# St. Mary's School, Pune

Date : 13/10/2021

Name : Varun Kadapatti Roll No.: 21 Class : IX-D Subject : Computer Application

## Computer Applications
## Half Yearly Examination

97/100

10 10 97 117 98.0

SECTION A

QUESTION 1

a)

| Unary Operator | Binary Operator |
|---|---|
| i) Unary operators are operators which are associated with only one operand. | i) Binary operators are operators which are associated with two operands |
| ii) Example: --, ++, +, - | ii) Example: /, % |

2

b) JVM stands for Java Virtual Machine. It is a virtual processor for interpreting and executing Java byte code across various platform.

2

c) 13 - Integer Literal
'd' - character Literal
4.7298 - Floating point literal
"z" - String Literal

2

d) literals are data items which do not change during execution of a program. Types of Literals are - Integer Literal, String Literal, Character literal, etc.

2

e) if (z>0)
a=5;
else

```
if (z>0)
{
    a=5;
}
else a=10;
```

2

## QUESTION 2

2) double q = 1/(Math.sqrt(a+b)) +2/(Math.pow(a,3));

b) m=11 , n=10

p=(n--) %4 + (m--) %2

p= 10 %4 + 11 %2

p= 2+1

p= 3

c)

```
if (condition)
{
 //Statement
}
```

2

else //statement

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d) Abstraction is the act of representing the essential features of an object or machine without knowing the background details. Example: We know how to drive a car but we don't know the mechanism that makes it move.

2

e) 100

2

## QUESTION 3

a)
```
if (x==y)
System.out.print(x);
else if (x<y)
System.out.print(y);
```

2

b)

| == operator | = operator |
|---|---|
| i) It is a relational operator. | i) It is an assignment operator |
| ii) It checks if two values are equal or not and returns true or false. Example: int a==6; | ii) It assigns the right hand side value of left hand side variable. Example: int a=5 Example: int x = 9 |

2

c) int c = 45

2

d) Implicit Conversion is the conversion of one primitive data type to another primitive data type by the compiler. Explicit Conversion is the conversion of one primitive data type to another primitive data type forcefully by the programmer.

2

---

e) i) System.out.println(Math.round(14.49));

2 ii) System.out.println(Math.abs(-1.7));

---

QUESTION 4

2 a) a=10 b=3

---

b) i) char ch = (char) p;

2 ii) int m = (int) c;

---

c) i) Logical Error

ii) Syntax Error

---

d) Different styles of expressing comment in a program:

i) Single line comment: //comment

2 ii) multi line comment: /* comment 1
comment 2 */

| e) Operator | Expression |
| --- | --- |
| 1) Operator is a symbol or a letter which performs certain operations and yields a value | 1) Expression is the combination of operators and operands together. |
| 2) example: +, -, = | 2) example: a = b - c |

Section B

Q7.

```
import java.util.* ;

public class Q7
{
   public static void main(String[] args)
    {
       Scanner s = new Scanner(System.in);

       double num;

       num = s.nextDouble();

       if(num >0) {
       System.out.println("Entered number is positive");
       }

       else if (num <0) {
        System.out.println("Entered number is negative");
       }

       else if(num ==0){
       System.out.println("Entered number is zero");
       }

    }

}
```

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Variable Description Table for Question: 7

| Data Type | Variable Name | Purpose / Description |
|---|---|---|
| double | num | Taking num as input using scanner class. |
| | | |
| | | |
| | | |

Q9

```
import java.util.*;

public class Q9
{
    public static void main(String args[])
    {
        Scanner s = new Scanner(System.in);
        int input, firstdig, lastdig, sumdig, prodig;

        System.out.println("Enter a 2digit number");
        input = S.nextInt();

        if(input <10 || input >99) {
            System.out.println("Invalid Input. Enter only 2digit no.");
            System.exit(0);
        }
        else{
            firstdig = n/10 ;
            lastdig = n%10 ;
            sumdig = firstdig + lastdig ;
            prodig = firstdig * lastdig ;

        if((sumdig + prodig) ==n) {
            System.out.println("Special two-digit number");
        }

        else System.out.println("Not a special two-digit number");
    }

}
```

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Variable Description Table for Question: 9

| Data Type | Variable Name | Purpose / Description |
|---|---|---|
| int | ~~iput~~ input | Allows the user to ~~enter a number~~ an integer. |
| int | firstdig | Stores the value of first digit of the variable - input. |
| ~~int~~ | ~~lastdig~~ | |
| int | lastdig | Stores the value of the last digit of the variable - input. |
| int | sumdig | Stores the value of the sum of the variables - firstdig and lastdig. |
| int | prodig | Stores the value of the product of variables - firstdig and last dig |

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Q6.

```
import java.util.*;

public class Q6
{
    public static void main(String args[])
    {
        Scanner s = new Scanner(System.in);
        int n;

        System.out.println("Enter a number");
        n = s.nextInt();

        if(n%2==0 && n%5==0) {
        System.out.println(n+ "is divisible by both 2and 5");
        }
        else if(n%2==0 && n%5 !=0) {
        System.out.println(n+ "is divisible by 2 not by 5");
        }
        else if(n%5==0 && n%2 !=0) {
        System.out.println(n+ "is divisiHe by5not by2");
        }

    }
}
```

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Variable Description Table for Question: 6

| Data Type | Variable name | Purpose / Description |
|---|---|---|
| int | n | to take and store n number from user |
| | | |
| | | |

Q5

```
import java.util.*;

public class Q5
{
    public static void main (String args[])
    {
        Scanner s = new Scanner (System.in);
        System.out.println("Enta 3 unequal numbes");
        double num1, num2, num3;
        System.out.println("Enter 3 unequal numbes");

num1 = s.nextDouble();
num2 = s.nextDouble();
num3 = s.nextDouble();

if(num1 > num2 && num1 > num3) {
 System.out.println("Greatest number is:" +num1);
}

else if(num2 > num1 && num2 > num3) {
 System.out.println("Greatest number is:" +num2);
}

else if(num3 > num1 && num3 > num2) {
 System.out.println("Greatest number is:" +num3);
}

}

}
```

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Variable Description Table for Question: 5

| Data Type | Variable Name | Purpose / Description |
|---|---|---|
| ~~int~~ double | num1 ✓ | Stores the value of the 1st number entered by the user |
| & ~~int~~ double | num2 | Stores the value of the 2nd number entered by the user |
| ~~int~~ double | num3 | Stores the value of the 3rd number entered by the user |