COMPUTER APPICATION
CLASS X
PRACTICE TEST(MCQ BASED)
Marks: 70

Tick (✓) the correct option.30x1=30

1. An object is represented by two attributes, out of which one is characteristics and the other one is _____.
 a. Behaviour   b. Situation
c. Abstraction   d. Encapsulation

2. Name the characteristics of Object Oriented Programming that hides the complexity and provides a simple interface.
a. Encapsulation   b. Polymorphism
c. Abstraction   d. Inheritance

3. What is the behaviour aspect of an object represented by?
a. Member Functions   b. Data Members
c. Both a and b   d. None of these

4. What is the ability of an object to take on many forms called?
a. Polymorphism   b. Encapsulation
c. Abstraction   d. Inheritance

5. A Virtual Processor that is implemented in software and runs using the capabilities provided by your operating system and computer hardware.
a. Byte Code   b. Compiler
c. Interpreter   d. Java Virtual Machine(JVM)

6. Which among the following is not a Token?
a. Keywords   b. Literals
c. Identifiers   d. Data Type

7. Which among the following is a keyword but not a literal?
a. for   b. null
c. true   d. false

8. Which among the following is a valid float literal?
a. 12.36f   b. 12.36F
c. 12.36   d. Both a and b

9. Which among the following is a valid method of initialising?
a. boolean f=true;   b. boolean f=True;
c. boolean f='true';   d. None of these

10.If a is of type int and b is of type float what would be the resultant data type of a+b?
a. int   b. float

c. double   d. short

11.Which among the following is the correct construct for creating an object named 'book' of the 'Library' class?
a. Library book=new Library;   b. book =new Library();
c. Library() book=new Library();   d. Library book=new Library();

12. Which operator is used to access individual members of an object?
a. . (dot)   b. >   c. ==   d. New
13. The member 'out' object of the 'System' class belongs to which class?
a. System   b. Print   c. PrintStream   d. Println

14.The statement a%2 will result to what if the value of a is an even number?
a. 0   b. 1   c. Both a and b   d. None of these
15.Which among the following package is imported by default:
a. java.lang   b. java.util
c. Both a and b   d. None of these
16. Which among the following class do not belong to the java.lang package?
a. System   b. String
c. Math   d. Scanner
17.Which among the following gives the next mathematical integer?
a. Math.floor( )   b. Math.ceil( )
c. Math.random( )   d. All of these
18. What is the return type of Math.min(1,2.0f)?
a. float   b. double
c. int   d. long
19.What value will Math.sqrt(-9) return?
a. -3.0   b. 3.0
c. NaN   d. None of these
20. What value will Math.sqrt(Math.ceil(8.1)) return?
a. 9.0   b. 9
c. 3.0   d. 4.0

21.Which among the following constants are used in switch-case statements?
a. char   b. int
c. float   d. Both a and b

22.What is the problem called in which an optional else clause in an if–then(–else) statement results in nested conditionals being ambiguous?
a. Dangling if   b. Dangling else
c. Both a and b   d. None of these
23.State whether the following statements about switch statement are correct.

i. Switch statement often provides a better alternative than a large series of if-else-if statements.

ii. The break statement is used inside the switch to terminate a statement sequence.

a. True, False   b. False, True

c. True, True   d. False, False

24. Which among the following represents a syntax error?

a. Dividing an integer by zero.

b. Accessing an element that is out of bounds of an array.

c. Trying to store a value which is incompatible to a certain data-type.

d. Missing semicolon

25. By_____ using you can force immediate termination of loop, bypassing the conditional expression and

any remaining code in the body of the loop.

a. switch   b. break

c. continue   d. default

26. What is the value of k after the following code fragment?

int k = 0;

int n = 12

while (k < n)

{

k = k + 1;

}

a.   0   b. 11   c. 12   d. Unknown

27. What is an infinite loop?

a. A loop that functions infinitely well   b. A loop that runs forever

c. A loop that never starts   d. A loop that will never function

28. Assigning value to a variable during declaration is called _____?

a. Declaration   b. Assignment

c. Initialisation   d. None of these

29. Which among the following Scanner methods allows us to input a number with a decimal point?

a. nextInt()   b. nextFloat()

c. nextDecimal()   d. nextPoint()

30. Which among the following is not a punctuator?

a. ; semicolon   b. , comma

c. : colon   d. . dot

B. What will be the output of the following: 10x2=20

1. int a=5,b=6,c;

```
c=a+b%2;
b=a+2*c;
System.out.println(c);
System.out.println(b);
```

2. int a=12,b=13,c;

```
c=a++ + ++a/7 + b++;
System.out.println(a+"\t"+b+"\t"+c);
```

3. int a=3,b=14;

```
System.out.println(a+ " " +b);
a=a+b;
b=a-b;
a=a-b;
System.out.println(a+" "+b);
```

4. int a=5,b=6,c=0;

```
c=(a+b>8)?2*a:3*b;
System.out.println(c);
```

5. Give the output of the following expressions.
i. If x = -9.99, calculate Math.abs(x);
ii. If x = 9.0, calculate Math.sqrt(x);
6. int x;
for(x=1;x<=10;x++)
{
System.out.println(x);
if (x==5)
break;
}

7. for(int m=5; m<=20; m+=5)
{
if(m%3 == 0)
break;
else
if(m%5 == 0)
System.out.println(m);
continue;
}

8. int num=75;
while(num<=100)
```

```
{
if(num%3==0)
num=num+10;
else
num=num+5;
System.out.println(num);
}
9. double x= Math.ceil(-7.5)+Math.floor(4.7)+Math.pow(3,2);
System.out.println(x);
10. int j=0;
for(int i=0;i<14;i++)
{
if(i<10)
 j=5+i;
}
System.out.println(j);
```

C: Fill in the following programs with appropriate statement: 5x4=20

Program 1.Mayur Transport Company charges for parcels as per the following tariff:

Weight   Charges
Upto 10 Kg.   Rs. 30 per Kg.
For the next 20 Kg.   Rs. 20 per Kg.
Above 30 Kg.   Rs. 15 per Kg.
Write a program in Java to calculate the charge for a parcel, taking the weight of the parcel as an input.

```
import java.util.*;
public class MayurTpt
{
   public static void main(String args[]) {
      Scanner in = new Scanner(System.in);
      _____
      double wt = in.nextDouble();
      double amt = 0;

      if (wt <= 10)
         amt = 30 * _____;
```

```
      else if (wt <= 30)
         amt = 300 + (_____* 20);
      else
         amt = 300 + 400 + ((wt - 30) * 15);


      System.out.println("Parcel Charge = " + _____);
   }
}
```

Program 2.Write a progra to find the sum of series::
S = 1 + (1+2) + (1+2+3) + ... + (1+2+3+ .... + n)

```
import java.util.*;
public class SumSeries
{
   public static void main(String args[]) {

      Scanner in = new Scanner(_____);
      System.out.print("Enter n: ");
      int n = _____();
      int sum = 0, c =_____;

      for (int i = 1; i <= n; i++) {
        c =c+ i;
         sum= _____;
      }

      System.out.println ("Sum=" + sum);
   }
}
```

Program 3.Write a program to input a number and display the new number after
reversing the digits of the original number. The program also displays the absolute
difference between the original number and the reversed number.
Sample Input: 194
Sample Output: 491
Absolute Difference= 297
****

```
import java.util.*;

public class Reverse_Digit
{
```

```java
    public static void main(String args[]) {

        Scanner in = new Scanner(Syst\em.in);
        System.out.print("_____ ");
        int num = in.nextInt();

        int num1 = num;
        int r = 0;

        while(num1 != 0) {
          int d = num1% 10;
            r = _____;
          num1=num1/10;

        }

        int diff = r-num;
        System.out.println("Reversed Number = " +_____);
        System.out.println("Absolute Difference = " + Math_____(diff));
    }
}
```

Program 4.Write a program to input marks in English, Maths and Science of 40 students who have passed ICSE Examination 2014. Now, perform the following tasks:
(a) Number of students, who have secured 95% or more in all the subjects.
(b) Number of students, who have secured 90% or more in English, Maths and Science.

```java
import java.util.*;

public class Exam_Result
{
    public static void main(String args[]) {
        Scanner in = new Scanner(System.in);
        int c = 0, c1 = 0, c2 = 0, c3= 0;
        for (int i = _____; i <=40; i++) {
            System.out.println("Enter marks of student " +i);
            System.out.print("English: ");
            int eng = _____();
            System.out.print("Maths: ");
            int math = in.nextInt();
            System.out.print("Science: ");
```

```
        int sci = in.nextInt();

        if (eng >= 95 && math >= 95 && sci >= 95)
         c=_____;

        if (eng >= 90)
          c1=c1+1;

        if (math >= 90)
          c2=c2+1;

        if (sci >= 90)
         c3=_____;
      }
    System.out.println("No. of students >= 95% in all subjects: " + c);
    System.out.println("No. of students >= 90% in English: " + c1);
    System.out.println("No. of students >= 90% in Maths: " + c2);
    System.out.println("No. of students >= 90% in Science: " + c3);
  }
}
```

Program 5. The Greatest Common Divisor (GCD) of two integers is calculated by the continued division method.
Divide the larger number by the smaller, the remainder then divides the previous divisor. The process repeats unless the remainder reaches to zero. The last divisor results in GCD.
Sample Input: 45, 20
Sample Output: GCD=5
import java.util.Scanner;

```
public class GCD
{
   public static void main(String args[]) {
     Scanner _____ = new Scanner(System.in);
     System.out.print("Enter first number: ");
     int a = in.nextInt();
     _____("Enter second number: ");
     int _____ = in.nextInt();
     while (b != 0) {
       int t = b;
       b = _____;
       a = t;
     }
     System.out.println("GCD=" + a);              }}
```