APCS **Class Examples 1-9**

Determine the output of the following programs.

1.

```
public class ClassExample1
{
    public static void main( String[] args )
    {
        int k=9;
        int tortilla=1;
        while( k>0 )
        {
            if( k%2 == 0 )
            {
                tortilla *= k;
            }
            k--;
        }
        System.out.print("tortilla = " + tortilla);
    }
}
```

2.

```
public class ClassExample2
{
    public static void main( String[] args )
    {
        int number = 19;
        char star = '*';
        for( int i=1; i<number; i++ )
        {
            if( number%i != 0 )
            {
                System.out.println();
                for( int k=0; k<=i; k++ )
                {
                    System.out.print(star);
                }
            }
            number -= 3;
        }
    }
}
```

3.

```
public class ClassExample3
{
    public static void main( String[] args )
    {
        int a = 1;
        int c = 10;
        int salsa = 0;
        int times;
        while( c > 1 )
        {
            a *= 5;
            times = 0;
            while( times < c )
            {
                salsa += a;
                times += 2;
            }
            c /= 5;
        }
        System.out.println("\nsalsa = " + salsa);
        if( salsa >= 100 )
        {
            System.out.println("\nI love super-hot macho-man salsa.");
        }
        else
        {
            if( (salsa < 100)&&(salsa >= 60) )
            {
                System.out.println("\nI like hot salsa.");
            }
            else
            {
                if( (salsa < 60)&&(salsa >= 0) )
                {
                    System.out.println("\nI can only handle wimpy mild salsa.");
                }
            }
        }
    }
}
```

4.

```
public class ClassExample4
{
    public static void main( String[] args )
    {
        String quePasa = "chihuahua";
        String firstPart = quePasa.substring(0, 3).toUpperCase();
        String secondPart = quePasa.substring(3,6).toUpperCase();
        String thirdPart = quePasa.substring(6).toUpperCase();
        String newQuePasa = thirdPart + "-" + secondPart + "-" + firstPart + "!!";
        System.out.print(quePasa + " ==> " + newQuePasa);
    }
}
```

5.

```
public class ClassExample5
{
    public static void main( String[] args )
    {
        String text = "exceptional";
        int temp;
        for(int k=0; k<text.length(); k++)
        {
            if( k%2 != 0 ) System.out.print( text.charAt(k) );
            else
            {
                temp = text.charAt(k) - 32;
                System.out.print( (char)temp );
            }
        }
    }
}
```

6.

```
public class ClassExample6
{
    public static void main( String[] args )
    {
        String name = "newport harbor high school";
        String firstPart = name.substring(0,3);
        String secondPart = name.substring(3,7);
        String thirdPart = name.substring(8,14);
        String fourthPart = name.substring(15, 19);
        String fifthPart = name.substring(20);
        System.out.println(name);
        String newName = firstPart + " " + fifthPart;
        String newPlace = fourthPart + " " + secondPart + " " + thirdPart;
        System.out.println("\nThe " + newName + " of " + newPlace + ".");
    }
}
```

7.

```
public class ClassExample7
{
    public static void main( String[] args )
    {
        int a = 3;
        int c = a;
        System.out.println("a = " + a + "\t" + "c = " + c);
        int d;
        c++;
        --a;
        a = ++c + a;
        System.out.println("a = " + a++ + "\t" + "c = " + c);
        c = --a;
        System.out.println("a = " + a + "\t" + "c = " + c);
        d = c++;
        a = ++d - c;
        System.out.println("a = " + a + "\t" + "c = " + c + "\t" + "d = " + d);
    }
}
```

8.

```
public class ClassExample8
{
    public static void main( String[] args )
    {
        String chump = "joker";
        int n = chump.substring(3).length();
        int a = 50;
        a /= (int)Math.pow(3, n );
        while( a > -1 )
        {
            if( a % 2 == 0 )
            {
                for(int k=0; k<a+3; k++)
                {
                    System.out.print("+");
                }
                System.out.println();
            }
            a--;
        }
    }
}
```

9.

```
public class ClassExample9
{
    public static void main( String[] args )
    {
        double flop = Math.PI;
        int mud = (int)( ( flop - (int)flop ) * 1000 );
        int sand = ( mud % 5 ) * 20;
        int oops = (int)Math.sqrt(500);
        System.out.println("mud = " + mud + "\t" + "sand = " + sand + "\t" +
                           "oops = " + oops);

        do
        {
            for(int k=sand; k<mud/5; k++)
            {
                System.out.print( (char)35 );
            }
            System.out.println();
            oops += 10;
            mud -= 10;
        }while( oops < 50 );

        System.out.println("mud = " + mud + "\t" + "sand = " + sand + "\t" +
                           "oops = " + oops);
    }
}
```