**Java Theory Assignment**

**Unit – 1(Introduction):**

1. Explain JDK root directory with diagram.
2. Define UNICODE.
3. Define Byte code.

**Unit – 2(Data Type, Variables and Constants, Loops and Logic):**

1. Discuss two types of byte ordering with example. Mention the difference between the two.
2. Explain immutable objects.
3. Difference between ‘==’ and equals() in Java.

**Unit – 3(Defining Classes):**

1. Difference between finally, finalize and final keyword.

**Unit – 4(Extending classes and Inheritance):**

1. Define functional programming.
2. Discuss Lambda expressions and its implementation in Java.

**Unit – 5(Generics in Java and Commonly used Classes):**

1. Discuss the benefit of generic over non-generic types.

**Unit – 6(Comparators and Lambda Expressions):**

**Unit – 7(Exceptions):**

1. Discuss Exception and types of Exceptions in Java.

**Unit – 8(Collection Framework, java.time package, java.util package):**

**Unit – 9(Stream API from java.util.stream package):**

**Unit – 10(The java.io package):**

1. Discuss the methods of File object OR Explain reading and writing in files in Java.
2. Difference between Byte Streams and Character Streams.
3. Discuss any five byte stream classes.
4. Explain seven different subclasses of InputStream.
5. Discuss base classes Reader and Writer along with their methods.

**Unit – 11(Threads):**

1. Explain Thread Life-cycle with diagram.
2. Discuss Application Thread with example.
3. Discuss thread scheduling with example.
4. Explain thread priorities.
5. Discuss inter-process communication.