**Lesson Plan**

**Name of Faculty :** VedParkash, Assistant Professor

**Discipline :** Computer Science & Engineering

**Semester :** 5th ECE

**Subject :** Essential of IT

**Lesson Plan Duration:** 15 weeks

Work Load (Lectutre/Practical) per week (in hours): **Lectures 03 hours**

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| **Week** | **Theory** |
| **Lecture Day** |  |
| 1st | 1 | Problem Solving Techniques: Introduction to Problem Solving |
| 2 | Introduction to Algorithms and Flowchart |
| 3 | Searching algorithms: Linear search |
| 2nd | 4 | Binary search and Sorting algorithms |
| 5 | Insertion and |
| 6 | Selection sort |
| 3rd | 7 | Basic Data Structures: Stack |
| 8 | Linear Queue |
| 9 | Programming Basics: Identifiers, Variables, Data Types |
| 4th | 10 |  Operators |
| 11 | Control Structures: Loop, If else, Nested If |
| 12 | Switch Statement, Arrays |
| 5th | 13 | Strings,. Object Oriented Concepts |
| 14 | Class & Object, Operator |
| 15 | Instance Variables & Methods |
| 6th | 16 | Access Specifiers, Reference Variables |
| 17 | This, Super, Parameter Passing Techniques |
| 18 | Constructors, Static , and Command Line Arguments |
| 7th | Minor test |
| 8th | 19 | Relationships: Inheritance, Types of Inheritance |
| 20 | Static Polymorphism |
| 21 | Method Overloading |
| 9th | 22 | Constructor Overloading |
| 23 | Method Overriding |
| 24 | Abstract, Interface |
| 10th | 25 | Introduction to Packages |
| 26 | Query |
| 27 | RDBMS- Data Processing |
| 11th | 28 | Database Technology, Data Models |
| 29 | Data Independence |
| 30 | ER Modeling Concept |
| 12th | 31 | ER-notations |
| 32 | Converting ER Diagram into Relational Schema |
| 33 | Definition of Keys: Primary key, Foreign key, Unique Key |
| 13th | 34 | SQL |
| 35 | DDL Statements |
| 36 | DML Statements |
| 14th | Minor test |  |
| 15th | 37 | DCL Statements |
| 38 | Joins |
| 39 | Sub queries, Views |