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Question: 1

Consider an information system of a Pay-Tv company based on a SOA architecture.

The integrated system currently consists of three core systems:

- a CRM (Customer Relationship Management) system
- a BRM (Billing and Revenue Management) system
- a CAS (Conditional Access System) system

all of them communicating with SOA Middleware.

You have been asked to manage the testing activities for the integration of two additional off-the-shelf systems from two different vendors: a SMS (Short Message Service) server and an IVR (Interactive Voice Response) system.

Assume that there is a high likelihood that the two off-the-shelf systems will be low-quality and that you have a clear proof that the testing performed by the two vendors on their systems has been unsystematic and unprofessional. This obviously leads to higher quality risk for the overall integrated system.

You are the Test Manager of this project. Your main goal is to plan for testing activities to mitigate this risk.

Which of the following answers best describes the test activities (assuming it is possible to perform all of them) you should plan for?

Number of correct responses: 1

A. You should plan for an informal and minimal acceptance test of the two off-the-shelf systems and then a single end-to-end test of the overall integrated system

B. You should directly plan for a single end-to-end test focused on end-to-end tests of the overall integrated system without an acceptance test of the two off-the-shelf systems

C. You should plan for two levels: a system integration test and an end-to-end test of the overall integrated system

D. You should plan for adequate re-testing of both the systems followed by a system integration test and an end-to-end test of the overall integrated system

Answer: D

Question: 2

Assume you are the Test Manager for a new software release of an e-commerce application.

The server farm consists of six servers providing different capabilities. Each capability is provided through a set of web services.

The requirements specification document contains several SLAs (Service Level Agreements) like the following:

SLA-001: 99.5 percent of all transactions shall have a response time less than five seconds under a load of up-to 5000 concurrent users

The main objective is to assure that all the SLAs specified in the requirements specification document will be met before system release. You decide to apply a risk-based testing strategy and an early risk analysis confirms that performance is high risk. You can count on a well-written requirements specification and on a model of the system behavior under various load levels produced by the system architect.

Which of the following test activities would you expect to be the less important ones to achieve the test objectives in this scenario?

Number of correct responses: 1

- A. Perform unit performance testing for each single web service
- B. Monitor the SLAs after the system has been released into the production environment
- C. Perform system performance testing, consisting of several performance testing sessions, to verify if all the SLAs have been met
- D. Perform static performance testing by reviewing the architectural model of the system under various load levels

Answer: B

Question: 3

The following is the unique “critical” quality risk item that has been identified:

CR-RSK-1. The GUI of the application might accept non-integer values for the input field designed to get the number of bottles from the user

Test analysis for system testing has just begun and the following test conditions have been identified:

TC-SEL-2. Test the selection of the package sizes

TC-SEL-4. Test wrong numbers of bottles for an order

TC-CR-RSK-1. Test the accepted values from the input field designed to get the number of bottles from the user

What is the MINIMUM number of test conditions that must be added to fulfill both the EXCR1 and EXCR2 exit criteria?

Number of correct responses: 1

- A. 4
- B. 3
- C. 2
- D. 1

Answer: A

Question: 4

The following are the requirements identified as “critical”:

REQ-SEL-001. The user shall be able to combine all the three products with all the four durations to

define an item to purchase

REQ-SEL-002. The user shall be able to add a maximum of six different items to the shopping cart

REQ-PUR-001. The user shall be able to purchase all the items in the shopping cart using a credit voucher

REQ-PUR-002. The user shall be able to purchase all the items in the shopping cart using the available credit already charged on the smartcard

REQ-PUR-003. The user shall be able to purchase all the items in the shopping cart using all the accepted credit cards (Visa, MasterCard and Great Wall Card)

REG-LOGO-001. The user shall be able to logout (by clicking the logout button) from both the “select” and “purchase” pages going back to the “browse” page (anonymous navigation)

Moreover the following quality risk item has been identified as “critical”:

QR-P1. The web customer portal might not be able to provide the expected response time (less than 10 sec) for the purchase transactions under a load of up-to 1000 concurrent users

Test analysis for system testing has just begun and the following test conditions have been identified:

TC-SEL-01. Test the combinations of products and durations to define an item to purchase

TC-SEL-02. Test the maximum number of items, which can be added to the shopping cart

TC-PUR-01. Test the purchase of an item

TC-PUR-02. Test the purchase of an item with the credit charged on the smartcard

What is the MINIMUM number of test conditions that must be added to fulfill both the EXCR1 and EXCR2

exit criteria?

Number of correct responses: 1

- A. 1
- B. 2
- C. 3
- D. 4

Answer: C

Question: 5

Which of the following statements describing the consequences of specifying test conditions at a detailed level is NOT true?

Number of correct responses: 1

- A. In an environment where the test basis is continuously changing, it is recommended to specify test conditions at a detailed level in order to achieve a better maintainability
- B. The specification of test conditions at a detailed level can be effective when no formal requirements or other development work products are available
- C. The specification of test conditions at a detailed level can require the implementation of an adequate level of formality across the team
- D. For system testing, the specification of test conditions at a detailed level, carried out early in the project as soon as the test basis is established, can contribute to defect prevention

Answer: A

Question: 6

The following is the unique “critical” quality risk item that has been identified:

CR-RSK-1. The GUI of the application might accept non-integer values for the input field designed to get the number of bottles from the user

Test analysis for system testing has just begun and the following test conditions have been identified:

TC-SEL-2. Test the selection of the package sizes

TC-SEL-4. Test wrong numbers of bottles for an order

TC-CR-RSK-1. Test the accepted values from the input field designed to get the number of bottles from the user

Assume that you have used traceability to determine the logical test cases that cover all the requirements and the single risk item identified in that scenario.

Which of the following is a positive logical test that is complete and correct, and covers the REQ-SEL-4 requirement?

Number of correct responses: 1

- A. Select a 6-bottles package, then try to insert 5 bottles; verify that no error messages are displayed
- B. Select a 6-bottles package, then try to insert 7 bottles; verify that no error messages are displayed
- C. Select a 6-bottles package, then try to insert 7 bottles; verify that the "Invalid number of bottles" message is displayed
- D. Select a 6-bottles package, then try to insert 7 bottles

Answer: C

Question: 7

The following are the requirements identified as “critical”:

REQ-SEL-001. The user shall be able to combine all the three products with all the four durations to define an item to purchase

REQ-SEL-002. The user shall be able to add a maximum of six different items to the shopping cart

REQ-PUR-001. The user shall be able to purchase all the items in the shopping cart using a credit voucher

REQ-PUR-002. The user shall be able to purchase all the items in the shopping cart using the available credit already charged on the smartcard

REQ-PUR-003. The user shall be able to purchase all the items in the shopping cart using all the accepted credit cards (Visa, MasterCard and Great Wall Card)

REG-LOGO-001. The user shall be able to logout (by clicking the logout button) from both the “select” and “purchase” pages going back to the “browse” page (anonymous navigation)

Moreover the following quality risk item has been identified as “critical”:

QR-P1. The web customer portal might not be able to provide the expected response time (less than 10 sec) for the purchase transactions under a load of up-to 1000 concurrent users

Test analysis for system testing has just begun and the following test conditions have been identified:

TC-SEL-01. Test the combinations of products and durations to define an item to purchase

TC-SEL-02. Test the maximum number of items, which can be added to the shopping cart

TC-PUR-01. Test the purchase of an item

TC-PUR-02. Test the purchase of an item with the credit charged on the smartcard

Assume that you have used traceability to determine the logical test cases that cover all the requirements and the single risk item identified in that scenario.

Which of the following is a positive logical test that is complete, is correct, and covers the REG-LOGO-001

requirement?

Number of correct responses: 1

A. On the purchase page ("purchase state"), click the logout button; verify that the browse page ("browse state") is displayed

B. On the select page ("select state"), click the logout button

C. On the purchase page ("purchase state"), click the logout button; verify that the "Impossible to logout – complete or cancel the current transaction" message is displayed

D. On the browse page ("browse state"), click the logout button

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| Answer: A |
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