### **iSQI CTAL-TTA-001**

ISTQB Certified Tester Advanced Level - Technical Test Analyst

What is the value of statement coverage achieved by test case 1 from test set A? 2 credits [K3]

**A.** ? 75% (21/28)

**B.** ? 78% (22/28)

**C.** ? 85% (24/28)

**D.** ? 90% (25/28)

Answer: A Explanation:

#### **QUESTION NO: 2**

Which additional set of test cases is needed to achieve both 100% statement coverage and 100% decision coverage? 3 credits [K3]

#### A)

Price	Quantity	Bonus	Market	
4.0	1100	1	UK	
1.0	3	4	NL	

B)

Price	Quantity	Bonus	Market
1.2	2000	10	USA
3.0	1100	20	UK

C)

Price	Quantity	Bonus	Market	
2.0	5000	3	NL	
3.0	500	3	USA	

D)

Price	Quantity	Bonus	Market
5.0	1100	1	USA
1.0	1	1	USA

- A. Option A
- B. Option B
- C. Option C
- D. Option D

Answer: C Explanation:

#### **QUESTION NO: 3**

Which TWO additional structure-based test design techniques could be used to dynamically test the code? 1 credit [K2]

- A. Condition testing
- B. Multiple condition testing
- C. Equivalence partitioning
- D. Cause/effect graphing
- **E.** Code reviews

Answer: A,B Explanation:



# QUESTION NO: 4 How many test cases are needed to test code fragment lines 26 – 32 to achieve 100% condition determination coverage? 2 credits [K3]

- **A.** 2
- **B.** 3
- **C.** 4
- **D**. 5

Answer: B Explanation:

#### **QUESTION NO: 5**

The application of multiple condition testing is also being considered.

Which specification-based technique is largely based on the principle of multiple condition testing? 1 credit [K2]

- A. Equivalence Partitioning
- B. State Transition Testing
- C. Decision Table Testing
- D. Use Cases

Answer: C Explanation:

#### **QUESTION NO: 6**

How many test cases are needed to test code fragment lines 26 - 32 to achieve 100% multiple condition coverage? 2 credits [K3]

- **A.** 2
- **B**. 3
- **C.** 4
- **D**. 8

Answer: D Explanation:



The Bonus Program is perceived by management to be critical. Defects in the program would almost immediately lead to financial loss. In the past an improvement program has been run to implement review based on IEEE 1028. Knowledge and skills on both formal and informal reviews are available. There is also an existing pool of review leaders. Which of the following review types would you choose to review the program? 2 credits [K4]

- A. Informal review
- **B.** Inspection
- C. Walkthrough
- D. Management review

Answer: B Explanation:

#### **QUESTION NO: 8**

You have tested the program and have found that with "bonus" a boundary value has not been implemented according to design. You have written an incident report. Which of the following is the incident report of the highest quality? 2 credits [K3]

A. Description: Boundary value not correctly implemented

Priority: High Repeatability: Yes Tester: WVU

Test case: 35 (test specification "bonus program"), V1.2

B. Description: Boundary value not correctly implemented for bonus

Priority: Medium Tester: WVU

Test case: 35 (test specification "bonus program")

C. Description: Boundary value not correctly implemented for bonus (line 26: 10 according to

design, now 5 implemented)

Priority: High Repeatability: Yes Tester: WVU

Test case: 35 (test specification "bonus program"), V1.2

**D.** Description: Boundary value not correctly implemented for bonus

Priority: High Repeatability: Yes



Tester: WVU

Test case: 35 (test specification "bonus program"), V1.2

Answer: C Explanation:

#### **QUESTION NO: 9**

Part 3 "Bonus Program"

```
01
         "Declaration of variables used in the program"
02
03
         Declare Price as float;
04
         Declare Quantity as integer;
05
         Declare Bonus as integer;
         "variables of type integer are not signed & should not have a negative value"
06
07
         Declare Market as string;
08
         Declare Sale_Value as float;
09
10
         "The main program"
         MAIN
11
12
13
         Read Price;
14
         Read Quantity;
15
         Read Market;
16
         Read Bonus;
17
         Sale_Value=Price*Quantity;
18
19
         IF Sale_Value > 1000 THEN
          Bonus = Bonus +2;
20
          IF Sale_Value > 5000 THEN
21
22
           Bonus = Bonus + 3;
23
          ENDIF
24
         ENDIF
25
26
         IF (Bonus < 5 AND Market <> "UK") THEN
27
          Bonus = Bonus * 1.5;
28
          Print Bonus:
          Print "Your bonus is enhanced for international sales!";
29
30
         ELSE
31
          Print Bonus;
32
         ENDIF
33
34
         END
```

When performing code reviews, which of the following defect types will be most difficult to find? 1 credit [K2]



- A. Dead code
- B. Variable used that is not defined
- C. Memory issues
- D. Conformance to design

Answer: C Explanation:

#### **QUESTION NO: 10**

#### Part 3 "Bonus Program"

```
01
         "Declaration of variables used in the program"
02
03
         Declare Price as float;
04
         Declare Quantity as integer;
05
         Declare Bonus as integer;
06
         "variables of type integer are not signed & should not have a negative value"
         Declare Market as string;
07
08
         Declare Sale_Value as float;
09
10
         "The main program"
11
         MAIN
12
13
         Read Price;
14
         Read Quantity;
15
         Read Market;
16
         Read Bonus;
17
         Sale Value=Price*Quantity;
18
19
         IF Sale_Value > 1000 THEN
20
          Bonus = Bonus +2;
          IF Sale Value > 5000 THEN
21
22
           Bonus = Bonus + 3;
23
          ENDIF
24
         ENDIF
25
26
         IF (Bonus < 5 AND Market <> "UK") THEN
          Bonus = Bonus * 1.5;
27
28
          Print Bonus;
29
          Print "Your bonus is enhanced for international sales!";
30
         ELSE
31
          Print Bonus;
32
         ENDIF
33
34
         END
```

During code reviews, it is the author's responsibility... 1 credit [K2]



- A. to address all major and minor defects as stated in the defect log
- B. to fix all major and minor defects as stated in the defect log
- C. to take action on only improvement suggestions from the defect log
- D. to correct source documents that have major defects

Answer: A Explanation:

#### **QUESTION NO: 11**

#### Part 3 "Bonus Program"

```
01
         "Declaration of variables used in the program"
02
03
         Declare Price as float;
04
         Declare Quantity as integer;
05
         Declare Bonus as integer;
         "variables of type integer are not signed & should not have a negative value"
06
         Declare Market as string;
07
08
         Declare Sale_Value as float;
09
         "The main program"
10
11
         MAIN
12
13
         Read Price;
14
         Read Quantity;
15
         Read Market;
16
         Read Bonus;
17
         Sale Value=Price*Quantity;
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         IF Sale_Value > 1000 THEN
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          Bonus = Bonus +2;
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          IF Sale Value > 5000 THEN
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          ENDIF
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         IF (Bonus < 5 AND Market <> "UK") THEN
          Bonus = Bonus * 1.5;
27
28
          Print Bonus;
29
          Print "Your bonus is enhanced for international sales!";
30
         ELSE
31
          Print Bonus;
32
         ENDIF
33
34
         END
```

An organization has already implemented a static analysis tool and is considering whether code reviews would have any added value. Which of the following defect types can only be found by



#### means of code reviews? 1 credit [K2]

- A. Conformance to coding standards
- B. Conformance to design
- C. Endless loop
- D. Cyclomatic complexity too high

Answer: B Explanation:

#### **QUESTION NO: 12**

#### Part 3 "Bonus Program"

```
01
         "Declaration of variables used in the program"
02
03
         Declare Price as float;
04
         Declare Quantity as integer;
05
         Declare Bonus as integer;
06
         "variables of type integer are not signed & should not have a negative value"
07
         Declare Market as string;
         Declare Sale_Value as float;
08
09
10
         "The main program"
         MAIN
11
12
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         Read Price:
14
         Read Quantity;
         Read Market:
15
16
         Read Bonus;
17
         Sale_Value=Price*Quantity;
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         IF Sale Value > 1000 THEN
          Bonus = Bonus +2;
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          IF Sale_Value > 5000 THEN
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23
          ENDIF
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         IF (Bonus < 5 AND Market <> "UK") THEN
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          Bonus = Bonus * 1.5;
27
28
          Print Bonus:
          Print "Your bonus is enhanced for international sales!";
29
30
         ELSE
31
          Print Bonus;
32
         ENDIF
33
34
         END
```

To support code reviews a checklist will be developed. Which TWO questions from the list would you implement as part of the code review checklist? 3 credits [K3]

- A. Are any magic numbers (numeric literals) used, other than 0 or 1?
- **B.** Can each item be implemented with the techniques, tools, and resources available?
- C. Is it possible during acceptance testing to verify whether the item has been satisfied?
- **D.** Is the item specified in an exact, unambiguous way?
- **E.** Is there any logic containing no statements and no explanation as to why it is empty?

Answer: A,E Explanation:

#### **QUESTION NO: 13**

#### Part 3 "Bonus Program"

```
01
         "Declaration of variables used in the program"
02
03
         Declare Price as float;
04
         Declare Quantity as integer;
05
         Declare Bonus as integer;
06
         "variables of type integer are not signed & should not have a negative value"
07
         Declare Market as string;
         Declare Sale_Value as float;
08
09
10
         "The main program"
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         MAIN
12
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         Read Price;
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         IF Sale Value > 1000 THEN
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          IF Sale Value > 5000 THEN
22
           Bonus = Bonus + 3;
23
          ENDIF
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         ENDIF
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         IF (Bonus < 5 AND Market <> "UK") THEN
27
          Bonus = Bonus * 1.5;
28
          Print Bonus;
          Print "Your bonus is enhanced for international sales!";
29
30
         ELSE
31
          Print Bonus;
32
         ENDIF
33
         END
```



Applying exploratory testing (ET) during unit testing is being considered. Which ET deliverable would be the primary candidate for informal reviews? 1 credit [K2]

- A. Test log & coverage outline
- B. Test charter
- C. Heuristics
- D. Test case specification

Answer: B Explanation:

#### **QUESTION NO: 14**

#### Part 3 "Bonus Program"

```
01
         "Declaration of variables used in the program"
02
03
         Declare Price as float;
04
         Declare Quantity as integer;
05
         Declare Bonus as integer;
06
         "variables of type integer are not signed & should not have a negative value"
         Declare Market as string;
07
08
         Declare Sale_Value as float;
09
10
         "The main program"
11
         MAIN
12
         Read Price;
13
14
         Read Quantity;
         Read Market;
15
         Read Bonus;
16
17
         Sale_Value=Price*Quantity;
18
19
         IF Sale_Value > 1000 THEN
20
          Bonus = Bonus +2;
          IF Sale_Value > 5000 THEN
21
22
           Bonus = Bonus + 3;
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24
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         IF (Bonus < 5 AND Market <> "UK") THEN
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27
28
          Print Bonus;
          Print "Your bonus is enhanced for international sales!":
29
30
         ELSE
31
          Print Bonus;
32
         ENDIF
33
34
         END
```

Which of the following is the most important benefit of making exploratory testing part of your test approach for the "Bonus Program"? 3 credits [K4]

- **A.** The ability to utilize a very experienced test team
- **B.** The ability to accurately predict the residual risk prior to delivery
- **C.** The ability to prevent defects during requirements analysis
- **D.** The ability to test effectively without a complete test basis

Answer: D Explanation:

#### **QUESTION NO: 15**

What are the TWO most significant benefits a test execution tool should bring to the organization? 1 credit [K2]

- A. Less expensive and time consuming regression testing
- **B.** More structured incident management
- C. Improved control and monitoring
- **D.** Visibility on test coverage
- **E.** More coverage during regression testing

Answer: A,E Explanation:

**QUESTION NO: 16** 

Part 1 "Test Techniques various"

Consider the following fault attack: "Force all possible incoming errors from the software/OS interfaces to the application". Which of the following is the kind of failure you are looking for when using this attack? 1 credit [K2]

- **A.** Application crashes when unsupported characters are pasted into an input field using the windows clipboard
- B. Front page of the application has incorrect spelling of the company name
- C. Application fails to display financial numbers in the correct currency format in reports
- **D.** Application miscalculates total monthly balance due on credit cards



An	SW	er:	Α	
Exi	pla	nat	io	n:

How many test cases would be needed to achieve 100% decision coverage? 1 credit [K2]

**A.** 1

**B.** 2

**C.** 3

**D.** 4

Answer: A Explanation:

**QUESTION NO: 18** 

Part 1 "Test Techniques various"

An embedded software company is considering to improve the quality of its software components to be delivered to the integration team. After studying various experience papers that report a higher level of quality for software components, two main alternative techniques are identified: static analysis and dynamic analysis. In deciding which one is most applicable and how they relate to each other a detailed study is performed. Which of the following are TWO key similarities between static analysis and dynamic analysis? 2 credits [K4]

- **A.** Both are performed using requirements as its major input document
- **B.** Both are usually undertaken by integration testers
- C. Both are usually undertaken by development during coding and unit testing
- D. Both are related to reviews
- **E.** Both usually use a tool

Answer: C,E Explanation:

**QUESTION NO: 19** 

Part 1 "Test Techniques various"



Which of the following is a dynamic analysis technique related to improving application performance? 1 credit [K2]

- A. Code complexity analysis
- **B.** Profiling
- C. Network package sniffing
- D. Spelling and grammar checking

Answer: B Explanation:

#### **QUESTION NO: 20**

Part 1 "Test Techniques various"

Definition-use pairs are identified during which of the following static analysis activities? 1 credit [K2]

- **A.** Control flow analysis
- B. Data flow activities
- C. Coding standards analysis
- D. Cyclomatic complexity analysis

Answer: B Explanation:

#### **QUESTION NO: 21**

Part 1 "Test Techniques various"

If we say that a set of tests has achieved 100% structural decision coverage on a particular module in a program, what does that mean? 1 credit [K2]

- **A.** That all bugs present in that module were necessarily revealed by those tests.
- **B.** That every control flow branch had been executed at least once by those tests.
- **C.** That every dataflow in that module was exercised at least once by those tests.
- **D.** That every path through that module was exercised at least once by those tests.

**Answer: B** 

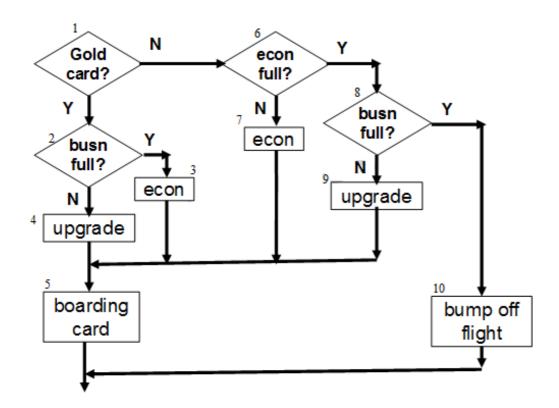


#### **Explanation:**

#### **QUESTION NO: 22**

Part 1 "Test Techniques various"

If you are flying with an economy ticket, there is a possibility that you may get upgraded to business class, especially if you hold a gold card in the airline's frequent flier program. If you don't hold a gold card, there is a possibility that you will get 'bumped' off the flight if it is full and you check in late. This is shown in the figure hereafter. Note that each box (i.e. statement) has been numbered.



Three tests have been run:

Test 1: Gold card holder who gets upgraded to business class

Test 2: Non-gold card holder who stays in economy

Test 3: A person who is bumped from the flight

What is the statement coverage of these three tests? 2 credits [K4]



Answer: C			
<b>D.</b> 90%			
<b>C.</b> 80%			
<b>B.</b> 70%			
<b>A.</b> 60%			

Part 1 "Test Techniques various"

As part of a risk analysis, technical risks are analyzed. Which TWO factors influence technical risk? 1 credit [K2]

- A. Complexity of technology
- B. Frequency of use of the affected failure
- C. Interfacing and integration issues
- D. Damage to image
- E. Lack of reasonable workaround

Answer: A,C Explanation:

#### **QUESTION NO: 24**

Part 1 "Test Techniques various"

A component has been analyzed as being highly critical. Which of the following structure-based test design techniques provides the highest level of coverage? 1 credit [K2]

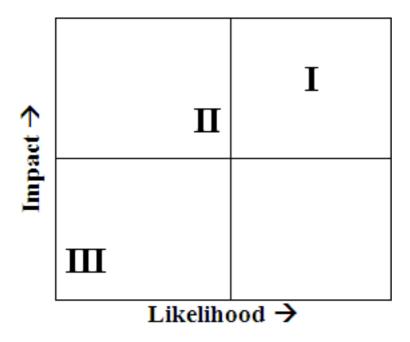
- A. Statement testing
- **B.** Decision testing
- C. Condition determination testing
- D. Multiple condition testing

Answer: C Explanation:



Part 1 "Test Techniques various"

The result of a product risk analysis performed on components I, II and III of the airplane control system shows the following risk matrix:



The project wants to mitigate the risks by defining different types of coverage depending on the risk level of the components. Which of the following would be a meaningful solution for setting the coverage targets? 2 credits [K3]

A. I: Condition determination coverage, II: Decision Coverage, III: Statement coverage

**B.** I: Condition determination coverage, II: Statement coverage, III: Decision coverage

C. I: Decision coverage, II: Condition determination coverage, III: Statement Coverage

D. I: Multiple condition coverage, II: Decision coverage, III: Condition determination coverage

Answer: A

**Explanation:** 

#### **QUESTION NO: 26**

Which of the following is a valid way to calculate the cyclomatic complexity? 1 credit [K2]

A. Number of decisions + 2

B. Number of enclosed regions - 1

C. Number of statements - 2

D. Links - Nodes + 2



Answer: D	
<b>Explanation:</b>	

The developers have suggested test set A is adequate to test the program opposite:

Test Set A				
Test Case 1	Test case 2	Test case 3		
Price = 0.1	Price = 2.0	Price = 10.0		
Quantity = 1000	Quantity = 500	Quantity = 120		
Bonus = 9	Bonus = 1	Bonus = 3		
Market="USA"	Market = "UK"	Market="FRA"		

When executing test set A through the program which statements are exercised? 2 credits [K3]

A. All

B. All, but statement 22

C. All, but statement 27, 28 and 29

**D.** All, but statement 22, 27, 28 and 29

Answer: D Explanation:

#### **QUESTION NO: 28**

How many test cases would be needed to achieve 100% statement coverage? 1 credit [K2]

**A.** 1

**B**. 2

**C.** 3

**D**. 4



Answer: A Explanation:
QUESTION NO: 29
What is the number of nested levels for the code fragment? 2 credits [K3]
A. 0 B. 1 C. 2 D. 3
Answer: C Explanation:
QUESTION NO: 30
The comment frequency of the code fragment is 13%. To which ISO 9126 quality attribute does a good level of comment frequency especially contribute? 1 credit [K2]
<ul><li>A. Portability</li><li>B. Maintainability</li><li>C. Usability</li><li>D. Efficiency</li></ul>
Answer: A Explanation:
QUESTION NO: 31
Which specification-based technique could be used to enhance coverage for this code fragment?  1 credit [K2]

A. Boundary value analysis

B. Exploratory testingC. State transition testing

**D.** Use case testing

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## Answer: A Explanation:

#### **QUESTION NO: 32**

Consider the following code fragment

If (a>b) and (b>c) then

$$b = (a+c)/2$$

endif

Assume that in the following options, each of the three numbers in parenthesis represent the inputs for a test case, where the first number represents variable "a", the second number represents variable "b", and the third number represents variable "c".

Which of the following gives a set of test case inputs that achieves 100% decision coverage for this fragment of code with the minimum number of test cases? 2 credits [K3]

**A.** (5, 3, 2)

**B.** (5, 3, 2); (5, 4, 0)

**C.** (5, 4, 0); (4, 5, 0)

**D.** (4, 5, 0); (5, 4, 5)

Answer: C Explanation:

#### **QUESTION NO: 33**

For the control flow, what is the correct labelling? 1 credit [K2]

i ii iii

- A. NodesLinkRegion
- B. NodesRegionLink
- C. RegionLinkNodes
- D. RegionNodesLink

**Answer: A** 



#### **Explanation:**

#### **QUESTION NO: 34**

A new web site has been launched for a conference organisation. There are a number of links to other related websites for information purposes. Customers like the new site but complaints are being made that some (not all) of the links to other sites do not work. 1 credit [K2]

- A. Performance tool
- **B.** Hyperlink tool
- C. Usability testing tool
- D. Static analysis tool

Answer: B Explanation:

**QUESTION NO: 35** 

Part 4 "Test tools & Automation"

A project has little structure in testing. You have been asked to create a test set for regression testing for a large legacy application. Manual testing will extent the current delivery deadline. The present situation presents an opportunity to introduce a test execution tool to the organisation. The IT Director believes that as a result future testing will be done by a smaller team, making maximum use of the tool to optimize efficiency.

It has been decided to improve the efficiency and effectiveness of unit testing by acquiring a number of test tools. Which TWO of the following tools would you select to support unit testing? 1 credit [K2]

- A. Dynamic analysis
- **B.** Review tool
- C. Coverage measurement tool
- **D.** Monitoring
- **E.** Test management



Answer:	A,C
Explanat	ion:

You have been asked to select a number of tools to support the performance testing. Which TWO of the following tools would you recommend? 2 credits [K4]

- A. Test management tool
- **B.** Load testing tool
- C. Static analysis tool
- **D.** Monitoring tool
- E. Test oracle tool

Answer: B,D Explanation:

#### **QUESTION NO: 37**

A developer has spent three days looking at a system that crashes now and then. The problem was caused by two coding faults:

- i. A variable was being used but had not been defined;
- ii. There was a 'goto' statement to an undefined label
- 1 credit [K2]
- **A.** Static analysis tool
- B. Code coverage tool
- C. Dynamic analysis tool
- **D.** Test execution tool

Answer: A Explanation:

**QUESTION NO: 38** 



What are the TWO most significant pitfalls the organisation should be aware of? 1 credit [K2]

- A. Lack of good process as a baseline
- B. Cost of maintenance of test scripts
- C. Test management will become more time-consuming
- D. Need to train testers and gain skills
- E. Coverage measurements are often difficult

Answer: B,D Explanation:

#### **QUESTION NO: 39**

Select TWO solutions how the team could achieve significant benefits in the use of this tool within the next 6 months? (3 credits, for 1 out of 2 correct 1 credit) 3 credits [K4]

- A. Introduce data-driven or keyword driven scripting techniques
- **B.** Change the development process
- C. Select and implement a test management tool to complement the test suite
- **D.** Identify critical parts of the system and concentrate on automating some of those tests for that particular area
- E. Get business testers involved in the automation process

Answer: A,B,C,D,E

**Explanation:** 

#### **QUESTION NO: 40**

Based on the state diagram above, how many invalid test cases could be identified in a state table? 2 credits [K3]

- **A.** 10
- **B.** 12
- **C.** 14
- **D.** 15

Answer: A Explanation:



QUESTION NO: 41
What is the theoretical maximum level of switch coverage that can be achieved for the state diagram above? 1 credit [K2]
<b>A.</b> 4 <b>B.</b> 5
<b>C.</b> 6

Answer: B Explanation:

**D.** 7

#### **QUESTION NO: 42**

How many test cases are required to test a specification that has three conditions using a decision table testing which is not collapsed? 1 credit [K2]

**A.** 2 **B.** 4

**C.** 6

**D.** 8

Answer: D Explanation:

**QUESTION NO: 43** 

Consider the following decision table,

	1	2	3	4	5	6	7	8
C1	1	1	1	1	0	0	0	0
C2	1	1	0.	0	1	1	0	0
C3	1	0	1	0	1	0	1	0
A1	X	Х						
A2	X							

How many cases are left when this decision table is collapsed? 2 credits [K3]

- **A.** 2
- **B.** 3
- **C.** 4
- **D.** 5

**Answer: C** 

**Explanation:** 

#### **QUESTION NO: 44**

At which test level would performance testing most likely be performed? 1 credit [K2]

- A. Component Testing
- **B.** Integration Testing
- C. System Testing
- D. User Acceptance Testing

Answer: C Explanation:

#### **QUESTION NO: 45**

To address reliability a number of measures will be taken throughout the development and testing process. Select TWO appropriate measures that are typically taken as part of reliability



engineering and/or testing of an application. 3 credits [K4]

- A. Define Operational Profiles
- **B.** State Transition Testing
- C. Usability testing
- D. Perform design FMEAs
- E. Exploratory test

Answer: A,D Explanation:

#### **QUESTION NO: 46**

It has been decided by management to ask an external consultant to perform a reliability assessment. The external consultant will use a checklist to support the assessment. Select TWO checklist items that are most likely to be part of a reliability checklist. 2 credits [K3]

- **A.** Are traceability matrices provided to the requirements?
- B. Is all code supported by a reviewed design document?
- **C.** Is the comment frequency at the correct level?
- **D.** Is a dual set of hardware available?
- **E.** Are features available for a periodic check of the database consistency?

Answer: D,E Explanation:

#### **QUESTION NO: 47**

It has been suggested to organize a performance test to find out more regarding the third risk. Which of the following would you use to quantify the situation and as a basis for defining a performance exit criteria? 2 credits [K3]

- A. Defect analysis time
- B. Change parameter success ratio
- **C.** Number of errors made by the user
- **D.** Time to perform the function

Answer: D Explanation:



To address the second risk mentioned in the scenario, security testing will be performed. Which test techniques would be most applicable for security testing? 1 credit [K2]

- A. Boundary Value Analysis
- **B.** Statement Testing
- C. Use Cases
- D. Fault Attacks

Answer: D Explanation:

#### **QUESTION NO: 49**

Part 5 "Testing of Software Characteristics"

The test team has been struggling to achieve major benefits using the test execution tool since they purchased it. Training in use of this tool has been given but staff turn-over is rather high. Script maintenance seems to be a problem.

A company wants to develop a web site to implement an on-line sales channel. Which TWO ISO 9126 quality attributes are most likely to be of importance? 1 credit [K2]

- A. Usability
- **B.** Accuracy
- C. Portability
- D. Fault-tolerance
- E. Installability

Answer: A,C Explanation:

**QUESTION NO: 50** 

Part 5 "Testing of Software Characteristics"



The test team has been struggling to achieve major benefits using the test execution tool since they purchased it. Training in use of this tool has been given but staff turn-over is rather high. Script maintenance seems to be a problem.

Which of the following is the best example of a reliability failure for the application? 1 credit [K2]

- A. Slow response time
- **B.** Excessive memory consumption
- C. Random application termination
- **D.** Failure to encrypt data

Answer: C Explanation:

#### **QUESTION NO: 51**

Based on the state diagram above, how many test cases are needed to achieve 1-switch coverage? 2 credits [K3]

- **A.** 5
- **B**. 7
- **C.** 8
- **D**. 9

Answer: C Explanation:

#### **QUESTION NO: 52**

Due to new legislation the tax system needs to be updated. For a person that has a salary less than € 20.000, the tax needs to be re-calculated. If the person also has more than two children an additional 10% reduction is applicable.

For equivalence partitioning based on this specification, how many input classes can be determined? 2 credits [K3]



Λ		1
н	_	4

**B.** 5

**C.** 6

**D.** 8

Answer: A Explanation:

#### **QUESTION NO: 53**

Identify TWO main advantages of this approach to incident management. (3 credits, for 1 out of 2 correct 1 credit) 3 credits [K4]

A test team is keeping logs of the incidents that they observe. They use a commonly-available word processor to write the incident reports in individual file, which are held in shared storage. They track the incidents along with some incident details, in a spreadsheet.

- A. Quick to set up and cheap
- B. Electronic rather than manual
- **C.** Allows attachments (e.g. screen prints) to be linked to the incident reports
- **D.** Can easily be integrated with open source tools
- **E.** Large files are not a problem

Answer: A,B Explanation:

#### **QUESTION NO: 54**

Due to new legislation the tax system needs to be updated. For a person that has a salary less than € 20.000, the tax needs to be re-calculated. If the person also has more than two children an additional 10% reduction is applicable.

You have now also been given the task to identify the key fields for logging the incident reports. So far the following fields have been in use in the Excel sheet:

- Incident description
- Date
- Author
- State



Which of the following would you recommend as the best combination of fields to add? 1 credit [K2]

- **A.** Priority, version of software under test, incident identification
- **B.** Date to be fixed, priority, incident identification
- **C.** Developer assigned to the fix, version of software under test, incident identification
- **D.** Priority, version of software under test, date to be fixed

Answer: A Explanation:

**QUESTION NO: 55** 

Due to new legislation the tax system needs to be updated. For a person that has a salary less than € 20.000, the tax needs to be re-calculated. If the person also has more than two children an additional 10% reduction is applicable.

For equivalence partitioning based on this specification, how many output classes can be determined? 2 credits [K3]

**A**. 2

**B.** 3

**C.** 4

**D.** 5

Answer: B Explanation:

**QUESTION NO: 56** 

Part 6 "Specification Based Test Techniques"

You are testing a set of signal changes at a railway station. The system is newly build using a traditional V-model approach. A full set of documentation is available that can be used as a test basis. Furthermore the system is identified as being safety critical. Which technique would you most likely use? 2 credits [K4]



- A. Equivalence Partitioning
- **B.** Exploratory Testing
- C. State transition Testing
- D. Boundary Value Analysis

Answer: C Explanation:

#### **QUESTION NO: 57**

Part 7 "Test Process & Incident Management"

You are asked to provide practical and pragmatic testing solution for a commercial system where the main user interface is via the World Wide Web. It is critical that the company's existing good name and market profile are not damaged in any way. Time to market is not an issue when appropriate testing solutions are identified to mitigate business risks.

The following issues are currently provided as a risk:

- lack of usability requirements
- security during on-line transactions
- perceived performance of the system and response time from the user interface
- a required availability of almost 100%.

Which TWO of the following artefacts can be useful as a test oracle the first time a test case is run? 1 credit [K2]

- A. Incident report
- **B.** Requirements Specification
- C. Test summary report
- D. Legacy system
- E. Test plan

Answer: B,D Explanation:

**QUESTION NO: 58** 

Part 7 "Test Process & Incident Management"



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The following issues are currently provided as a risk:

- lack of usability requirements
- security during on-line transactions
- perceived performance of the system and response time from the user interface
- a required availability of almost 100%.

Which of the following is an example of testing as part of the software design phase? 1 credit [K2]

- A. A design review meeting
- B. An architect translating requirements into design
- C. Performing unit tests against design
- **D.** A test log showing code coverage achieved

Answer: A Explanation:

#### **QUESTION NO: 59**

Part 7 "Test Process & Incident Management"

You are asked to provide practical and pragmatic testing solution for a commercial system where the main user interface is via the World Wide Web. It is critical that the company's existing good name and market profile are not damaged in any way. Time to market is not an issue when appropriate testing solutions are identified to mitigate business risks.

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- lack of usability requirements
- security during on-line transactions
- perceived performance of the system and response time from the user interface
- a required availability of almost 100%.

As a technical test analyst, which documents would you typically create? 1 credit [K2]

A. Test plan, test design, test cases and test log



- B. Test plan, test log, test design and test summary report
- C. Test script, test log, incident report and test design
- **D.** Incident report, test item transmittal report, test cases and test procedure

Answer: C Explanation:

**QUESTION NO: 60** 

Part 7 "Test Process & Incident Management"

You are asked to provide practical and pragmatic testing solution for a commercial system where the main user interface is via the World Wide Web. It is critical that the company's existing good name and market profile are not damaged in any way. Time to market is not an issue when appropriate testing solutions are identified to mitigate business risks.

The following issues are currently provided as a risk:

- lack of usability requirements
- security during on-line transactions
- perceived performance of the system and response time from the user interface
- a required availability of almost 100%.

As a technical test analyst, you have found out during test case design that the design document is incomplete. Which is an example of a good way to communicate that problem in an email? 1 credit [K2]

- **A.** E-mail: "Until I have received an updated version of the design document, I will not do any work on the test design."
- **B.** E-mail: "When will it be possible to receive the missing information? Test design is impeded by a lack of clarity here."
- **C.** E-mail: "Here we go again. The developer gave us incomplete and ambiguous design specifications. Typical."
- **D.** Do not communicate the problem, just log the delaying effect of the information problem and be ready to explain the delays to the test manager later.

Answer: B Explanation:



#### Part 7 "Test Process & Incident Management"

You are asked to provide practical and pragmatic testing solution for a commercial system where the main user interface is via the World Wide Web. It is critical that the company's existing good name and market profile are not damaged in any way. Time to market is not an issue when appropriate testing solutions are identified to mitigate business risks.

The following issues are currently provided as a risk:

- lack of usability requirements
- security during on-line transactions
- perceived performance of the system and response time from the user interface
- a required availability of almost 100%.

As a technical test analyst, you are involved in a risk analysis session using the Failure Mode and Effect Analysis technique. You are calculating risk priorities. Which of the following are the major factors in this exercise? 1 credit [K2]

- **A.** Severity and priority
- B. Functionality, reliability, usability, maintainability, efficiency and portability
- C. Likelihood and impact
- **D.** Financial damage, frequency of use and external visibility

Answer: C Explanation:

#### **QUESTION NO: 62**

Part 7 "Test Process & Incident Management"

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The following issues are currently provided as a risk:

- lack of usability requirements
- security during on-line transactions
- perceived performance of the system and response time from the user interface
- a required availability of almost 100%.



In which of the following test documents would you expect to find the preconditions to start executing a set of test cases? 1 credit [K2]

- A. Level test plan
- **B.** Test procedure specification
- C. Test design specification
- D. Master test plan

Answer: B Explanation:

#### **QUESTION NO: 63**

Part 7 "Test Process & Incident Management"

You are asked to provide practical and pragmatic testing solution for a commercial system where the main user interface is via the World Wide Web. It is critical that the company's existing good name and market profile are not damaged in any way. Time to market is not an issue when appropriate testing solutions are identified to mitigate business risks.

The following issues are currently provided as a risk:

- lack of usability requirements
- security during on-line transactions
- perceived performance of the system and response time from the user interface
- a required availability of almost 100%.

Defects are discovered through test analysis and design because... 1 credit [K2]

- **A.** the tasks involve extracting information from the test basis
- B. developers are involved in writing test cases
- C. the cost of fixing a defect will increase if found later on
- **D.** the author of the test basis will have made errors

Answer: A Explanation:

**QUESTION NO: 64** 

Part 7 "Test Process & Incident Management"



You are asked to provide practical and pragmatic testing solution for a commercial system where the main user interface is via the World Wide Web. It is critical that the company's existing good name and market profile are not damaged in any way. Time to market is not an issue when appropriate testing solutions are identified to mitigate business risks.

The following issues are currently provided as a risk:

- lack of usability requirements
- security during on-line transactions
- perceived performance of the system and response time from the user interface
- a required availability of almost 100%.

The development manager asks you to identify suitable test coverage entry criteria for a component test. Which TWO of the following would you recommend as appropriate for entry criteria to a component testing phase? 2 credits [K3]

- A. 100% statement coverage
- B. No critical outstanding defects
- C. Test log available
- **D.** Code review completed
- E. Static analysis shows no major violations

Answer: D,E Explanation:

**QUESTION NO: 65** 

A test team is keeping logs of the incidents that they observe. They use a commonly-available word processor to write the incident reports in individual file, which are held in shared storage. They track the incidents along with some incident details, in a spreadsheet.

Identify the most significant risk introduced by this approach to incident management. 3 credits [K4]

- A. Excel list may not be insynchronizationwith Word documents
- **B.** Low level of usability
- C. Spreadsheet/text files may not be complete
- **D.** Does not map to IEEE 1044

**Answer: A** 

