Question 1.

The following statement refers to decision coverage:
“When the code contains only a single ‘if’ statement and no loops or CASE statements, and its execution is not nested within the test, any single test case we run will result in 50% decision coverage.”
Which of the following statement is correct?

a) The statement is true. Any single test case provides 100% statement coverage and therefore 50% decision coverage.

b) The statement is true. Any single test case would cause the outcome of the “if” statement to be either true or false.

c) The statement is false. A single test case can only guarantee 25% decision coverage in this case.

d) The statement is false. The statement is too broad. It may be correct or not, depending on the tested software.

Question 2.

Which one of the following is the description of statement coverage?

a) It is a metric which is used to calculate and measure the percentage of test cases that have been executed.

b) It is a metric, which is used to calculate and measure the percentage of statements in the source code that have been executed.

c) It is a metric, which is used to calculate and measure the number of statements in the source code that have been executed by test cases that are passed.

d) It is a metric that gives a true/false confirmation if all statements are covered or not.

Question 3.

An employee’s bonus is to be calculated. It cannot be negative, but it can be calculated down to zero. The bonus is based on the length of employment:

- less than or equal to 2 years,
- more than 2 years but less than 5 years,
- 5 to 10 years inclusively or longer than 10 years.

What is the minimum number of test cases required to cover all valid equivalence partitions for calculating the bonus?

a) 3.

b) 5.

c) 2.

d) 4.

Question 4.

A speed control and reporting system has the following characteristics:
If you drive 50 km/h or less, nothing will happen.
If you drive faster than 50 km/h, but 55 km/h or less, you will be warned.
If you drive faster than 55 km/h but not more than 60 km/h, you will be fined.
If you drive faster than 60 km/h, your driving license will be suspended.
The speed in km/h is available to the system as an integer value.
Which would be the most likely set of values (km/h) identified by applying the boundary value analysis, where only the boundary values on the boundaries of the equivalence classes are relevant?

a)0, 49, 50, 54, 59, 60.
b) 50, 55, 60.
c) 49, 50, 54, 55, 60, 62.
d) 50, 51, 55, 56, 60, 61.

Question 5.

A company's employees are paid bonuses if they work more than a year in the company and achieve a target which is individually agreed before.

These facts can be shown in a decision table:

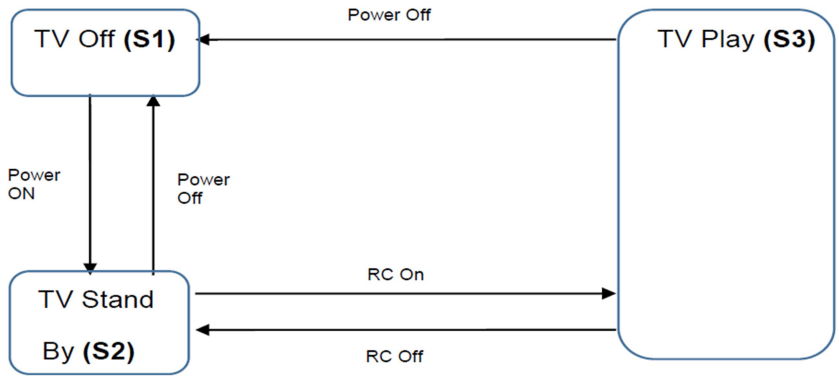
Test-ID		T1	T2	T3	T4
Condition1	Employment for more than 1 year?	YES	NO	NO	YES
Condition2	Agreed target?	NO	NO	YES	YES
Condition3	Achieved target?	NO	NO	YES	YES
Action	Bonus payment	NO	NO	NO	NO

Which test case for a real life scenario is missing in the above decision table?

a) Condition1 = YES, Condition2 = NO, Condition3 = YES, Action= NO
b) Condition1 = YES, Condition2 = YES, Condition3 = NO, Action= YES
c) Condition1 = NO, Condition2 = NO, Condition3 = YES, Action= NO
d) Condition1 = NO, Condition2 = YES, Condition3 = NO, Action= NO

Question 6.

Which of the following statements about the given state transition diagram and table of test cases is TRUE?



Test Case	1	2	3	4	5
Start State	S1	S2	S2	S3	S3
Input	Power On	Power Off	RC On	RC Off	Power Off
Expected Final State	S2	S1	S3	S2	S1

a) The given test cases can be used to cover both valid and invalid transitions in the state transition diagram.

b) The given test cases represent all possible valid transitions in the state transition diagram.

c) The given test cases represent only some of the valid transitions in the state transition diagram.

d) The given test cases represent pairs of transitions in the state transition diagram.

Question 7.

A video application has the following requirement: The application shall allow playing a video on the following display resolution:
1. 640x480.

2. 1280x720.
3. 1600x1200.
4. 1920x1080.

Which of the following list of test cases is a result of applying the equivalence partitioning test technique to test this requirement?

a) Verify that the application can play a video on a display of size 1920x1080 (1 test case).

b) Verify that the application can play a video on a display of size 640x480 and 1920x1080 (2 test cases).

c) Verify that the application can play a video on each of the display sizes in the requirement (4 test cases).

d) Verify that the application can play a video on any one of the display sizes in the requirement (1 test case).

Question 8.

Which of the following BEST matches the descriptions with the different categories of test techniques?

1. Coverage is measured based on a selected structure of the test object.
2. The processing within the test object is checked.
3. Tests are based on defects' likelihood and their distribution.
4. Deviations from the requirements are checked.
5. User stories are used as the test basis.

Black - Black-box test techniques
White - White-box test techniques
Experience - Experience-based test techniques

a) Black – 4, 5 White – 1, 2 Experience – 3
b) Black – 3 White – 1, 2 Experience – 4, 5
c) Black – 4 White – 1, 2 Experience – 3, 5
d) Black – 1, 3, 5 White – 2 Experience – 4

Question 9.

A fitness app measures the number of steps that are walked each day and provides feedback to encourage the user to keep fit.
The feedback for different numbers of steps should be:

Up to 1000 - Couch Potato!
Above 1000, up to 2000 - Lazy Bones!
Above 2000, up to 4000 - Getting There!
Above 4000, up to 6000 - Not Bad!
Above 6000 - Way to Go!

Which of the following sets of test inputs would achieve the highest equivalence partition coverage?

a) 0, 1000, 2000, 3000, 4000
b) 1000, 2001, 4000, 4001, 6000
c) 123, 2345, 3456, 4567, 5678
d) 666, 999, 2222, 5555, 6666

Question 10.

A daily radiation recorder for plants produces a sunshine score based on a combination of the number of hours a plant is exposed to the sun (below 3 hours, 3 to 6 hours or above 6 hours) and the average intensity of the sunshine (very low, low, medium, high).

Given the following test cases

	Hours	Intensity	Score
T1	1.5	v. low	10
T2	7.0	medium	60
T3	0.5	v. low	10

What is the minimum number of additional test cases that are needed to ensure full coverage of all valid INPUT equivalence partitions?

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

Question 11.

A smart home app measures the average temperature in the house over the previous week and provides feedback to the occupants on their environmental-friendliness based on this temperature.
The feedback for different average temperature ranges (to the nearest °C) should be:
Up to 10°C - Icy Cool!
11°C to 15°C - Chilled Out!
16°C to 19°C - Cool Man!
20°C to 22°C - Too Warm!
Above 22°C - Hot & Sweaty!

Using two-point BVA, which of the following sets of test inputs provides the highest level of boundary coverage?

a) 0°C, 11°C, 20°C, 22°C, 23°C
b) 9°C, 15°C, 19°C, 23°C, 100°C
c) 10°C, 16°C, 19°C, 22°C, 23°C
d) 14°C, 15°C, 18°C, 19°C, 21°C, 22°C

Question 12.

Decision table testing is being performed on a speeding fine system. Two test cases have already been generated for rules 1 and 4, which are shown below:

	Rules	R1	R4
Conditions	Speed > 50	T	F
	School Zone	T	F
Actions	$250 Fine	F	F
	Jail	T	F

Given the following additional test cases:

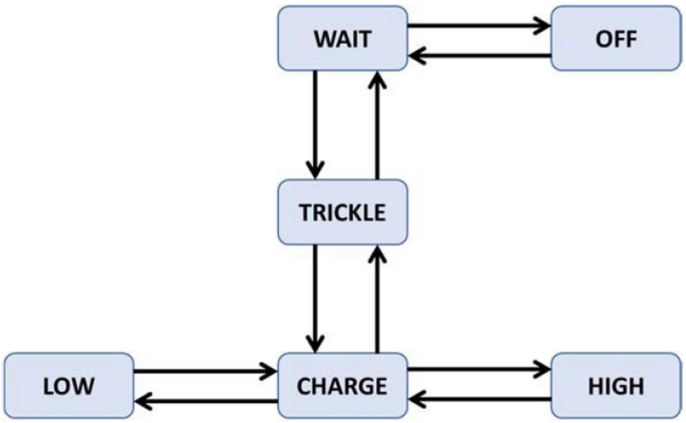
	Rules	DT1	DT2	DT3	DT4
Input	Speed	55	44	66	77
	School Zone	T	T	T	F
Expected Result	$250 Fine	F	F	F	T
	Jail	T	F	T	F

Which two of the additional test cases would achieve full coverage of the complete decision table (when combined with the test cases that have already been generated for rules 1 and 4)?

a) DT1, DT2
b) DT2, DT3
c) DT2, DT4
d) DT3, DT4

Question 13.

Given the following state model of a battery charger software:



Which of the following sequences of transitions provides the highest level of transition coverage for the model?

a) OFF → WAIT → CHARGE → OFF → HIGH → WAIT → CHARGE → TRICKLE → LOW

b) WAIT → TRICKLE → TRICKLE → WAIT → CHARGE → OFF → LOW → WAIT → CHARGE

c) HIGH → CHARGE → WAIT → LOW → TRICKLE → CHARGE → WAIT → TRICKLE → TRICKLE

d) WAIT → TRICKLE → TRICKLE → CHARGE → WAIT → HIGH → OFF → CHARGE → WAIT

Question 14.

Given the following fragment of code, how many tests are required for 100% decision coverage?

```
if width > length
then
biggest_dimension = width
if height > width
then
biggest_dimension = height
end_if
else
biggest_dimension = length
if height > length
then
biggest_dimension = height
end_if
end_if
```

A. 3

B. 4

C. 2

D. 1

Question 15.

You have designed test cases to provide 100% statement and 100% decision coverage for the following fragment of code.

```
if width > length
then
```

biggest_dimension = width

else

biggest_dimension = length

end_if

The following has been added to the bottom of the code fragment above.

print “Biggest dimension is ” & biggest_dimension

print “Width: ” & width

print “Length: ” & length

How many more test cases are required?

A. One more test case will be required for 100 % decision coverage.

B. Two more test cases will be required for 100 % statement coverage, one of which will be used to provide 100% decision coverage.

C. None, existing test cases can be used.

D. One more test case will be required for 100″ statement coverage.

Question 16.

How many test cases are needed to achieve 100 % statement coverage?

if ((temperature < 0) or

(temperature > 100)) {

alert (“DANGER”);

```
if ((speed > 100) and (load <= 50)) {
speed = 50;
}
} else {
check = false;
}
```

A. 5

B. 4

C. 2

D. 3

Question 17.

What techniques would be MOST appropriate if the specifications are outdated?

A. Structure-based and experienced-based techniques

B. Black-box and specification-based techniques

C. Specification-based and structure-based techniques

D. Structure-based technique and exhaustive testing

Question 18.

Program has given a data on a person age, which should be between 1 to 99. Using BVA which is the appropriate one

A. 0,1,2,99

B. 1, 99, 100, 98

C. 0, 1, 99, 100

D. 1, 0, 1, 99

E. 0, 1, 2, 3, 4, 98, 99, 100, 101

Question 19.

The principle of Cyclomatic complexity, considering L as edges or links, N as nodes, P as independent paths

A. L-N +2P

B. N-L +2P

C. N-L +P

D. N-L +P

Question 20.

The Switch is switched off once the temperature falls below 18 and then it is turned on when the temperature is more than 21. When the temperature is more than 21. Identify the Equivalance values which belong to the same class.

A. 12,16,22

B. 24,27,17

C. 22,23,24

D. 14,15,19

Question 21.

One of the fields on a form contains a text box which accepts alpha numeric values. Identify the Valid Equivalence class

A. BOOK

B. Book

C. Boo01k

D. book

Question 22.

One of the fields on a form contains a text box which accepts numeric values in the range of 18 to 25. Identify the invalid Equivalance class

A. 17

B. 19

C. 24

D. 21

Question 23.

The testing technique that requires devising test cases to demonstrate that each program function is operational is called

A. Black-box testing

B. Glass-box testing

C. Grey-box testing

D. White-box testing

Question 24.

A white box testing technique that measures the number of or percentage of decision directions executed by the test case designed is called

A. Condition coverage

B. Decision/Condition coverage

C. Decision Coverage

D. Branch coverage

Question 25.

_____ includes both Black box and White Box Testing features

A. Gray Box Testing

B. Hybrid Testing

C. A. & B.

D. None

Question 26.

Given the Following program

IF X <>= Z

THEN Statement 2;

END

McCabe's Cyclomatic Complexity is :

A. 2

B. 3

C. 4

D. 5

Question 27.

An input field takes the year of birth between 1900 and 2004

The boundary values for testing this field are

A. 0,1900,2004,2005

B. 1900, 2004

C. 1899,1900,2004,2005

D. 1899, 1900, 1901,2003,2004,2005

Question 28.

How many test cases are necessary to cover all the possible sequences of statements (paths) for the following program fragment? Assume that the two conditions are independent of each other:

if (Condition 1)

then statement 1

else statement 2

fi

if (Condition 2)

then statement 3

fi

A. 2 Test Cases

B. 3 Test Cases

C. 4 Test Cases

D. Not achievable

Question 29.

Cyclomatic Complexity method comes under which testing method.

A. White box

B. Black box

C. Green box

D. Yellow box

Question 30.

Which test technique is based on requirements specifications?

A. White-box technique

B. Component testing

C. Black-box technique

D. Data driven testing

Question 31.

Order numbers on a stock control system can range between 10000 and 99999 inclusive. Which of the following inputs might be a result of designing tests for only valid equivalence classes and valid boundaries:

A. 1000, 5000, 99999

B. 9999, 50000, 100000

C. 10000, 50000, 99999

D. 10000, 99999

E. 9999, 10000, 50000, 99999, 10000

Question 32.

Given the following:

Switch PC on

Start "outlook"

IF outlook appears THEN

Send an email

Close outlook

A. 1 test for statement coverage, 1 for branch coverage

B. 1 test for statement coverage, 2 for branch coverage

C. 1 test for statement coverage. 3 for branch coverage

D. 2 tests for statement coverage, 2 for branch coverage

E. 2 tests for statement coverage, 3 for branch coverage

Question 33.

Given the following code, which is true:

```
IF A > B THEN
C = A * B
ELSE
C = A + B
ENDIF
Read D
```

IF C = D Then

Print “Error”

ENDIF

A. 1 test for statement coverage, 3 for branch coverage

B. 2 tests for statement coverage, 2 for branch coverage

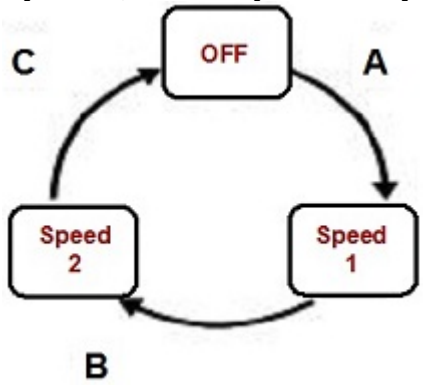
C. 2 tests for statement coverage. 3 for branch coverage

D. 3 tests for statement coverage, 3 for branch coverage

E. 3 tests for statement coverage, 2 for branch coverage

Question 34.

Consider the following state transition diagram of a two-speed hair dryer, which is operated by pressing its one button. The first press of the button turns it on to Speed 1, second press to Speed 2 and the third press turns it off.



Which of the following series of state transitions below will provide -switch coverage?

A. A,C,B

B. B,C,A

C. A,B,C

D. C,B,A

Question 35.

How many test cases are needed to achieve 100 % decision coverage?

```
If (p = q) {
s = s + 1;
if (a < S) {
t = 10;
}
} else if (p > q) {
t = 5;
}
```

A. 3

B. 6

C. 5

D. 4

Question 36.

Which of the following statements about the component testing standard is false:

A. Black box design techniques all have an associated measurement technique

B. White box design techniques all have an associated measurement technique

C. Cyclomatic complexity is not a test measurement technique

D. Black box measurement techniques all have an associated test design technique

E. White box measurement techniques all have an associated test design technique

Question 37.

Which technique is appropriate

to test changes on old and undocumented functionalities of a system?

A. Specification-based technique

B. Black-box technique

C. White-box technique

D. Data driven testing technique

Question 38.

Which of the following is NOT a black box technique:

A. Equivalence partitioning

B. State transition testing

C. LCSAJ

D. Syntax testing

E. Boundary value analysis

Question 39.

Consider the following:

Pick up and read the newspaper

Look at what is on television

If there is a program that you are interested in watching then switch the the television on and watch the program

Otherwise

Continue reading the newspaper

If there is a crossword in the newspaper then try and complete the crossword

A. SC = 1 and DC = 1

B. SC = 1 and DC = 2

C. SC = 1 and DC = 3

D. SC = 2 and DC = 2

E. SC = 2 and DC = 3

Question 40.

Given the following code, which is true about the minimum number of test cases required for full statement and branch coverage:

Read P

Read Q

IF P+Q > 100 THEN

Print “Large”

ENDIF

If P > 50 THEN

Print “P Large”

ENDIF

A. 1 test for statement coverage, 3 for branch coverage

B. 1 test for statement coverage, 2 for branch coverage

C. 1 test for statement coverage, 1 for branch coverage

D. 2 tests for statement coverage, 3 for branch coverage

E. 2 tests for statement coverage, 2 for branch coverage

Question 41.

Error guessing is best used

A. As the first approach to deriving test cases

B. After more formal techniques have been applied

C. By inexperienced testers

D. After the system has gone live

E. Only by end users

Question 42.

One of the fields on a form contains a text box, which accepts alphabets in lower or upper case. Identify the invalid Equivalance class value.

A. CLASS

B. cLASS

C. CLass

D. CLa01ss

Question 43.

Which of the following techniques is NOT a black box technique?

A. State transition testing

B. LCSAJ (Linear Code Sequence and Jump)

C. Syntax testing

D. Boundary value analysis

Question 44.

Features of White Box Testing Technique:

i. We use explicit knowledge of the internal workings of the item being tested to select the test data.

ii. Uses specific knowledge of programming code to examine outputs and assumes that the tester knows the path of logic in a unit or a program.

iii. Checking for the performance of the application

iv. Also checks for functionality.

A. i, ii are true and iii and iv are false

B. iii is true and i,ii, iv are false

C. ii ,iii is true and i,iv is false

D. iii and iv are true and i,ii are false

Question 45.

Minimum Test Required for Statement Coverage:

Disc = 0

Order-qty = 0

Read Order-qty

If Order-qty >=20 then

Disc = 0.05

If Order-qty >=100 then

Disc =0.1

End if

End if

A. Statement coverage is 4

B. Statement coverage is 1

C. Statement coverage is 3

D. Statement Coverage is 2

Question 46.

Which input combinations will a knowledgeable tester MOST LIKELY use to uncover potential errors when testing a surname field?

A. Wilson, de Costa and Morgan

B. Go, Cheenaswamimuthusami and Venkatsewaran

C. Smit, Smyth and Smithson

D. O'Lever, Lesa-Brit and Jewel D'e

Question 47.

Minimum Tests Required for Statement Coverage and Branch Coverage:

Read P

Read Q

If p+q > 100 then

Print “Large”

End if

If p > 50 then

Print “pLarge”

End if

A. Statement coverage is 2, Branch Coverage is 2

B. Statement coverage is 3 and branch coverage is 2

C. Statement coverage is 1 and branch coverage is 2

D. Statement Coverage is 4 and Branch coverage is 2

Question 48.

In a system designed to work out the tax to be paid: An employee has $4000 of salary tax free. The next $1500 is taxed at 10% The next $28000 is taxed at 22% Any further amount is taxed at 40%

Which of these groups of numbers would fall into the same equivalence class?

A. $5800; $28000; $32000

B. $0; $200; $4200

C. $5200; $5500; $28000

D. $28001; $32000; $35000

Question 49.

Cyclomatic complexity is used to calculate

A. Number of independent paths in the basis set of a program

B. Number of binary decisions + 1

C. Number bound for the number of tests that must be conducted to ensure that all statements have been executed at least once

D. Number of branches and decisions

Question 50.

What is the smallest number of test cases required to Provide 100% branch coverage?

```
If(x>y) x=x+1;
else y=y+1;
while(x>y)
{
y=x*y; x=x+1;
}
```

A. 1

B. 2

C. 3

D. 4

Question 51.

Which test design techniques should

a tester use to respectively achieve the following:

(a) Check the documented features of the system,

(b) ensure 100 % decision c overage, and

(c) detect likely defects and distribution?

A. Specification-based, data driven testing, and defect density techniques

B. Specification-based, branch coverage, and exploratory techniques

C. Structure-based, equivalence partitioning, and exploratory techniques

D. Specification-based, structure-based, and experience-based techniques

Question 52.

Which set of test data demonstrates equivalence partitioning to check whether a customer is a teenager or not?

A. 10, 15 and 19 years

B. 13, 19 and 25 years

C. 13, 16 and 19 years

D. 12, 13 and 20 years

Question 53.

Which technique if OFTEN considered as an extension of equivalence partitioning?

A. Decision table testing

B. State transition testing

C. Use case testing

D. Boundary value analysis

Question 54.

Which of the following is a black box design technique?

A. Statement testing

B. Equivalence partitioning

C. Error- guessing

D. Usability testing

Question 55.

A program validates a numeric field as follows:

Values less than 10 are rejected, values between 10 and 21 are accepted, values greater than or equal to 22 are rejected. Which of the following input values cover all of the equivalence partitions?

A. 10,11,21

B. 3,20,21

C. 3,10,22

D. 10,21,22

Question 56.

A program with high cyclometic complexity is almost likely to be:

A. Large

B. Small

C. Difficult to write

D. Difficult to test

Question 57.

Which of the following is the odd one out?

A. White box

B. Glass box

C. Structural

D. Functional

Question 58.

Which of the following techniques are black box techniques?

A. State transition testing, code testing, agile testing

B. Equivalence partitioning, state transition testing, decision table testing

C. System testing, acceptance testing, equivalence partitioning

D. System integration testing, system testing, decision table testing

Question 59.

What is the KEY difference between black-box and white-box testing?

A. Black-box is functional; white-box is structural

B. Black-box is functional; white-box is non-functional

C. Black-box has a wider statement coverage than white-box

D. Black-box can only be performed after white-box

Question 60.

What technique captures system requirements that contain logical condition s?

A. Boundary value

B. Equivalence partition

C. Decision table

D. State transition

Question 61.

If a program is tested and 100% branch coverage is achieved, which of the following coverage criteria is then guaranteed to be achieved?

A. 100% Equivalence class coverage

B. 100% Condition coverage and 100% Statement coverage

C. 100% Statement coverage

D. 100% Multiple condition coverage

Question 62. A defect management system shall keep track of the status of every defect registered and enforce the rules about changing these states. If your task is to test the status tracking, which method would be best?

A. Logic-based testing

B. Use-case-based testing

C. State transition testing

D. Systematic testing according to the V-model

Question 63.

This part of a program is given:

WHILE (condition A) Do B

END WHILE

How many decisions should be tested in this code in order to achieve 100% decision coverage?

A. 2

B. Indefinite

C. 1

D. 4

Question 64.

In a flight reservation system, the number of available seats in each plane model is an input. A plane may have any positive number of available seats, up to the given capacity of the plane. Using Boundary Value analysis, a list of available seat values were generated. Which of the following lists is correct?

A. 1, 2, capacity -1, capacity, capacity plus 1

B. 0, 1, capacity, capacity plus 1

C. 0, 1, 2, capacity plus 1, a very large number

D. 0, 1, 10, 100, capacity, capacity plus one

Question 65.

Which of the following is a valid collection of equivalence classes for the following problem: An integer field shall contain values from and including 1 to and including 15

A. Less than 1, 1 through 15, more than 15

B. Negative numbers, 1 through 15, above 15

C. Less than 1, 1 through 14, more than 15

D. Less than 0, 1 through 14, 15 and more

Question 66.

This part of a program is given:

WHILE (condition A)

Do B

END WHILE

How many paths should be tested in this code in order to achieve 100% path coverage?

A. One

B. Indefinite

C. Two

D. Four

Question 67.

If a program is tested and 100% condition coverage is achieved, which of the following coverage criteria is then guaranteed to be achieved?

A. 100% branch coverage

B. 100% condition coverage and 100% statement coverage

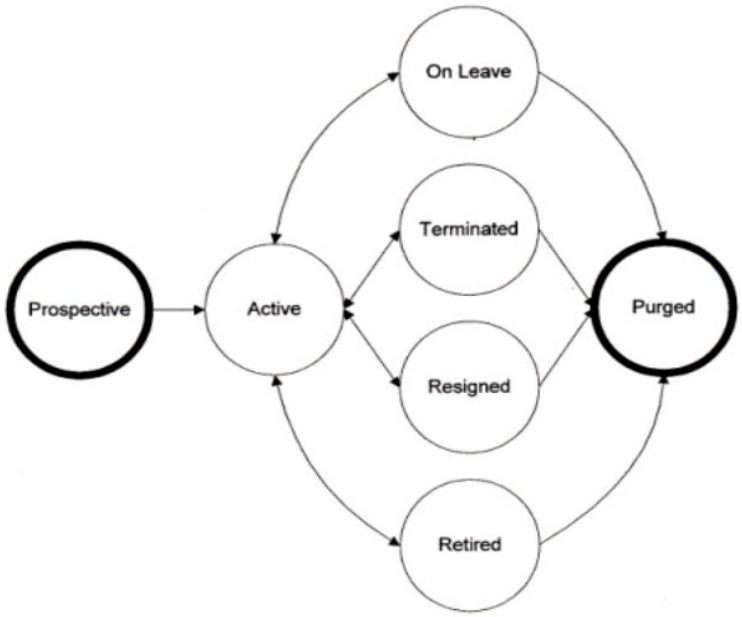
C. Equivalence class and boundary value coverage

D. No other white box coverage criterion is guaranteed to be fulfilled 100%

Question 68.

Using the diagram below,

which test suite will uncover invalid state transitions for employee status reporting software?



A. Prospective – Active – Resigned – Active – Terminated – Purged

B. Prospective – Active – On Leave – Active – Resigned – Retired

C. Prospective – Active – Retired – Active – On Leave – Purged

D. Prospective – Active – On Leave – Active – Retired – Active

Question 69.

In a system designed to work out the tax to be paid: An employee has £4000 of salary tax free. The next £1500 is taxed at 10% The next £28000 is taxed at 22% Any further amount is taxed at 40% Which of these groups of numbers would fall into the same equivalence class?

a) £4800; £14000; £28000

b) £5200; £5500; £28000

c) £28001; £32000; £35000

d) £5800; £28000; £32000

Question 70.

What is the expected result for each of the following test cases? A. Citibank card member, holding a Silver room B. Non Citibank-member, holding a Platinum room

	Rule 1	Rule 2	Rule 3	Rule 4
Conditions				
Citibank Card Member	Yes	Yes	No	No
Type of Room	Silver	Platinum	Silver	Platinum
Actions				
Offer upgrade to Gold Luxury	Yes	No	No	No
Offer upgrade to Silver	N/A	Yes	N/A	No

a) A – Don't offer any upgrade, B – Don't offer any upgrade.

b) A – Don't offer any upgrade, B – Offer upgrade to Gold.

c) A – Offer upgrade to Silver, B – Offer upgrade to Silver.

d) A – Offer upgrade to Gold, B – Don't offer any upgrade.