Subject:-Java Programming
Paper Code: MCAO- 201/MCSO-201

Time: One Hour   **Max. Marks: 30**

Note: All questions are compulsory. Each question carries 6 marks. Part A of each question carries 4 marks and part B carries 2 marks.

Q1. (A) Discuss the method calling mechanism for method overloading and overriding when a superclass reference variable has a subclass object.

Q1. (B) Which of these are keywords in Java?
Select all valid answers.

(a) default
(b) NULL
(c) String
(d) throw
(e) long

Q 2. (A) Discuss the use of **this** constructor and **super** constructor for method overloading and overriding.

Q 2. (B) Which statements are true about the following code?

```java
class A {
public A() {}
public A(int i) { this(); }
}
class B extends A {
public boolean B(String msg) { return false;}
}
class C extends B {
private C() { super(); }
public C(String msg) { this(); }
public C(int i) {}
}
```

Select all the valid answers.

I.   The code will fail to compile.
II.   The constructor in A that takes an **int** as an argument will never be called as a result of constructing an object of class B or C.
III. Class C defines three constructors.
IV.   Objects of class B cannot be constructed.
V.   At most one of the constructors of each class is called as a result of constructing an object of class C.

Q3. (A) Discuss different ways to initialize the two-dimensional array. Also shows the usage of length variable for two-dimensional array.

Q3. (B) What will be written to the standard output when the following program is run?

```java
class abc
{
  public static void main(String args[]) {
      System.out.print(9 ^ 2);
  }
}
```

(a) Compile time error
(b) 81
(c) 11
(d) 0

Q4. (A) Describe labelled break and labelled continue statements with the help of example.

Q4. (B) Which declarations will allow a class to be started as a standalone program? Select all valid answers.

(a) public void main(String args[])
(b) public void static main(String args[])
(c) public static void main(String[] a)
(d) final public static void main(String arg[])

Q5. (A) How to achieve multiple inheritance in Java. Explain multiple inheritance with the help an example.

Q5. (B) What will be the output of the following program also justifies your answer.

```java
class abc {
  public static void main(String args[]) {
      abc obj=null;
      String str="null";
      boolean bool = str == obj;
      System.out.print(bool);
  }
}
```

(a) Compile time error- incomparable types: String and abc
(b) false
(c) true
(d) Runtime exception