**Question Bank**

**Module 2**

**Object Oriented Programming using Java (21CIC34)**

**Semester:3rd**

1. What is a class? What are its characteristics? Give its general structure. ( CO2)
2. What is Constructor.Differentiate constructors and methods.What is constructor overloading? Explain Each type with an example. ( CO2)
3. Distinguish between the abstract class and interface. ( CO2)
4. What is inheritance? Mention the different types. Demonstrate Multi level inheritance with an example. ( CO2)
5. Demonstrate the use of super and this keyword with an example. ( CO2)
6. Discuss static and runtime polymorphism with example. ( CO2)
7. Write short notes on a) final class b) abstract class. ( CO2)
8. A final method can not be overridden. Illustrate with an example. ( CO2)
9. 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. ( CO2)
10. Explain garbage collection with its advantages and disadvantages. ( CO2)
11. Write a short note on finalize() method. ( CO2)
12. Explain the characteristics of a static variable and static method with example( CO2)
13. Write short notes on a) final class b) abstract class( CO2)
14. **Write a note on different access specifiers.** ( CO2)
15. How do you achieve run time polymorphism in java? Illustrate with an example. ( CO2)
16. Explain Dynamic Method Dispatch (DMD) with example. ( CO2)