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B.E. MID-SEMESTER EXAMINATION March 2023

Date : 31/03/2023	Branch : CE & IT
Subject Name & Code: Object Oriented Programming using JAVA	Semester : IV
Subject Code: CT 405 N	
Time : 09:20 AM to 10:50 AM	Max. Marks : 30

Q1 A)

Do as directed (2 marks each)

10

1. Fill in the blank for the following code so that the output is : 5

```
class Q1_1{
    public static void main(String args[]){
        int x[][] = {{1,2,3,4},{5,6,7,8}};
        System.out.println(_____);
    }
}
```

2. What will be output of the program if executed

```
class Q1_2{
    public static void main(String args[]){
        for(int a=1;a<3;a+=3){
            System.out.println(--a);
        }
    }
}
```

3. What will be the output of the program

```
class Writer {
    public static void write() {
        System.out.println("Writing...");
    }
}
class Author extends Writer {
    public static void write() {
        System.out.println("Writing book");
    }
}
class Programmer extends Author {
    public static void write() {
        System.out.println("Writing code");
    }
    public static void main(String[] args) {
        Author a = new Programmer();
        a.write();
    }
}
```

4. Consider the following method:

```
public static int secret (int one)
{
    int i;
    int prod = 1;
    for (i = 1; i <= 3; i++)
        prod = prod * one;
    return prod;
}
```

What is the output of the following Java statements?

- i. `System.out.println(secret(5));`
- ii. `System.out.println(2 * secret(6));`

5. Consider the following method:

```
public static int test(int x, int y)
{
    if (x == y)
        return x;
    else if (x > y)
        return (x + y);
    else
        return test(x + 1, y - 1);
}
```

What is the output of the following statements?

- a.) `System.out.println(test(5, 10));`
- b.) `System.out.println(test(3, 9));`

Q2 A)	Justify if the following statements are true or false	10
	<ul style="list-style-type: none">i. We can declare a class as Abstract without having any abstract method.ii. We can declare main method of our class as private.iii. We can override static methods of a class.iv. We can call the constructor of a class more than once for an object.v. We can use the default constructor of a class even if an explicit constructor is defined.	
	OR	
Q2 A)	Explain final keyword with example.	5
B)	Explain abstract class with example.	5
Q3 A)	Explain interface with example.	5
B)	Explain the keywords used in exception handling with example.	5
	OR	
Q3 A)	Write a program to demonstrate user-defined exception.	10