**ERNAL TEST – I**

**III Sem**

**21CIC34-Object Oriented Programming using Java**

**Module 1:**

1. Discuss the three OOP principles.
2. What is an array? Implement java program to search an element in the array using for each loop.
3. Explain the switch statement with example.
4. Explain while and do-while statements with an example and Write a [java a program to display Fibonacci Series based on the user input using while loop](https://beginnersbook.com/2017/09/java-program-to-display-fibonacci-series-using-loops/).
5. Discuss if-else-if ladder with an example.
6. Explain the working of short circuit logical operators with an examples.
7. Explain Java’s buzzwords or salient features of Java
8. Write a java program to check a number is prime or not using for loop.
9. Discuss the ternary (?) operator with an example.
10. Write a j[ava a program to find factorial using while loop](https://beginnersbook.com/2017/09/java-program-to-display-fibonacci-series-using-loops/)

**Module 2:**

1. What is a class? What are its characteristics? Give its general structure.
2. Create a Java Class “Shape” with constructor to initialize the one parameter “dimension”. Now create three sub classes of Shape with following methods (i) “Circle” with methods to calculate the area and circumference of the circle with dimension as radius. (ii) “Square” with methods to calculate the area and length of diagonal of the square with dimension as length of one side. (assuming length of each side of the square is same). (iii) “Sphere” with methods to calculate the volume and surface area of the sphere with dimension as radius of the sphere. Write appropriate main method to create object of each class and test every method.
3. What is a class? What are its characteristics? Give its general structure.
4. What is inheritance? Mention the different types. Implement Multi level inheritance with an example.
5. Write a short note on finalize method.
6. **Write a note on different access specifiers.**
7. Demonstrate the uses of the following: 1.this 2.static 3.super 4.final
8. Differentiate method overloading and overriding.
9. What are nested classes? Explain the different types with examples.
10. Differentiate constructors and methods.