Ministry of Higher Education Modern Academy For Computer Science and Management Technology

Department: Computer Science Program: Computer Science



Academic Year: 2021-2022

Subject: Object Oriented Programming

Code: CS204

Specialization: $CS - 2^{nd}$ Level

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OOP Sheet 1 (Lectures 1 to 5)

Name:......Class:......

- 1- What is constructor? What is the purpose of default constructor? Does a constructor return any value? What happens if we use a return type when defining a constructor?
- 2- What is method overloading? Give examples.
- 3- What is method overriding? Create examples to clarify your answer.
- 4- (a) Show the errors in the following code segments, and correct them.
 - (b) override the method *addition* in all possible ways.

```
package pack;
class Test
{ protected int x;
 private int y;
 int addition(int I, int j)
{ return i + j;}
}
package pack;
class Test1 extends Test
{ public static void main(String args[])
{ x=100;
 y=30;
 int z = addition(x, y);
 }
}
```

- 5- **Define:** a class, an object and abstraction. Give examples in Java.
- 6- **Define:** inheritance, polymorphism, and encapsulation. Give examples in Java.
- 7- **Define:** association and its types. Give examples in Java.
- 8- Why main method is static?

9- Show the errors in the following code segments, and correct them.

```
package pack;
                                           package pack1;
public class Test
                                           import pack.*;
{ protected int x;
                                           class Test1 extends Test
   public int y;
                                           {
int addition(int I, int j)
                                           int z;
{ return i + j;}
                                           public static void main(String args[])
                                            { Test t = new Test();
                                             Test1 t1 = new Test1();
                                             t1.z = t.addition(t.x , t.y);
                                             }
```