## OOPs in Java Syllabus 4th SEM Parul University

| **Topic Number** | **Topic Name** | **Topic Contents** | **No. of Hours** |
| --- | --- | --- | --- |
| Topic-1 | Introduction to Java | History of java, Features of java, Java installation and path setting, JVM, JDK, JRE, Sample Program, Execution flow of java program, Lexical issues, Keywords of java | 3 |
| Topic -2 | Variables, Data types, Operators | Variables creation, Variable naming Conventions, Types of Variables, scope of variables, Data types, final keyword, Operators , Java Memory Management | 4 |
| Topic-3 | Control Statements | Conditional Statements, Looping Statements, Jump Statements | 4 |
| Topic-4 | Arrays | Arrays, Types of Arrays and with Examples | 4 |
| Topic-5 | Object Oriented Programming | Classes, Methods, Constructors, Access Specifiers, Different ways of Object creation,  OOP concepts with Examples, Abstraction, Encapsulation, Inheritance, Polymorphism , Over loading, overriding, super keyword usage | 9 |
| Topic-6 | Inner classes, Interfaces, packages | Inner classes, Types of Inner classes, Interfaces, this key word usage, What is Package, Types of Packages, IO package, lang package, util Packages, wrapper classes, enumerations in java, auto boxing, unboxing | 5 |
| Topic-7 | String Handling | What is string, String functions in java | 3 |
| Topic-8 | Exception Handling | Exceptions, Types of Exceptions, Handling of Exceptions | 3 |
| Topic-9 | Multi Threading | Thread, Usage of threads, Types of threads, Handling Threads | 4 |
| Topic-10 | Collection Framework in Java | Collections, Hierarchy of collections and Examples | 5 |