

# School of Computing Science and Engineering

B.Tech CSE  
ETE - Jun 2023

Time : 3 Hours

Marks : 50

## Sem VIII - MCAN1210 - Object Oriented Programming with Java

*Your answer should be specific to the question asked*

*Draw neat labeled diagrams wherever necessary*

1. Differentiate between Array and ArrayList. K4 CO6 (2)
2. Why Java is architectural neutral? K3 CO3 (2)
3. What will be the output of the following Java program? K4 CO4 (2)

```
// filename Test.java
class Test {
    public static void main(String[] args) {
        for(int i = 0; 1; i++) {
            System.out.println("Hello");
            break;
        }
    }
}
```

4. Java addresses four categories of visibility for class members based on the interplay between packages & classes. What are these categories? Demonstrate each category. K2 CO3 (2)
5. What is type wrapper? What is the role of auto boxing? K1 CO3 (2)
6. Write a java program to demonstrate the priority setting of multiple threads. K6 CO4 (6)
7. When do we use keywords final and static? Explain the working of static member functions. K3 CO4 (5)
8. Depict and describe the Collection hierarchy in Java. K4 CO3 (5)
9. Explain the creation of thread using different approaches with example. Implement synchronization in the method. K5 CO6 (8)
10. Draw a UML activity diagram describing the behavior of the Purchase Ticket use case for a Ticket Vending Machine. Activity is started by Commuter actor who needs to buy a ticket. Ticket vending machine will request trip information from Commuter. Based on the info machine will calculate payment due and request payment options. After payment is complete, ticket is dispensed to the Commuter. K4 CO5 (8)
11. Write and discuss the steps used for JDBC connectivity with backend database. Write a program to describe each step. Use appropriate comments wherever required. K5 CO4 (8)