Question Label : Multiple Choice Question

Consider the following

1. Great slide presentations contain appropriate content arranged in the most efficient, graceful manner without superfluous decoration.
2. Good slide designs have plenty of negative space.

Which of the statement(s) given above is/are true?

Options :

6406531887531. ✖ 1 only

6406531887532. ✖ 2 only

6406531887533. ✔ Both 1 and 2

6406531887534. ✖ Neither 1 nor 2

Sw Testing

Section Id :	64065338350
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 : 64065380584

Question Shuffling Allowed : No

Is Section Default? : null

Question Number : 60 Question Id : 640653564675 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 :

6406531887535. ✔ YES

6406531887536. ✖ NO

Sub-Section Number : 2

Sub-Section Id : 64065380585

Question Shuffling Allowed : Yes

Is Section Default? : null

Question Number : 61 Question Id : 640653564676 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 find the upper limit capacity of the system

and also to determine how the system performs if the current load goes well above the expected maximum?

Options :

6406531887537. ✖ Load testing

6406531887538. ✔ Stress testing

6406531887539. ✖ Soak testing

6406531887540. ✖ Spike testing

Question Number : 62 Question Id : 640653564678 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 type of client-side testing can verify the inter-value constraints of the different parameters of the input, like the selected country, selected state, selected city, entered zip code, etc.?

Options :

6406531887545. ✖ Value level bypass testing

6406531887546. ✔ Parameter level bypass testing

6406531887547. ✖ Control flow level bypass testing

6406531887548. ✖ User-session data based testing

Sub-Section Number :	3
Sub-Section Id :	64065380586
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 63 Question Id : 640653564677 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

Match the following.

Type of metrics	Example
1. Software metrics	A. Mean time to failure
2. Product quality metrics	B. Fix backlog and backlog management
3. In-process quality metrics	C. Defect Removal Effectiveness
4. Maintenance quality metrics	D. Cyclomatic complexity

Options :

6406531887541. ✖ 1-B, 2-C, 3-A, 4-D

6406531887542. ✖ 1-D, 2-C, 3-A, 4-B

6406531887543. ✔ 1-D, 2-A, 3-C, 4-B

6406531887544. ✖ 1-B, 2-A, 3-C, 4-D

Question Number : 64 Question Id : 640653564681 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 code.

```
1. class Person{
2       protected String name;
3       public Person(){
4           name = "Unknwon";
5       }
6       public Person(String n){
7           name = n;
8       }
9. }
10.
11.class Employee extends Person{
12.     protected int eid;
13.     public Employee(){
14.         eid = -1;
15.     }
16.     public Employee(String n, int i){
17.         super(n);
18.         eid = i;
19.     }
20.     public void print() {
21.         System.out.println(eid + " " + name);
22.     }
23.}
24.
25.public class T2 {
26.     public static void main(String[] args) {
27.         Employee e = new Employee("kevin", 10);
28.         e.print();
29.     }
30.}
```

Which of the following mutation operator can be used to create a new mutant by removing the statement at LINE 17?

Options :

6406531887558. ✖ Actual type change (ATC) operator

6406531887559. ✔ Parent constructor deletion (PCD) operator

6406531887560. ✖ Overriding method deletion (OMD) operator

6406531887561. ✖ Hiding variable deletion (HVD) operator

Question Number : 65 Question Id : 640653564682 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

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

$$S \to aXb,$$
$$X \to aXb,$$
$$X \to ab,$$

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

Options :

6406531887562. ✖ $\{ab\}$

6406531887563. ✖ $\{a^n b^n | n \geq 1\}$

6406531887564. ✖ $\{(ab)^n | n \geq 1\}$

6406531887565. ✔ $\{a^n b^n | n \geq 2\}$

Question Number : 66 Question Id : 640653564683 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 `if(x >= y)` to the statement `if(x > y)` is an example of which kind of mutation operator?

Options :

6406531887566. ✖ Conditional operator replacement

6406531887567. ✖ Logical operator replacement

6406531887568. ✔ Relational operator replacement

6406531887569. ✖ Unary Operator Insertion

Question Number : 67 Question Id : 640653564684 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 percentage of discount to be given for a given total purchase price. The input to the system is an integer that represents the total purchase price, and the output is the percentage of discount to be given. The percentage of discount to be given on the total purchase price is calculated as follows:

- If the total purchase price is $\geq$ Rs. 0/- and $<$ Rs. 5,000/-, then no discount will be given.
- If the total purchase price is $\geq$ Rs. 5,000/- and $<$ Rs. 10,000/-, then the discount is 5%.
- If the total purchase price is $\geq$ Rs. 10,000/- and $<$ Rs. 50,000/-, then the discount is 10%..
- If the total purchase price is $\geq$ Rs. 50,000/-, then the discount is 15%.

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

Options :

6406531887570. ✖ 4

6406531887571. ✔ 5

6406531887572. ✖ 6

6406531887573. ✖ 7

Question Number : 68 Question Id : 640653564688 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) {
            abort();
        }
    }
}
```

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

Options :

6406531887582. ✖ $(2 * x_0 >= y_0 * y_0)$

6406531887583. ✖ $(x_0 == z_0) \wedge (x_0 >= y_0)$

6406531887584. ✔ $(2 * x_0 == z_0) \wedge (2 * x_0 >= y_0 * y_0)$

6406531887585. ✖ $(2 * x_0 \neq z_0) \wedge (2 * x_0 < y_0 * y_0)$

Question Number : 69 Question Id : 640653564690 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 cause an abnormal server error. Identify the category of server response in this case.

Options :

6406531887590. ✖ Valid response

6406531887591. ✔ Faults and failures

6406531887592. ✖ Exposure

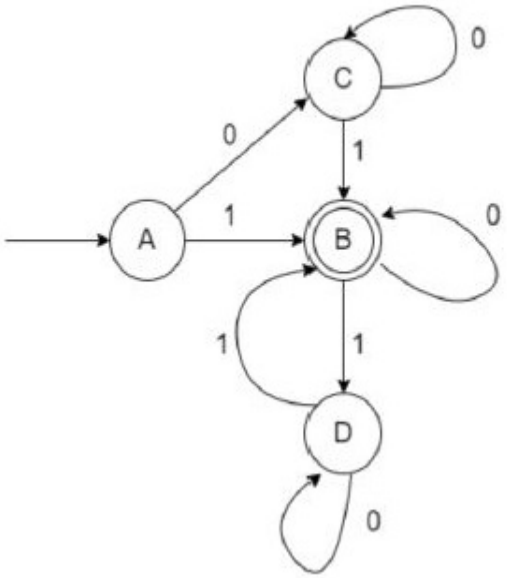
6406531887593. ✖ None of these

Question Number : 70 Question Id : 640653564692 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 :

6406531887598. ✖ The FSM accepts the input, if the number of 0s are odd.

6406531887599. ✖ The FSM accepts the input, if the number of 0s are even, and there are at least two 0s.

6406531887600. ✔ The FSM accepts the input, if the number of 1s are odd.

6406531887601. ✖ The FSM accepts the input, if the number of 1s are even and, there are at least two 0s.

Question Number : 71 Question Id : 640653564694 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 _____ with respect to a variable v is a simple path that is def-clear from a def of *v* to a use of *v* .

Fill in the blank with appropriate option

Options :

6406531887606. ✔ du-path

6406531887607. ✖ def-clear path

6406531887608. ✖ du-pair

6406531887609. ✖ du-tour

Sub-Section Number :	4
Sub-Section Id :	64065380587
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 72 Question Id : 640653564679 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, ...

	//items_price stores prices of all prices the items in an order
	ArrayList<Double> items_price = null;
	response.setContentType("text/html");
	PrintWriter out=response.getWriter();

P_1	out.println ("<HTML><HEAD><TITLE>Discount</TITLE></HEAD><BODY>");
	String order_no = request.getParameter("order_no");
	/*
	getItemsPrice() takes order number as input, runs a query
	in the database, and returns a ArrayList object containing
	the prices of all the items belong to the order_id
	*/
	items_price = getItemsPrice(order_no);
	double total_price = 0.0;

	if(items_price == null){
P_2	out.println("Invalid roll number</BR>");
	}
	else{
	for (Double val : items_price) {
P_3	total_price += val;
	}
	if(total_price >= 1000.0)
P_4	out.println("Discount : " + total_price * 0.1 + "</BR>");
	else
P_5	out.println("No discount</BR>");
	}
P_6	out.println ("</BODY></HTML>"); out.close();

Identify the component expression corresponding to the given code above.

Options :

6406531887549. ✖ $P_1 \cdot (P_2 \cdot (P_3^* | P_4) \cdot P_5) \cdot P_6$

6406531887550. ✔ $P_1 \cdot (P_2 | (P_3^* \cdot (P_4 | P_5))) \cdot P_6$

6406531887551. ✖ $P_1 \cdot (P_2 | (P_3 \cdot P_4 | P_5)) \cdot P_6$

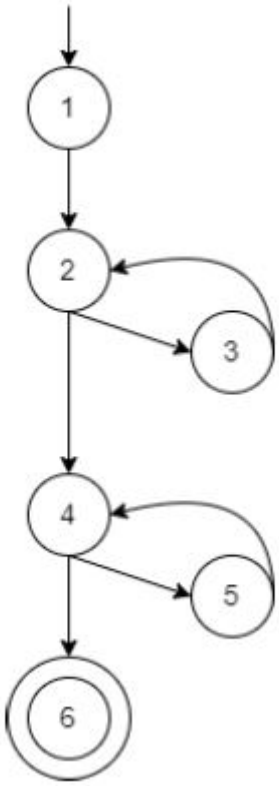
6406531887552. ✖ $P_1 \cdot (P_2 | (P_3^* | (P_4 | P_5))) \cdot P_6$

Question Number : 73 Question Id : 640653564691 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 control flow graph (CFG) given below.



What is cyclomatic complexity of the above CFG?

Options :

6406531887594. ✖ 2

6406531887595. ✔ 3

6406531887596. ✖ 4

6406531887597. ✖ 5

Sub-Section Number :	5
Sub-Section Id :	64065380588
Question Shuffling Allowed :	Yes
Is Section Default? :	null

Question Number : 74 Question Id : 640653564680 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 question. 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 `true` at `LINE-1`?

Options :

6406531887553. ✔ `Number::setA()`

6406531887554. ✔ `Number::setB()`

6406531887555. ✔ `Complex::print()`

6406531887556. ✖ `Real::print()`

6406531887557. ✔ `Number::print()`

Sub-Section Number : 6

Sub-Section Id : 64065380589

Question Shuffling Allowed : Yes

Is Section Default? : null

Question Number : 75 Question Id : 640653564689 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 Disjunctive Normal Form (DNF).

Options :

6406531887586. ✖ $a \wedge b \wedge c$

6406531887587. ✔ $(a \wedge b) \vee (c \wedge d)$

6406531887588. ✖ $(a_1 \vee a_2 \vee a_3) \wedge (b_1 \vee b_2) \wedge c_1$

6406531887589. ✔ $a \vee (b_1 \wedge b_2) \vee (c_1 \wedge c_2 \wedge c_3)$

Question Number : 76 Question Id : 640653564693 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

Given a graph with set of vertices (or nodes) *V* and set of edges *E*. From among the given options, identify the correct one/s.

Options :

6406531887602. ✔ For both directed and undirected graphs, adjacency list representation requires $\Theta(|V| + |E|)$ memory.

6406531887603. ✖ Total running time of BFS using an adjacency lists is $O(V + E)$.

6406531887604. ✖ For both directed and undirected graphs, Adjacency matrix representation requires $\Theta(|V| + |E|)$ memory.

6406531887605. ✔ For both directed and undirected graphs, Adjacency matrix representation requires $\Theta(|V|^2)$ memory.

Sub-Section Number :	7
Sub-Section Id :	64065380590
Question Shuffling Allowed :	No
Is Section Default? :	null

Question Id : 640653564685 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 : (77 to 78)

Question Label : Comprehension

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

Based on the above data, answer the given subquestions.

Sub questions

Question Number : 77 Question Id : 640653564686 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_a?

Options :

6406531887574. ✖ $\neg(b \vee c)$

6406531887575. ✔ $\neg(b \wedge c)$

6406531887576. ✖ $(b \wedge c)$

6406531887577. ✖ $(b \vee c)$

Question Number : 78 Question Id : 640653564687 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 a.

Options :

6406531887578. ✖ $\{(\mathrm{a}=\mathrm{T}, \mathrm{b}=\mathrm{T}, \mathrm{c}=\mathrm{F}), (\mathrm{a}=\mathrm{F}, \mathrm{b}=\mathrm{T}, \mathrm{c}=\mathrm{F})\}$
$\{(\mathrm{a}=\mathrm{F}, \mathrm{b}=\mathrm{T}, \mathrm{c}=\mathrm{T}), (\mathrm{a}=\mathrm{F}, \mathrm{b}=\mathrm{F}, \mathrm{c}=\mathrm{T})\}$

6406531887579. ✖ $\{(a = T, b = T, c = F), (a = F, b = T, c = F)\}$
$\{(a = T, b = F, c = F), (a = F, b = F, c = F)\}$
$\{(a = F, b = T, c = T), (a = F, b = F, c = T)\}$

6406531887580. ✔ $\{(a = T, b = T, c = F), (a = F, b = T, c = F)\}$
$\{(a = T, b = F, c = T), (a = F, b = F, c = T)\}$
$\{(a = T, b = F, c = F), (a = F, b = F, c = F)\}$

6406531887581. ✖ $\{(a = T, b = T, c = F), (a = F, b = T, c = F)\}$
$\{(a = T, b = F, c = T), (a = F, b = F, c = T)\}$
$\{(a = F, b = T, c = T), (a = F, b = F, c = F)\}$

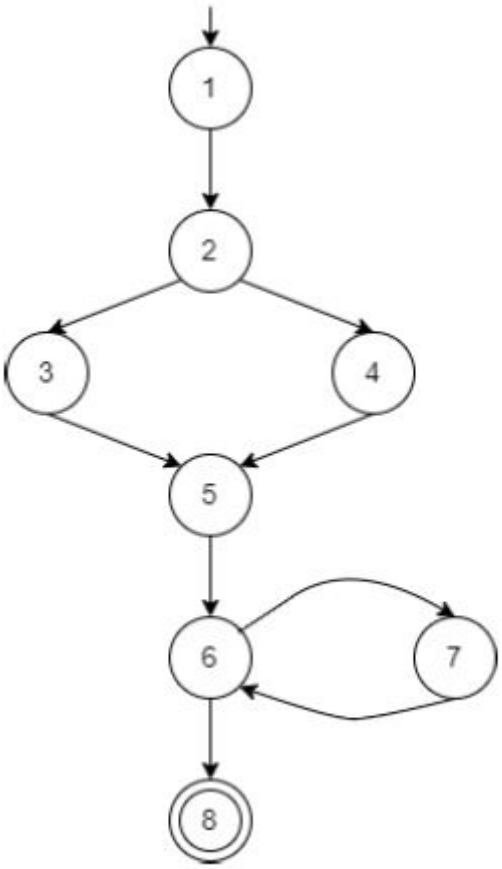
Sub-Section Number :	8
Sub-Section Id :	64065380591
Question Shuffling Allowed :	No
Is Section Default? :	null

Question Id : 640653564695 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 : (79 to 80)

Question Label : Comprehension

Consider the CFG given below.



Based on the above data, answer the given subquestions.

Sub questions

Question Number : 79 Question Id : 640653564696 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

Identify the correct statement about node and edge coverage of the given CFG.

Options :

6406531887610. ✔ Minimum 2 test paths are required satisfy both the node and edge coverage.

6406531887611. ✖ Minimum 1 test path is required to satisfy node coverage, and minimum 2 test paths is required to satisfy edge coverage.

6406531887612. ✖ Minimum 3 test paths are required satisfy both the node and edge coverage.

6406531887613. ✖ Minimum of 2 test path is required to satisfy node coverage, and minimum 3 test paths is required to satisfy edge coverage.

Question Number : 80 Question Id : 640653564697 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 :

6406531887614. ✖ 5

6406531887615. ✖ 6

6406531887616. ✔ 7

6406531887617. ✖ 8

AI

Section Id :	64065338351
Section Number :	4
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	9
Number of Questions to be attempted :	9
Section Marks :	25
Display Number Panel :	Yes
Group All Questions :	No
Enable Mark as Answered Mark for Review and Clear Response :	Yes