UNIT 1 – FUNDAMENTALS OF OOP & JAVA BASICS

1. Explain Object-Oriented Paradigm.
2. Basic concepts of OOP with examples.
3. Benefits and applications of OOP.
4. History and evolution of Java.
5. Features of Java.
6. Differences between Java, C and C++.
7. Java and Internet / WWW.
8. Structure of a simple Java program.
9. Java tokens and statements.
10. Java Virtual Machine (JVM).

UNIT 2 – BRANCHING AND LOOPING

1. Constants, variables and data types in Java.
2. Operators and expressions.
3. Decision making statements – if, if-else, nested if.
4. Switch statement with example.
5. Conditional operator (? :).
6. Looping statements – while, do-while, for.
7. Jump statements in loops.
8. Labeled loops.
9. Classes and objects.
10. Methods in Java.

UNIT 3 – ARRAYS AND INTERFACES

1. One-dimensional and multi-dimensional arrays.
2. String handling in Java.
3. Vectors and their methods.
4. Interfaces – definition and usage.
5. Multiple inheritance using interfaces.
6. Packages – creating and using packages.
7. Multithreaded programming.
8. Thread life cycle.
9. Thread synchronization.

UNIT 4 – ERROR HANDLING & GRAPHICS

1. Types of errors in Java.
2. Exception handling mechanism.
3. try, catch, finally blocks.
4. User-defined exceptions.
5. Applet programming – life cycle.
6. Graphics programming – drawing shapes.
7. Event handling basics.

UNIT 5 – FILE HANDLING IN JAVA

1. Java I/O stream concept.
2. Byte stream classes.
3. Character stream classes.
4. File class and its methods.
5. Reading and writing files.
6. Handling primitive data types.
7. Random Access Files.
8. I/O exceptions.