Teaching Plan

Dept. Of Computer Science

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Discipline   :   **Computer Science (Hons.)**
Semester   :   **Fourth**
Paper Code   :   **CC10T**
Subject   :   **Database Management Systems**
Name of faculty :   **Priyanka Roy Gupta**

Unit	Topics	No. of Lectures	Duration in Hour
1	Introduction Characteristics of database approach, data models, database system architecture and data independence	4	4
2	Entity Relationship(ER) Modeling Entity types, relationships, constraints.	6	6
3	Relation data model Relational model concepts, relational constraints normalization, relational algebra, SQL queries	8	8
4	Database design Mapping ER/EER model to relational database, functional dependencies, Lossless decomposition, Normal forms (up to BCNF).	10	10
5	Transaction Processing ACID properties, concurrency control	8	8
6	File Structure and Indexing Operations on files, File of Unordered and ordered records, overview of File organizations, Indexing structures for files(Primary index, secondary index, clustering index), Multilevel indexing using B and B+ trees.	6	6

Reference Books:

1. R. Elmasri, S.B. Navathe, Fundamentals of Database Systems 6th Edition, Pearson Education, 2010