   Only II is respected.
    D.   Only I is respected.

Select ONE option

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Question #38 (2 Points)

Easytravel is a card which is used for paying for journeys on buses. The user can store credit to the card at Easytravel Loading Machines and the system automatically deducts the journey fee when the user puts the card in the card reader at a bus station. You are a member of the Easytravel project team and the following user story has been given to you for reviewing.

USER STORY: Add credit to the EasyTravel card   Priority: 1

As a bus passenger, I want to add credit to my EasyTravel card so that I can pay for bus rides using the card

FEATURE

Action	Acceptance Criteria
User puts the Easytravel card into a card reader on the Easytravel Loading Machine.	The loading machine displays an option to top up funds on the card's balance.
Loading machine checks card credentials	Card rejected if invalid
User selects "top up card".	Loading machine is ready
User puts in one or more cash notes.	The loading machine shows an increase to the card's balance according to note(s) entered.
Loading machine contacts back-end system with update.	Back-end system is updated
User selects "exit".	User is prompted to remove their Easytravel card.

Consider the following checklist for a good user story:

- a) Is the story written entirely from the view of the person who is requesting it?
- b) Is the feature clearly defined and distinct?
- c) Are the acceptance criteria defined and testable?
- d) Is the story prioritized?
- e) Does the story follow the commonly used format:
  As a < type of user >, I want < some goal > so that < some reason >

You are reviewing the specification above with the provided checklist. Which of these criteria are NOT achieved regarding this user story?

Select TWO options.

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Question #39 (2 Points)

A business application is in the maintenance phase and several changes to the business logic have either already been implemented or are expected be implemented in the next release. Test automation is used to ensure that business cases are regression tested whenever a change is made. A keyword-driven approach is used for the test automation. Since the last release some emergency fixes were necessary and the test automation reports are now highlighting anomalies.

Which of the following steps should now be conducted by the Test Analyst?

a) update the keywords and data to reflect changes made.
b) modularize the automation sctripts.
c) analyze anomalies to determine if the problem is with the keywords, the input data, the automation script itself or with the application being tested.
d) ask the developer to manually step through the failed automated test with the same data to see if the failure is in the application itself.
e) if the cause of the anomaly cannot be found remove the test from the automated regression testing pack.

Select TWO options.

Question #40 (1 Point)

Which of the following statements does NOT describe a benefit from the tools used by a Test Analyst:

a) Test data preparation tools can "anonymize data while still maintaining the internal integrity of that data.
b) Test execution tools enable fewer tests to be run, which reduces costs and the efficiency of regression tests.
c) Test design tools can help the Test Analyst to choose the types of tests that are needed to obtain a targeted level of test coverage.
d) Test execution tools enable the same tests to be repeated in many environments

Select ONE option

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Additional Questions

When constructing the exam, certain learning objectives may be examined optionally. In order to give full coverage of learning objectives, the following alternative questions are provided in this chapter

Question	Learning objective covered in sample exam	Alternative question	Learning objective covered in alternative question (see below)
Question 6	TA-1.5.1	Question 6 alternative 2	TA-1.4.3
		Question 6 alternative 3	TA-1.6.1

Question 6 Alternative 2 (1 Point)

Which of the following issues should be considered when designing test cases?

- a) The same test basis should be used for diferrent test levels
- b) Expected results may include environmental postconditions
- c) The process may be effective when combined with dynamic analysis
- d) The required detailed test infrastructure requirements should be finalized

Select ONE option.

Question 6 Alternative 3 (1 Point)

Which of the following answers describes the most appropriate and complete set of activities for the Test Analyst to focus on during test execution?

- a) Conducting exploratory test sessions, reporting defects, analyzing anomalies, comparing expected and actual results, updating traceability information based on test results
- b) Implementing test automation, finalizing the test environments, analyzing anomalies, reporting defects, comparing expected and actual results
- c) Logging test outcomes, reporting defects, analyzing anomalies, organizing tests into test suites, identifying the test conditions
- d) Analyzing the test basis, performing manual tests, select test case design techniques, analyzing anomalies, updating traceability information based on test results

Select ONE option.