NATIONAL INSTITUTE OF TECHNOLOGY, PATNA
MID- SEMESTER EXAMINATION, 2022

Program: B.Tech 3rd Sem CSE
Semester: 3rd
Course Code: CS34105
Full Marks: 30

Department: CSE
Course Name: Object Oriented Programming
Duration of Examination: 2 hours

(15*2=30 marks)

ANSWER ALL THE QUESTIONS.
Assume Missing Data If Any

Write the output of the following code snippets with valid reasons.

1. [CO1, CO2] [L2, L3]

```
class array_output
{
    public static void main(String args[])
    {
        int array_variable [] = new int[10];
  for (int i = 0; i < 10; ++i) {
            array_variable[i] = i/2;
            array_variable[i]++;
            System.out.print(array_variable[i] + " ");
            i++;
        }

    }
}
```

2. [CO1, CO2] [L2, L3]

```
class variable_scope
{
 public static void main(String args[])
 {
     int x;
     x = 5;
     {
      int y = 6;
      System.out.print(x + " " + y);
     }
     System.out.println(x + " " + y);
 }
}
```

3. [CO1, CO2] [L2, L3]

```
class evaluate
{
 public static void main(String args[])
 {
     int a[] = {1,2,3,4,5};
 int d[] = a;
 int sum = 0;
```

```
        for (int j = 0; j < 3; ++j)
                sum += (a[j] * d[j + 1]) + (a[j + 1] * d[j]);
        System.out.println(sum); }}
        }
    }
```

4. [CO1, CO2] [L2, L3]

0 2 4 6 8

```
class array_output
{
    public static void main(String args[])
    {
        int array_variable [] = new int[10];
    for (int i = 0; i < 10; ++i)
        {
            array_variable[i] = i;
            System.out.print(array_variable[i] + " ");
            i++;
        }
    }
}
```

5. [CO1, CO2] [L2, L3]

1 3 5 7 9

```
class jump_statments
{
    public static void main(String args[])
    {
        int x = 2;
        int y = 0;
        for ( ; y < 10; ++y)
        {
            if (y % x == 0)
                continue;
            else if (y == 8)
                break;
            else
               System.out.print(y + " ");

        }
    }
```

6. [CO1, CO2] [L2, L3]

12

```
class operators
{
    public static void main(String args[])
    {
        int var1 = 5;
        int var2 = 6;
        int var3;
        var3 = ++ var2 * var1 / var2 + var2;
        System.out.print(var3);
    }
}
```

7. [CO1, CO2] [L2, L3]

Error / 20 0 20 1

```
class Output
{
    public static void main(String args[])
    {
        int a,b,c,d;
        a=b=c=d=20;
       a+=b-=c*=d/=20;
      System.out.println(a+" "+b+" "+c+" "+d);

    }
```

8. [CO1, CO2] [L2, L3]

```
class recursion
{
    int func (int n)
    {
        int result;
        result = func (n - 1);
        return result;
    }
}
class Output
{
    public static void main(String args[])
    {
        recursion obj = new recursion() ;
        System.out.print(obj.func(12));
    }
}
```

9. [CO1, CO2] [L2, L3]

```
class A
{
  int i;
  int j;
     A()
     {
         i = 1;
         j = 2;
     }
     public static void main(String args[])
     {
          A obj1 = new A();
          A obj2 = new A();
       System.out.print(obj1.equals(obj2));
     }
}
```

10. [CO1, CO2] [L2, L3]

```
class A
{
     int i;
     public void display()
     {
         System.out.println(i);
     }
}
class B extends A
{
     int j;
     public void display()
     {
         System.out.println(j);
     }
     public static void main(String args[])
     {
         B obj2 = new B();
         obj2.i = 1;
         obj2.j = 2;
         A r;
         r = obj2;
         r.display();
     }
}
```

11. [CO1, CO2] [L2, L3]

```
class Base {
  public static void show() {
  System.out.println("Base::show() called");
  }
}
class Derived extends Base {
  public static void show() {
  System.out.println("Derived::show() called");
  }
  public static void main(String[] args) {
          Base b = new Derived();
          b.show();
  }
}
```

Base: show() called

12. [CO1, CO2] [L2, L3]

```
class Main {
public static void main(String args[]) {
          int t;
          System.out.println(t);
  }
}
```

Error

13. [CO1, CO2] [L2, L3]

```
class Main {
public static void main(String args[]){
final int i;
i = 20;
System.out.println(i);
}
}
```

20

14. [CO1, CO2] [L2, L3]

```
class Simple
{
 public void m1 (int i,float f)
 {
  System.out.println(" int float method");
 }

 public void m1(float f,int i);
  {
  System.out.println("float int method");
  }

  public static void main(String[]args)
  {
    Simple s=new Simple();
        s.m1(20,20);
  }
}
```

Error

15. [CO1, CO2] [L2, L3]

```
class conversion
{
    public static void main(String args[])
    {
        double a = 295.04;
        int  b = 300;
        byte c = (byte) a;
        byte d = (byte) b;
        System.out.println(c + " "  + d);
    }
}
```

39 44