**Lesson Plan for Session 2023-2024(Odd Sem)**

**Name of Assistant Professor**: **Sangharsh Saini**

**Subject code and Subject name**: **Paper-I Fundamentals of Data Base Systems**

**Class Name: B.Sc.(CS) Semester V**

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| **Month** | **Topics Covered** |
| **July 2023** | **UNIT – I**  Basic Concepts – Data, Information, Records and files. Traditional file Based Approach- Limitations of Traditional File Based Approach, Database Approach-Characteristics of Database Approach, Database Management System (DBMS), Components of DBMS Environment, DBMS Functions and Components, Advantages and Disadvantages of DBMS. |
| **August 2023** | **UNIT – II**  Actors on the Scene - Data and Database Administrator, Database Designers, End users Applications Developers and Workers behind the Scene.  Database System Architecture – Three Levels of Architecture, Schemas – External, Conceptual and Internal Level, Database Languages – VDL, DDL, SDL, DML, SQL, Mappings – External/ Conceptual and Conceptual/Internal, Instances, Data Independence – Logical and Physical Data Independence |
| **Sept 2023** | **UNIT – III**  Data Models: High Level, Low Level and Representational – Records- based Data Models,Object-based Data Models, Physical Data Models and Conceptual Models  Entity-Relationship Model – Concepts, Entity Types, Entity Sets, Attributes, Relationships,Constraints, Keys , Degree, Cardinality etc.ER Diagrams of any Database Organization- Inventory System, Payroll System, Reservation System, Online Book Store etc. |
| **Oct 2023** | **UNIT – IV**  Classification of Database Management System, Centralized and Client Server  Architecture Relational Data Model:-Brief History, Terminology in Relational Data Structure, Relations, Properties of Relations, Keys – Primary, Secondary, Composite, Candidate, Alternate and Foreign Key, Domains, Integrity Constraints over Relations.. |