

Dr. Babasaheb Ambedkar Open University
Term End Examination January – 2026

Course	: BSCIT	Date	: 19/02/2026
Subject Code	: BSCIT-304	Time	: 03:00pm to 05:15pm
Subject Name	: Object Oriented Programming using Java (Core Java)	Duration	: 02.15 Hours
		Max. Marks	: 70

Section A

Answer the following (Attempt any three)

(30)

1. Explain the features of Java (Java Buzzwords) like Platform Independence, Object Oriented, and Robust in detail.
2. What is a Class and an Object? Explain how to define a class and create objects in Java with a code example.
3. Explain the concept of Inheritance in Java. Discuss different types of inheritance and why Multiple Inheritance is not supported through classes.
4. What is the Java Virtual Machine (JVM)? Explain the internal architecture of JVM and the process of compilation and execution.
5. Define Exception Handling. Explain the use of try, catch, finally, throw, and throws keywords with a programming example.

Section B

Answer the following (Attempt any four)

(20)

1. Differentiate between Method Overloading and Method Overriding with suitable examples.
2. Explain the importance of the 'static' keyword for variables and methods in Java.
3. What are Interfaces? How are they different from Abstract Classes?
4. Explain the Lifecycle of a Thread in Java with a state transition diagram.
5. Describe the Graphics class and its role in Java AWT for drawing shapes.
6. Discuss the use of 'this' and 'super' keywords in Java.

Section C

Part – A (Multiple Choice Questions)

(10)

- 1 Which of these is used to compile a Java program?
A. java B. javac C. javadoc D. javap
- 2 What is the extension of a compiled Java class file?
A. .java B. .txt C. .class D. .exe
- 3 Which keyword is used to inherit a class in Java?
A. implements B. extends C. inherits D. import
- 4 Which of these is a non-access modifier?
A. public B. private C. static D. protected
- 5 Which class is the superclass of every class in Java?
A. String B. Object C. Main D. Applet
- 6 Which method is used to force an object to be eligible for garbage collection?
A. stop() B. finalize() C. gc() D. delete()
- 7 An interface in Java can contain only _____ methods.
A. static B. abstract C. private D. protected

- 8 Which package contains the Graphics class?
A. java.io B. java.util C. java.awt D. java.net
- 9 Which operator is used to create an object in Java?
A. class B. new C. create D. malloc
- 10 The range of 'byte' data type in Java is:
A. -128 to 127 B. -32768 to 32767 C. 0 to 255 D. -2147483648 to 2147483647

Part – B (Do as Directed)

(10)

State whether the following statements are true or false

- 1 Java is a purely Object-Oriented language because of primitive data types.
- 2 A constructor has the same name as the class name.
- 3 Final classes can be inherited by other classes.
- 4 Java supports multiple inheritance through the use of Interfaces.
- 5 The 'main' method must always be declared as static.
- 6 String objects in Java are mutable.
- 7 Array index in Java starts from 1.
- 8 The 'finally' block is executed even if an exception occurs or not.
- 9 Package is a container used to group related classes.
- 10 'repaint()' method calls the 'paint()' method internally.
