

6406531894691. ✖ Cultural accommodation

6406531894692. ✔ Cultural compromise

6406531894693. ✖ Cultural dominance

Sw Testing

Section Id :	64065338430
Section Number :	3
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	19
Number of Questions to be attempted :	19
Section Marks :	100
Display Number Panel :	Yes
Group All Questions :	No
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	64065381144
Question Shuffling Allowed :	No
Is Section Default? :	null

Question Number : 61 Question Id : 640653566933 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 0

Question Label : Multiple Choice Question

THIS IS QUESTION PAPER FOR THE SUBJECT "DEGREE LEVEL : SOFTWARE TESTING (COMPUTER

BASED EXAM)"

ARE YOU SURE YOU HAVE TO WRITE EXAM FOR THIS SUBJECT?

CROSS CHECK YOUR HALL TICKET TO CONFIRM THE SUBJECTS TO BE WRITTEN.

(IF IT IS NOT THE CORRECT SUBJECT, PLS CHECK THE SECTION AT THE TOP FOR THE SUBJECTS REGISTERED BY YOU)

Options :

6406531894694. ✓ YES

6406531894695. ✗ NO

Sub-Section Number : 2

Sub-Section Id : 64065381145

Question Shuffling Allowed : Yes

Is Section Default? : null

Question Number : 62 Question Id : 640653566934 Question Type : MCQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4

Question Label : Multiple Choice Question

Which of the following types of testing is performed to measure the ability of system to keep operating over specified periods (typically several months/years) of time?

Options :

6406531894696. ✗ Compatibility testing

6406531894697. ✗ Security testing

6406531894698. ✓ Reliability testing

6406531894699. ✗ Scalability testing

Question Number : 63 Question Id : 640653566936 Question Type : MCQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4

Question Label : Multiple Choice Question

Consider the component transitions in an Application Transition Graph (ATG). A transition out of the software’s control like back button, forward button, refresh button etc. is known as _____ .

Fill in the blank with appropriate option.

Options :

6406531894704. ✖ simple link transition

6406531894705. ✖ form link transition

6406531894706. ✔ operational transition

6406531894707. ✖ redirect transition

Sub-Section Number :	3
Sub-Section Id :	64065381146
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 64 Question Id : 640653566935 Question Type : MSQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 5 Selectable Option : 0

Question Label : Multiple Select Question

Consider test-driven development (TDD) for a mobile app in which the user can set a passcode to restrict access to certain folders in the internal memory of the mobile. The test cases for the user story *passcode validation* are provided below.

```
import static org.junit.Assert.*;
import org.junit.Test;

public class PasscodeValidationTest {
    private PasscodeValidation obj;
    @Test
    public void test() {
        obj = new PasscodeValidation();
        assertEquals(false, obj.isValid("123"));
        assertEquals(false, obj.isValid("123456789"));
        assertEquals(true, obj.isValid("12345"));
    }
}
```

Which of the following are the appropriate implementations for the user story?

Options :

```
public class PasscodeValidation {
    public boolean isValid(String passcode) {
        if(passcode.length() > 9) {
            System.out.println("passcode length is above maximum");
            return false;
        }
        else if(passcode.length() < 3) {
            System.out.println("passcode length is below minimum");
            return false;
        }
        else
            return true;
    }
}
```

6406531894700. ✖

6406531894701. ✔

```

public class PasscodeValidation {
    public boolean isValid(String passcode) {
        if(passcode.length() < 4) {
            System.out.println("passcode length is below minimum");
            return false;
        }
        else if(passcode.length() > 8) {
            System.out.println("passcode length is above maximum");
            return false;
        }
        else
            return true;
    }
}

```

```

public class PasscodeValidation {
    public boolean isValid(String passcode) {
        if(passcode.length() >= 9) {
            System.out.println("passcode length is above maximum");
            return false;
        }
        else if(passcode.length() <= 3) {
            System.out.println("passcode length is below minimum");
            return false;
        }
        else
            return true;
    }
}

```

6406531894702. ✓

```

public class PasscodeValidation {
    public boolean isValid(String passcode) {
        if(passcode.length() > 4) {
            System.out.println("passcode length is below minimum");
            return false;
        }
        else if(passcode.length() < 8) {
            System.out.println("passcode length is above maximum");
            return false;
        }
        else
            return true;
    }
}

```

6406531894703. ✖

Question Number : 65 Question Id : 640653566938 Question Type : MSQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 5 Selectable Option : 0

Question Label : Multiple Select Question

Consider the below code to answer the following questions. The below code may have some faults/errors.

```
class Number{
    protected double a, b;
    public void setA(double a) {
        this.a = a;
    }
    public void setB(double b) {
        this.b = b;
    }
    public void print() {
        System.out.print("Num = ");
    }
}
class Complex extends Number{
    public void print() {
        super.print();
        System.out.println(a + " + i" + b);
    }
}
class Real extends Number{
    public void print() {
        super.print();
        System.out.println(a);
    }
}
public class NumberExample {
    public static void main(String[] args) {
        boolean flag;
        //LINE-1: flag = true/false;
        Number n;
        if(flag) {
            n = new Complex();
            n.setA(10);
            n.setB(20);
            n.print();
        }
        else {
            n = new Real();
            n.setB(10);
            n.print();
        }
    }
}
```

Which of the following methods will be invoked when the variable `flag` is read with a value of `false` at LINE-1?

Options :

6406531894712. ✖ `Number::setA()`

6406531894713. ✔ `Number::setB()`

6406531894714. ✖ Complex::print()

6406531894715. ✔ Real::print()

6406531894716. ✔ Number::print()

Sub-Section Number :	4
Sub-Section Id :	64065381147
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 66 Question Id : 640653566937 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 6

Question Label : Multiple Choice Question

Consider the code segment of a Java servlet below. The atomic sections are marked as P_1, P_2, P_3, \dots .

	//asg_scores stores scores for all assignments ArrayList<Double> asg_scores = null; response.setContentType("text/html"); PrintWriter out=response.getWriter();
P_1	out.println("<HTML><HEAD><TITLE>Eligibility</TITLE></HEAD><BODY> "); String roll_no = request.getParameter("roll"); /* getScores() take roll number of a student as input, runs a query in the database, and returns a ArrayList object containing the scores for all the assignments. */ asg_scores = getScores(val); double total_score = 0.0;
	if(asg_scores != null){
	for (Double val : asg_scores) {
P_2	total_score += val;
	}
P_3	avg_score = total_score / 10;
	if(perMark >= 50.0)
P_4	out.println("Status : Eligible</BR>");
	else
P_5	out.println("Status : Not eligible</BR>");
	}
	else{
P_6	out.println("Invalid roll number</BR>");
	}
P_7	out.println("</BODY></HTML>"); out.close();

Identify the component expression corresponding to the given code above.

Options :

6406531894708. ✓ $P_1 \cdot ((P_2^* \cdot P_3 \cdot (P_4|P_5))|P_6) \cdot P_7$

6406531894709. ✗ $P_1 \cdot (P_2 \cdot P_3 \cdot (P_4|P_5)|P_6) \cdot P_7$

6406531894710. ✗ $P_1 \cdot ((P_2|P_3) \cdot (P_4|P_5)|P_6) \cdot P_7$

6406531894711. ✗ $P_1 \cdot (((P_2|P_3) \cdot (P_4|P_5))|P_6) \cdot P_7$

Question Number : 67 Question Id : 640653566949 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 6

Question Label : Multiple Choice Question

Match the following.

Type of coupling	Description
1. Parameter coupling	A. Two units communicate by sending and/or receiving messages over buffers/channels
2. Shared data coupling	B. Two units access an external object like a file
3. External device coupling	C. Two units access the same data through global or shared variables
4. Message-passing interfaces	D. Parameters are passed in calls

Options :

6406531894753. ✔ 1-D, 2-C, 3-B, 4-A

6406531894754. ✖ 1-D, 2-B, 3-C, 4-A

6406531894755. ✖ 1-A, 2-C, 3-B, 4-D

6406531894756. ✖ 1-A, 2-B, 3-C, 4-D

Sub-Section Number : 5

Sub-Section Id : 64065381148

Question Shuffling Allowed : Yes

Is Section Default? : null

Question Number : 68 Question Id : 640653566939 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 5

Question Label : Multiple Choice Question

Consider the following Java program.

```
class A{
    protected int x, y;
    public void setX(int x) {
        this.x = x;
    }
    public void setY(int y) {
        this.y = y;
    }
    public void print() {
        System.out.println(x + " " + y);
    }
}

class B extends A{
    protected int y;
    public void setY(int y) {
        this.y = y;
    }
}

public class MutationEx {
    public static void main(String[] args) {
        B objB = new B();
        objB.setX(10);
        objB.setY(20);
        objB.print();
    }
}
```

The above program generates output as 10 0, instead 10 20, which is due to the inherited y is overridden in the descendant B that hides the inherited variable y in B. Identify the type of anomaly/fault in the given scenario.

Options :

6406531894717. ✖ Inconsistent type use

6406531894718. ✖ State definition anomaly

6406531894719. ✔ State definition inconsistency anomaly

6406531894720. ✖ State visibility anomaly

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 5

Question Label : Multiple Choice Question

Given a context free grammar over a finite alphabet $\Sigma = \{a, b\}$, with the production rules as follows:

$$\begin{aligned} S &\rightarrow aXb, \\ X &\rightarrow aXb, \\ X &\rightarrow a \end{aligned}$$

Let S be the starting variable. Which of the following sets below corresponds to the language generated by the given grammar?

Options :

6406531894721. ✖ $\{a^2b\}$

6406531894722. ✖ $\{a^n b^n a \mid n \geq 1\}$

6406531894723. ✖ $\{a^{n+1} b^n \mid n \geq 0\}$

6406531894724. ✔ $\{a^{n+1} b^n \mid n \geq 1\}$

Question Number : 70 Question Id : 640653566941 Question Type : MCQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 5

Question Label : Multiple Choice Question

Mutation of the statement $y = m * x + c$ to the statement $y = -m * x + c$ is an example of which kind of mutation operator?

Options :

6406531894725. ✖ Conditional operator replacement

6406531894726. ✖ Logical operator replacement

6406531894727. ✖ Scalar variable replacement

6406531894728. ✔ Unary Operator Insertion

Question Number : 71 Question Id : 640653566942 Question Type : MCQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 5

Question Label : Multiple Choice Question

Consider a software application that needs to be tested. The application computes the scholarships to be given to the students at a school on a merit basis. The input to the system is an integer that represents the percentage of marks obtained by a student, and the output is the amount of money to be given to the student each month as a scholarship. The amount of money to be given (monthly) as scholarship can be calculated as follows:

- If marks obtained by a student is $> 90\%$ and $\leq 100\%$, then scholarship amount is Rs. 5,000/- per month.
- If marks obtained by a student is $> 80\%$ and $\leq 90\%$, then scholarship amount is Rs. 4,000/- per month.
- If marks obtained by a student is $> 70\%$ and $\leq 80\%$, then scholarship amount is Rs. 3,000/- per month.
- If marks obtained by a student is $\geq 0\%$ and $\leq 70\%$, then no scholarship will be given.

What is the minimum number of test cases to be prepared for testing the software system using equivalence class partitioning technique?

Options :

6406531894729. ✖ 4

6406531894730. ✖ 5

6406531894731. ✔ 6

6406531894732. ✖ 7

Question Number : 72 Question Id : 640653566946 Question Type : MCQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction

Time : 0

Correct Marks : 5

Question Label : Multiple Choice Question

Consider the following code segment as the code base for symbolic testing.

```
//code base
int square(int n) {
    return n * n;
}
int double(int n) {
    return 2 * n;
}
void compute(int x, int y, int z) {
    int u = double(x);
    if(u == z) {
        int v = square(y);
        if(u >= v) {
            z = u + v;
        }
        else {
            abort();
        }
    }
}
```

Identify the appropriate program condition (PC) to reach the `abort()` statement in the above code.

Options :

6406531894741. ✖ $(2 * x_0 < y_0 * y_0)$

6406531894742. ✔ $(2 * x_0 == z_0) \wedge (2 * x_0 < y_0 * y_0)$

6406531894743. ✖ $(2 * x_0 == z_0) \wedge (2 * x_0 >= y_0 * y_0)$

6406531894744. ✖ $(2 * x_0 \neq z_0) \wedge (2 * x_0 < y_0 * y_0)$

Question Number : 73 Question Id : 640653566948 Question Type : MCQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 5

Question Label : Multiple Choice Question

Suppose, for a particular web application, the invalid inputs are not recognized by the server, and abnormal software behavior is exposed to users.

Options :

6406531894749. ✖ Valid response

6406531894750. ✖ Faults and failures

6406531894751. ✔ Exposure

6406531894752. ✖ None of these

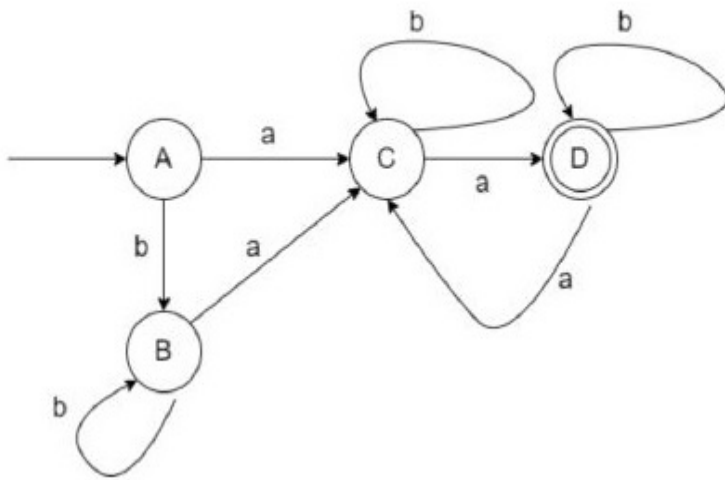
Question Number : 74 Question Id : 640653566950 Question Type : MCQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 5

Question Label : Multiple Choice Question

Consider the below finite state machine (FSM) and choose the correct option.



Options :

6406531894757. ✖ The FSM accepts the input, if the input string contains odd number of a , and there are at least three a .

6406531894758. ✖ The FSM accepts the input, if the input string contains even number of b , and there are at least two b .

6406531894759. ✖ The FSM accepts the input, if the input string contains odd number of b , and there are at least three b .

6406531894760. ✔ The FSM accepts the input, if the input string contains even number of a , and there are at least two a .

Question Number : 75 Question Id : 640653566952 Question Type : MCQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 5

Question Label : Multiple Choice Question

A path from I_i to I_j is _____ with respect to variable v if v is not given another value on any of the nodes or edges in the path.

Fill in the blank with appropriate option.

Options :

6406531894765. ✖ du-path

6406531894766. ✓ def-clear

6406531894767. ✖ du-pair

6406531894768. ✖ du-tour

Sub-Section Number :	6
Sub-Section Id :	64065381149
Question Shuffling Allowed :	No
Is Section Default? :	null

Question Id : 640653566943 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Question Numbers : (76 to 77)

Question Label : Comprehension

Consider the predicate $p = (a \vee b) \wedge (b \vee c)$.

Based on the above data, answer the given subquestions.

Sub questions

Question Number : 76 Question Id : 640653566944 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 4

Question Label : Multiple Choice Question

What will be p_b ?

Options :

6406531894733. ✓ $\neg(a \wedge c)$

6406531894734. ✖ $\neg(a \vee c)$

6406531894735. ✖ $(a \wedge c)$

6406531894736. ✖ $(a \vee c)$

Question Number : 77 Question Id : 640653566945 Question Type : MCQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 6

Question Label : Multiple Choice Question

From the given options identify all pairs test requirements to satisfy restricted active clause coverage (RACC) for clause b .

Options :

6406531894737. ✖ $\{(a = T, b = F, c = T), (a = T, b = F, c = F)\}$
 $\{(a = F, b = T, c = F), (a = F, b = F, c = T)\}$

6406531894738. ✖ $\{(a = T, b = F, c = T), (a = T, b = F, c = F)\}$
 $\{(a = F, b = T, c = F), (a = F, b = F, c = T)\}$
 $\{(a = F, b = T, c = T), (a = F, b = F, c = F)\}$

6406531894739. ✖ $\{(a = F, b = T, c = T), (a = F, b = F, c = T)\}$
 $\{(a = F, b = T, c = F), (a = F, b = F, c = F)\}$
 $\{(a = T, b = F, c = T), (a = T, b = F, c = F)\}$

6406531894740. ✔ $\{(a = T, b = T, c = F), (a = T, b = F, c = F)\}$
 $\{(a = F, b = T, c = T), (a = F, b = F, c = T)\}$
 $\{(a = F, b = T, c = F), (a = F, b = F, c = F)\}$

Sub-Section Number :

7

Sub-Section Id :

64065381150

Question Shuffling Allowed :

Yes

Is Section Default? :

null

Question Number : 78 Question Id : 640653566947 Question Type : MSQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Selectable Option : 0

Question Label : Multiple Select Question

Identify the predicate/s which is/are in Conjunctive Normal Form (CNF).

Options :

6406531894745. ✓ $a \wedge b \wedge c$

6406531894746. ✗ $(a \wedge b) \vee (c \wedge d)$

6406531894747. ✓ $(a_1 \vee a_2 \vee a_3) \wedge (b_1 \vee b_2) \wedge c_1$

6406531894748. ✗ $a \vee (b_1 \wedge b_2) \vee (c_1 \wedge c_2 \wedge c_3)$

Question Number : 79 Question Id : 640653566951 Question Type : MSQ Is Question

Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 4 Selectable Option : 0

Question Label : Multiple Select Question

Identify the correct statements about Structural coverage criteria subsumption.

Options :

6406531894761. ✓ Edge coverage subsumes node coverage.

6406531894762. ✗ Node coverage subsumes edge coverage.

6406531894763. ✓ Prime path coverage subsumes edge coverage

6406531894764. ✖ Edge coverage subsumes prime path coverage

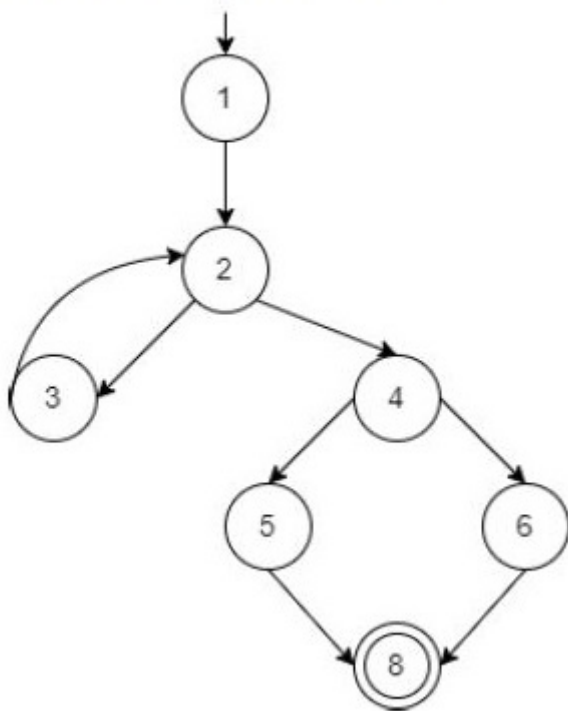
Sub-Section Number :	8
Sub-Section Id :	64065381151
Question Shuffling Allowed :	No
Is Section Default? :	null

Question Id : 640653566953 Question Type : COMPREHENSION Sub Question Shuffling Allowed : No Group Comprehension Questions : No Question Pattern Type : NonMatrix Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Question Numbers : (80 to 81)

Question Label : Comprehension

Consider the CFG given below.



Based on the above data, answer the given subquestions.

Sub questions

Question Number : 80 Question Id : 640653566954 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 6

Question Label : Multiple Choice Question

Find the total number of test requirements for edge pair coverage?

Options :

6406531894769. ✖ 7

6406531894770. ✖ 8

6406531894771. ✔ 9

6406531894772. ✖ 10

Question Number : 81 Question Id : 640653566955 Question Type : MCQ Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 6

Question Label : Multiple Choice Question

Find the total number of prime paths in the given CFG?

Options :

6406531894773. ✖ 5

6406531894774. ✖ 6

6406531894775. ✔ 7

6406531894776. ✖ 8

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Section Id :	64065338431
Section Number :	4
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	9