

COMPUTER APPLICATION

Class-XI (2024-25)

Lesson: 1 **Fundamentals of Information Technology**

Computer System, Components of Computer System, Software & its types, Trends in IT

Lesson: 2 **NUMBER SYSTEM & LOGIC GATES**

Introduction to Number system, Types of Number system, Conversion between Number Systems, Logic Gates, Proof of NAND and NOR as Universal Gates, Demorgan Law

Lesson: 3 **INTRODUCTION TO PROGRAMMING LANGUAGES**

Introduction, Concept of Program, Programming and Programmer, Programming Languages, Language Translator, Types of Errors

Lesson: 4 **INTRODUCTION TO OOP WITH JAVA**

Introduction to Object Oriented Programming, Principles of Object-Oriented Programming - abstraction, encapsulation, inheritance and polymorphism, Introduction to Java, History of Java, Features of Java , Basic Structure of Java Program , Creating an Executing a Simple Java Program , Basic Elements for Java Programming:character set, tokens, comments

Lesson: 5 **DATA TYPES AND OPERATORS IN JAVA**

Data Types, Variables, Operators , Expressions , Precedence of Operators, Type Conversion

Lesson: 6 **CONTROL STATEMENTS IN JAVA**

Introduction, Branching Statements: if else, switch case, Looping Statements: for, while, do while, Jumping Statements: break, continue

Lesson 7: **CLASSES AND OBJECTS**

Class, Objects, Static Members, Constructors, Overloading in Java (Methods and Constructors)

Lesson 8: **STRINGS AND WRAPPER CLASSES**

Strings, Performing operations on Strings, Wrapper Classes

Lesson 9 : **INHERITANCE**

Inheritance and its types, Interfaces , Use of super method, Abstract Class and Methods Method Overriding, Final Class, Method and Variables