Exam Code: CTAL

Exam Name: ISTQB Advanced Level

Exam A

QUESTION 1
Select the correct statements about safety critical systems;
I . Risk management reduces the likelihood and / or impact of a risk.
II . Failure Mode and Effect Analysis (FMEA) technique is used mainly for safety critical systems.
III . All safety critical systems are subject to sector specific regulations only.
IV . Full traceability from requirements to evidence is required in some safety critical systems.

A. I, II, IV true, III false

B. II,III, IV true, I false

C. I, IV true, II, III false

D. All of the above true

Correct Answer: A
Section:

QUESTION 2
Select the correct statement regarding test planning and control

A. Test controlling is a one-time activity that will occur at the beginning of the test effort.

B. Test planning includes identifying test activities and resources required for the test effort.

C. Complex relationships (many to many, one to many) cannot exist among test conditions, test cases and test procedures.

D. Risk and Test coverage is not a metric for test planning and control.

Correct Answer: B
Section:

QUESTION 3
Select the correct statement;
I . Comparing actual progress against the plan is part of Test Controlling activity.
II . Updating the test plan if needed is part of test controlling activity.
III. Prioritization criteria identified during risk analysis should be applied only during test execution.
IV . Test conditions are identified by analyzing the test basis and test objectives.

A. I and IV true. II and II false.

B. I, II and IV true. III false.

C. I, II and III true. IV false.

D. II, III and IV true. I false.

Correct Answer: B
Section:

QUESTION 4
The main Objective of Test Analysis and Design phase is to;

A. Create test strategy and test plan
B. Design and create the test environment
C. Identify test conditions and create test cases
D. Archive test results, logs and reports in the configuration management system

Correct Answer: C
Section:

QUESTION 5
Which of the statements are true about test cases?
I . All test cases should be automated
II . Test cases should be repeatable
III . Test cases should be traceable back to requirements
IV . Test cases should have expected results

A. I,II and III are true, IV is false
B. II,III and IV are true, I is false
C. III and IV are true , I and II false
D. All of them are true

Correct Answer: B
Section:

QUESTION 6
According to the ISTQB syllabus, Test Analysis and Design phase metrics include,

A. Percentage of requirements covered by test conditions, percentage of test conditions covered by test cases and number of defects found during test analysis and design.
B. Percentage of requirements covered by test conditions, percentage of test conditions covered by test cases and percentage of test cases automated.
C. Percentage of requirements covered by test conditions, percentage of test cases automated and percentage of test environment configured.
D. Percentage of test cases automated, percentage of test cases executed and percentage of test environment configured.

Correct Answer: A
Section:

QUESTION 7
Objectives of test implementation phase are;

A. Create test procedures.
B. Finalize and create test data and set up environment
C. Create a test execution schedule / order
D. Check test level entry criteria

Correct Answer: C
Section:

QUESTION 8

Select the correct answer;

A. If the expected and actual results do not match, it is always because of a defect in the software under test.

B. Customers should not be involved in any level of test execution.

C. Collecting test evidence / test logging is always up to the tester to decide.

D. Actual and expected results comparison is part of test execution phase.

Correct Answer: D
Section:

QUESTION 9
Select the correct answer;
I . IEEE 829 contains a standard for test summary report.
II. Test reporting can occur at the end of the testing effort.
III . Percentage of test time lost due to blocking events is not a valid metric to monitor.
IV . Test summary report may contain summary of testing activities, versions of the software tested and management approvals.

A. I, II and III are true, IV false

B. I and II true, III and IV are false

C. I, II and IV are true, III false

D. I and IV are true, II and III are false

Correct Answer: C
Section:

QUESTION 10
The testing department of a leading company delivered a software, which included the three new features along with the test qualification report. They also archived their test results, logs, and other test artifacts in company documentation database. Scheduled a lessons learned meeting with the software testers, project managers and software developers. The testing department is describing;

A. Test analysis activities

B. Test planning activities

C. Test closure activities

D. User acceptance testing activities

Correct Answer: C
Section:

QUESTION 11
Which of the following statements are true?
I . Percentage of test data loaded is a metric to monitor during test closure activities
II . Test coverage is a metric to monitor during test closure activities.
III . Cause Effect Analysis of defects can be done as part of test closure activities.
IV . Identification of potential process improvement can be done as part of test closure activities.

A. II, III and IV true, I is false

B. I true, II, III and IV false

C. II and III true, I and IV false

D. II and IV true, I and III false

Correct Answer: A
Section:

QUESTION 12
Which of the statements are true about a test policy document?
Test policy document;
I . Is a high level document which describes the company philosophy towards quality assurance.
II . Contains the company values, goals related to testing and test process.
III . May contain activities for test process improvement
IV . May contain information about how to evaluate the effectiveness and efficiency of testing.

A. I and II true, III and IV false

B. III and IV false, I and II true

C. I, II and IV true, III false

D. All of them are true

Correct Answer: D
Section:

QUESTION 13
Test Strategy;

A. Includes organization's methods of testing, risk management and high level activities of testing.

B. Cannot be preventive or reactive.

C. Includes the application of the test strategy to a project.

D. Describes desired quality targets.

Correct Answer: A
Section:

QUESTION 14
Which of the statements are true about Test Strategy approaches?
I . Company can use analytical strategy (risk based) for their test strategy.
II . Company can use dynamic strategy for their test strategy.
III . Company may combine two or more test strategies for their test activities.
IV . Company may not have a test strategy document.

A. I and II true

B. I III and III true

C. I, II, III and IV true

D. I, II, IV true

Correct Answer: C
Section:

QUESTION 15

Master test plan may contain;
I . Items to be tested, out of scope test items
II . Testing schedule, budget
III . Entry and exit criteria for each level and relationship among each level
IV . Business value of testing

A. I, II true.

B. II, III true

C. I,III, IV true

D. I, II, III, IV true

Correct Answer: D
Section:

QUESTION 16
Which of the statements are true about test documentation?
I . IEEE 829 standard contains test documentation template
II . Level test plan is a more detailed document, which has information about testing tasks and milestones.
III . Test plan structures may vary depending on the organization and project.
IV . Test strategy or test plan is not required for safety critical projects.

A. I,II,III true

B. I, II, IV true C. II, III, IV true D. III, IV true

Correct Answer: A
Section:

QUESTION 17
Which of the following is correct about test progress monitoring?
I . According to ISQTB syllabus, Product Risks, Defects, Tests, Coverage and Confidence are 5 dimensions that can be used to monitor test progress.
II . Confidence is measured via surveys and questionnaires and outcome is subjective to the person responding.
Ill. Various metrics are used to measure the product risks, tests and coverage.
IV . One outcome of the progress monitoring could be to relax the test exit criteria.

A. All of the above is true

B. All of the above is false

C. I, II and III true.

D. I and II true.

Correct Answer: A
Section:

QUESTION 18
Which of the statement are true about risk based testing;
I . All risks have equal weights / concerns.
II . The level of risk is influenced by likelihood of the risk and impact of the risk.
III . All risks must be mitigated.
IV . Main developer quitting, during the coding phase of the project can be a project risk.

A. I and II true B.
   I and III true C.
   II and IV true

B. III and IV true

Correct Answer: A
Section:

QUESTION 19
Select the correct matching pair. According to the ISTQB Syllabus;
I . Risk Identification
II . Risk Analysis
III . Risk mitigation

A. Methods include: Expert interviews, checklists, brainstorming and past experience.

B. Technical factors include: Training issues, tools and technology, conflicts within the team

C. Business factors include: Damage to the image, loss of license, legal issues

D. I-a,II-b,III-c

E. I-a,II-b,III-b

F. I-b,II-c,III-a

G. I-c,II-b,III-a

Correct Answer: B
Section:

QUESTION 20
According to the ISTQB syllabus, major ways to handle risks are:
I . Mitigate the risk through preventive measures.
II . Make contingency plans to reduce impact if risk occurs.
III . Transfer the risk to someone else to handle.
IV . Ignore and accept the risk.

A. I, II and III true

B. I, II and IV true

C. II, III, IV true

D. I, II, III, IV true

Correct Answer: D
Section:

QUESTION 21
Failure Mode and Effect Analysis (FMEA) should be applied;

A. In safety critical systems

B. Only on underground systems

C. Only on air traffic systems

D. In all systems

Correct Answer: A
Section:

QUESTION 22
Innovative software solutions have adopted a new way of testing their software. Testers set up the test environment, scan the software and look for problems for about 3 hours every week on Mondays and Wednesdays (in addition to their normal test activities). They create a session sheet and record testers name, date and time started, issues found, task breakdown and defects found at the end. Then the test manager holds a meeting with the testers and reviews the session sheet.
Manager asks the testers for their outlook, results, what happened during the testing and their feelings about past 3 hours. What type of testing activity is described above?

A. Risk based testing

B. Exploratory Testing

C. State transition Testing

D. Decision Testing

Correct Answer: B
Section:

QUESTION 23
A development house (DH) uses the V model for its projects. It delivers systems to the energy industry. In response to consumer demands, DH has been asked to create an online system for consumers to switch energy suppliers easily. There are already offerings in the marketplace for this service, but DH thinks it can provide a service which is easier to use. It will request more detailed information on homes and occupant lifestyles in order to accurately predict likely bills per quarter, and will update users if a cheaper tariff becomes available. For this new service, the specifications have been defined, code has been created, and system testing is about to start.
Which of the following could form part of the entry criteria into system testing?
I . 100 per cent decision coverage of all tariff calculations.
II . 100 per cent functional specification coverage of all household types.
III . Outstanding defects at integration testing highlighted.
IV . Test summary report for system testing produced.
V . Business requirements signed off.

A. I, II and III

B. II, III and IV

C. I and III

D. I, III and IV

Correct Answer: C
Section:

QUESTION 24
A development house (DH) uses the V model for its projects. It delivers systems to the energy industry. In response to consumer demands, DH has been asked to create an online system for consumers to switch energy suppliers easily. There are already offerings in the marketplace for this service, but DH thinks it can provide a service which is easier to use. It will request more detailed information on homes and occupant lifestyles in order to accurately predict likely bills per quarter, and will update users if a cheaper tariff becomes available. For this new service, the specifications have been defined, code has been created, and system testing is about to start.
Which of the following would form part of the entry criteria into unit testing (which will be followed by integration testing)?
I . 100 per cent decision coverage of all tariff calculations.
II . Signed-off program specification.
III . Signed-off technical specification.
IV . 100 per cent program specification coverage.
V . Compiled code.

A. I, III and V

B. II and V

C. I, II and III

D. III, IV and V

Correct Answer: B
Section:

QUESTION 25
A local council employs its own IT staff; there are 40, most of whom have been with the council for over 10 years. The council uses the Agile development methodology. Each project has between five and nine team members, all of whom work very closely together. At the start of each iteration, the requirements are loosely defined. These are then built, tested and refined. The IT Department has been asked to upgrade the council website to include:
Information on recycling targets;
Amounts recycled per month; and
Energy usage in the recycling effort.
The project will be undertaken in three iterations, one for each requirement defined above.
Which two of the following methods of test estimation would be most appropriate in this situation?
I . Making use of a work breakdown structure.
II . Taking 30 per cent of the total iteration time.
III . Calculating the time required using test point analysis.
IV . Gaining consensus from the team.

A. I and II B.II and III

B. I and IV

C. II and IV

Correct Answer: C
Section:

QUESTION 26
Which of the following are "white-box" test techniques?
I . Decision Testing
II . Condition Testing
III . LCSAJ (loop testing)
IV . State transition testing

A. I, II true.III, IV false

B. I, III, IV true, II false

C. I, II, III true, IV false

D. All of the above

Correct Answer: C
Section:

QUESTION 27
According to the ISTQB Syllabus, which of the following are test techniques?
I . Experienced based

II . Defect based
III . Static and dynamic analysis
IV . Structure based

A. III is true. I, II, IV false

B. I, IV true. II, III false

C. All of the above

D. None of the above

Correct Answer: C
Section:

QUESTION 28
Software Testers in a software development company installed the new release on test systems and started the testing phase. Testers verified the new functionality, performed necessary security testing and completed planned regression tests. During the last week of testing, testers noticed that the memory utilization was more than 95% on two of the test servers (out of 4 servers). This behavior was not observed during the first weeks of the testing phase. As a test analyst, what would you do?

A. Ignore the problem because other two servers are okay (memory utilization is normal)

B. Report the problem to the developer immediately and create a defect report because it could be a problem related to memory leak.

C. Reboot the system so that memory utilization will come back to normal. Not report it as a problem.

D. Create a defect report and reboot the system to correct the memory problem.

Correct Answer: B
Section:

QUESTION 29
Select the correct statement related to test techniques;
I . Software program should be running to perform dynamic analysis
II . Software program should be running to perform static analysis
III. Control flow analysis is part of dynamic analysis
IV . Data flow analysis is part of static analysis

A. I, II true. III, IV false

B. I, III true. II, IV false

C. I, IV true. II, III false

D. I true. II, III, IV false

Correct Answer: C
Section:

QUESTION 30
You and two junior testers have been assigned to a new project qualification by your manager.
Development of the code started two weeks ago and now you are invited to attend a code review meeting by development manager. Meeting agenda is to cover following items.
Verify code compliance to coding standards
Verify comment usage frequency
Review number of function calls
Review logical decision points in the application
What is the purpose of this meeting?

A. Perform a Static Analysis of the code with the intention of finding bugs early.

B. Explain the testers how the program should work.

C. Get an agreement to release the partially completed software to the testing department.

D. Explain the complexity of the code.

Correct Answer: A
Section:

QUESTION 31
Integrated Solutions Inc. is a software testing company with 20 testers. One of their clients provided a software release and requested to test the software within 2 weeks. The client did not provide any specifications of the software or any documentation. However, Integrated Solutions Inc. testers have tested similar releases from the same client in the past. As a Senior Software Tester, what is your best approach?

A. Test the product using "Defect and Experienced Based" techniques like error guessing, exploratory and attacks.

B. Request for more time.

C. Explain the client why you cannot test the software.

D. Test only performance of the software.

Correct Answer: A
Section:

QUESTION 32
A software company developed a software application for a Life Insurance Company. The testers of the software company were given the release to test. The software application calculates the annual life insurance cost based on customers' age. Life insurance cost is as follows per year;
Age 18 or less: US $ 300
Age over 18 or less than 70: US $ 500
Person has to be at least 1 year old to purchase insurance
If a customer enters any other age, the software prints an error message. The Application accepts only positive integer values (no decimals). Given above scenario, how many valid test cases at minimum can you derive using equivalence partitioning?

A. 4

B. 3

C. 5

D. 2

Correct Answer: D
Section:

QUESTION 33
A software company developed a software application for a Life Insurance Company. The testers of the software company were given the release to test. The software application calculates the annual life insurance cost based on customers' age. Life insurance cost is as follows per year;
Age 18 or less: US $ 300
Age over 18 or less than 70: US $ 500
Person has to be at least 1 year old to purchase insurance
If a customer enters any other age, the software prints an error message. The Application accepts only positive integer values (no decimals).
How many boundary value test cases can you derive for the life insurance application?

A. 9

B. 10

C. 6

D. 3

Correct Answer: A

Section:

QUESTION 34

A software company developed a software application for a Life Insurance Company. The testers of the software company were given the release to test. The software application calculates the annual life insurance cost based on customers' age. Life insurance cost is as follows per year;

Age 18 or less: US $ 300

Age over 18 or less than 70: US $ 500

Person has to be at least 1 year old to purchase insurance

If a customer enters any other age, the software prints an error message. The Application accepts only positive integer values (no decimals). How many test cases at minimum can you derive using both Boundary Value analysis and Equivalence partitioning to test the life insurance application?

A. 9

B. 10

C. 6

D. 3

Correct Answer: A

Section:

QUESTION 35

A Car sales company is financing their customers' vehicles. Financing interest rates are as follows:

(I) For all motorcycles:

a) Customer Credit score 300 - 550

Annual income US$ 40K-80K - Interest rate 15%

Annual income US$ 81K-100K- Interest rate 12 %

Annual income US $ 101K or more - Interest rate 9 %

b) Customer Credit score 551- 680

Annual income US$ 40K-80K - Interest rate 12%

Annual income US$ 81K-100K- Interest rate 9 %

Annual income US $ 101K or more - Interest rate 7 %

c) Customer Credit score 681 or more

Annual income US$ 40K-80K - Interest rate 10%

Annual income US$ 81K-100K-Interest rate 6

Annual income US $ 101K or more - Interest rate 5 %

(II) For all other vehicles the interest rate is 1 % less (from the values given above) for each category mentioned.

a) Ex: Customer Credit score 300 - 550 Annual income US$ 40K-80K - Interest rate 14% and so on.Select the correct decision table from the decision tables given below for the above scenario

A. Option

Option - A

Conditions																		
Vehicle Type	Motorcycles									All other vehicles								
Credit Score	300 - 550			551 - 680			681 +			300 - 550			551 - 680			681 +		
Income	40K-80K	81K-100K	101 K+	40K-80K	81K-100K	101 K+	40K-80K	81K-100K	101 K+	40K-80K	81K-100K	101K +	40K-80K	81K-100K	101K +	40K-80K	81K-100K	101 K+
Actions																		
Interest Rate	15%	12%	9%	12%	9%	7%	10%	6%	5%	14%	11%	8%	11%	8%	6%	9%	5%	4%

B. Option

Option - B

Conditions																		
Vehicle Type	Motorcycles									cars								
Credit Score	300 - 550			551 - 680			681 +			300 - 550			551 - 680			681 +		
Income	40K-80K	81K-100K	101 K+	40K-80K	81K-100K	101 K+	40K-80K	81K-100K	101 K+	40K-80K	81K-100K	101K +	40K-80K	81K-100K	101K +	40K-80K	81K-100K	101 K+
Actions																		
Interest Rate	15%	12%	9%	12%	9%	7%	10%	6%	5%	15%	12%	9%	12%	9%	7%	10%	6%	5%

C. Option

Option - C

Conditions																		
Vehicle Type	Motorcycles									Motorcycles								
Credit Score	300 - 550									551 - 680								
Income	40K-80K	81K-100K	101 K+	40K-80K	81K-100K	101 K+	40K-80K	81K-100K	101 K+	40K-80K	81K-100K	101K +	40K-80K	81K-100K	101K +	40K-80K	81K-100K	101 K+
Actions																		
Interest Rate	15%	12%	9%	12%	9%	7%	10%	6%	5%	14%	11%	8%	11%	8%	6%	9%	5%	4%

D. Option

Option - D

Conditions																		
Vehicle Type	All other vehicles									Motorcycles								
Credit Score	300 - 550			551 - 680			681 +			300 - 550			551 - 680			681 +		
Income	40K-80K	81K-100K	101 K+	40K-80K	81K-100K	101 K+	40K-80K	81K-100K	101 K+	40K-80K	81K-100K	101K +	40K-80K	81K-100K	101K +	40K-80K	81K-100K	101 K+
Actions																		
Interest Rate	15%	12%	9%	12%	9%	7%	10%	6%	5%	14%	11%	8%	11%	8%	6%	9%	5%	4%

Correct Answer: A
Section:

QUESTION 36
A Car sales company is financing their customers' vehicles. Financing interest rates are as follows:
(I) For all motorcycles:

A. Customer Credit score 300 - 550
 # Annual income US$ 40K-80K - Interest rate 15%
 # Annual income US$ 81K-100K- Interest rate 12 %
 # Annual income US $ 101K or more - Interest rate 9 %

B. Customer Credit score 551- 680
 # Annual income US$ 40K-80K - Interest rate 12%
 # Annual income US$ 81K-100K- Interest rate 9 %
 # Annual income US $ 101K or more - Interest rate 7 %

C. Customer Credit score 681 or more
 # Annual income US$ 40K-80K - Interest rate 10%
 # Annual income US$ 81K-100K-Interest rate 6
 # Annual income US $ 101K or more - Interest rate 5 %
 (II) For all other vehicles the interest rate is 1 % less (from the values given above) for each category mentioned.
 a) Ex: Customer Credit score 300 - 550
 Annual income US$ 40K-80K - Interest rate 14% and so on.
 What is the minimum number of test cases required to test the above application? (Hint: derive test cases using decision table technique using the decision table described in

D. 9

E. 18

F. 20

G. 2

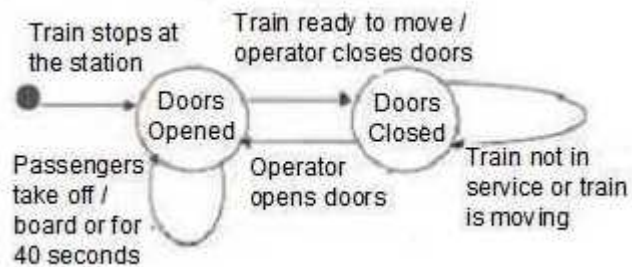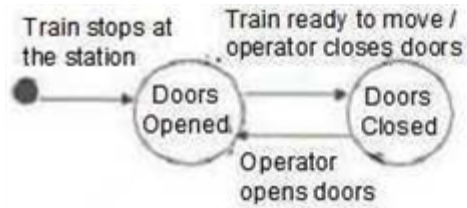**Correct Answer: B**
Section:

QUESTION 37
Select the correct state transition diagram for the following train door open/close scenario. When the train is moving, the train doors are closed. After train stops at a station, doors will be opened by the operator, passengers take off and new passengers board the train. Doors will be opened for 40 seconds at the train station. Train doors will be closed when the train is not in service.
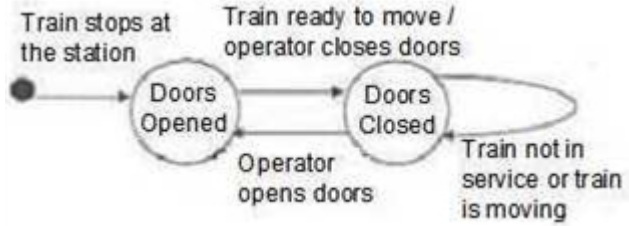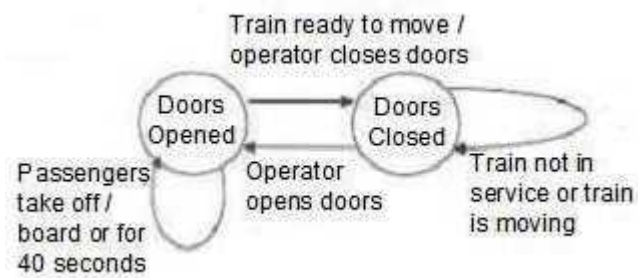
A. Option

B. Option

C. Option

D. Option

Correct Answer: A
Section:

QUESTION 38
Each number represents a state in the following online shopping cart state transition diagram. Select the correct pair.

A. 1- Initial state, 2- event, 3 - transition, 4 - state, 5 - Final State
B. 1- Initial state, 2- event , 3 - states, 4 - transition, 5 - event
C. 1- Initial state, 2- transition, 3 - event, 4 - state, 5 - Final State
D. 1- Final state, 2- transition, 3 - event, 4 - state, 5 - Initial state

Correct Answer: C
Section:

QUESTION 39
Use the following code;
x=1
y=2
z=3
If (x = = 2)
{
print "Hi There !";
}
else
{
print "Good bye";

```
}
z=x + y;
if (z ==4)
{
print "Welcome Back!";
}
else
{
print "Thank you";
}
```
How many test cases, at minimum, are required for statement coverage?

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

Correct Answer: B
Section:

QUESTION 40
Use the following code;
```
x=1
y=2
z=3
If (x = = 2)
{
print "Hi There !";
}
else
{
print "Good bye";
}
z=x + y;
if (z ==4)
{
print "Welcome Back!";
}
else
{
print "Thank you";
}
```
How many test cases at minimum are required to test branch / decision coverage?

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

Correct Answer: A
Section:

QUESTION 41
Use the following code;
```
x=1
y=2
z=3
If (x = = 2)
{
print "Hi There !";
}
else
{
print "Good bye";
}
z=x + y;
if (z ==4)
{
print "Welcome Back!";
}
else
{
print "Thank you";}
```
How many test cases at minimum are needed to test the path coverage?

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

Correct Answer: B
Section:

QUESTION 42
A College Enrollment application used by ABC College calculates the amount each student has to pay for gym and computer lab usage. The application asks for Student ID, Name and Student's major.
Then the application calculates the fee. If student's major is Computer Science, they have to pay the full computer lab fee. If the student's major is not Computer Science, they have to pay only 1/3 rd of the computer lab fee.
All students have to pay for the gym membership. How many tests are required for path coverage of the above application?

A. 1
B. 2
C. 3
D. 10

Correct Answer: B
Section:

QUESTION 43
Consider the following perl code;

```
$x = 100;
If ($account > 100)
{ for ($deposit =
1
;
$
deposit >
3
;
$
deposit ++)
{$x=$x+1;
}i
f ($account <= 100)
{ for ($withdraw =
0; $
withdraw >
2
;
$
withdraw ++)
{
$x=$x-1;
}}
$x=$x+100;
```
How many test cases at a minimum are needed to test the path coverage?

A. 6
B. 5
C. 4
D. 3

Correct Answer: B
Section: