Question 1.   Multiple-Choice Questions (5 Marks)

1. What, if any, is the output of this program?

```java
public class Output {
    public static void main(String[] args)  {
        int x=5 , y=50;
        z= y/x ;
        System.out.println(x +","+ y +","+ z);
    }
}
```
(A) 5,50,10   **(B)** 5,10,50   **(C)** 5,50,0   **(D)** Compilation error

2. Which one of the following is not a primitive data type?

(A) long   **(B)** char   **(C)** String   **(D)** boolean

3. What, if any, is the output of this program?

```java
public class ConfusingIf {
    public static void main(String[] args)  {
        double balance=300,target=1000;
        String message="";
        if(balance<target)
        if(target%10!=0) message="Case 1";
        else message="Case 2";
        else if(balance==target) message="Case 3";
        else message="Case 4";
        System.out.println(message);
    }    }
```
(A) Case 1   **(B)** Case 2   **(C)** Case 4   **(D)** Compilation error

4. Which boolean expression does not cause a run time error in the following code?

```java
public class LogicalOperator {
    public static void main(String[] args)  {
        int dividend=200,divisor=0;
        if( ………………………………………………………… )
            System.out.println(":(");
        else
            System.out.println(":)");
    }
}
```

(A) `divisor!=0 && dividend/divisor>1`   **(B)** `divisor!=0 & dividend/divisor>1`
(C) `divisor==0 && dividend/divisor>1`   **(D)** `divisor==0 & dividend/divisor>1`

5. How many times this loop will iterate?

```
int n=50;
while (n>=10)
    n-=n/n;
```

(A) 10   **(B)** 25   **(C) 40**   **(D)** 50

6. What is the value of the variable `var` after these statements?

```
int x=5;
double var= x/2;
```

(A) 2   **(B) 2.0**   **(C)** 2.5   **(D)** Compilation error

7. What is the output of this program?

```
public class StringClass {
    public static void main(String[] args)  {
        String t1="con",t2="cat";
        String t3=t2+t1;
        if(t3.equals(t2+t1))
            System.out.print(t3);
        else
            System.out.print(t1);
    }
}
```

(A) con   **(B)** cat   **(C)** concat   **(D) catcon**

8. What is the value of the variable `op` after this statement?

```
int op= 1 + 2 * 3 % (7 - 1);
```

(A) 0   **(B) 1**   **(C)** 2   **(D)** -1

9. What is the output of this program?

```
public class WhatDoYouThink {
    public static void main(String[] args)  {
        int a=4,b=2;
        System.out.print(a + b);
        System.out.print("," + a + b + ",");
        System.out.print(a + b + ",");
    }
}
```

(A) 6,6,6,   **(B)** 42,42,42,   **(C)** 42,6,42,   **(D) 6,42,6,**

10. **What is the value of the variable `i` after these statements?**

```
int i=1;
i=i++i;
```

(A) 1   **(B)** 2   **(C)** 3   **(D)** Compilation error

Question 2. (5 marks)
2.1) Write down the output of each of the following code segments: (4 marks)

Code	Output
```double Pi=3.14159;``` ```System.out.print("Pi is \" + Pi ");```	Pi is " + Pi
```boolean b= 10>-1 && 5/10!=0.5;``` ```System.out.print(b);```	true

```double grade=89.6;```
```double bonus= grade++ +-1;```
```System.out.print((int)bonus);```
	88

```int i=1;```
```while (i<10)```
```   i+=2;```
```   System.out.print(i);```
	11

2.2) Convert the following `if-else` **statement to an equivalent** `switch` **statement: (1 mark)**

```
char c='F';
String s;
if (c=='A' || c=='B')
     s="Good";
else if (c=='C')
     s="OK";
else
     s="?";
System.out.println(s);
```

Possible answer 1	Possible answer 2

<pre>switch (c)
{
    case 'A':
    case 'B':
       s="Good";
       break;
    case 'C':
       s="OK";
       break;
    default:
       s="?";
       break;   //Optional
}
System.out.println(s);</pre>
	<pre>switch (c)
	{
	    case 'A':
	       s="Good";
	       break;
	    case 'B':
	       s="Good";
	       break;
	    case 'C':
	       s="OK";
	       break;
	    default:
	       s="?";
	       break; //Optional
	}
	System.out.println(s);</pre>