



VIVEKANANDHA COLLEGE OF ENGINEERING FOR WOMEN

[AUTONOMOUS INSTITUTION AFFILIATED TO ANNA UNIVERSITY, CHENNAI]



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Course Code / Name :U15CS306/Database Management Systems

Class (Year / Programme / Department / Section): II/BE/CSE/A&B

LESSON PLAN

| UNIT -1(INTRODUCTION TO DATABASE SYSTEMS) | | | | |
|--|--|----------------------------|---------------------|----------------------|
| Session No | Topic | Duration in Minutes | Teaching Aid | Book Referred |
| 1 | Database system concepts and architecture. | 45 | BB | R2 |
| 2 | ER model: | 45 | BB | R2 |
| 3 | ER Modeling concepts, | 45 | BB | R2 |
| 4 | ER Diagrams | 45 | BB | R2 |
| 5 | Cardinality constraints, | 45 | BB | R2 |
| 6 | Enhanced ER Model (EER) | 45 | BB | R2 |
| 7 | Weak-entity types | 45 | BB | R2 |
| 8 | Specialization | 45 | BB | R2 |
| 9 | and Generalization. | 45 | BB | R2 |
| UNIT -2 RELATIONAL MODEL, LANGUAGES AND SYSTEMS | | | | |
| 1 | Relational algebra | 45 | BB | R2 |
| 2 | Relational model concepts | 45 | BB | R2 |
| 3 | Relational integrity constraints | 45 | BB | R2 |
| 4 | Relational algebra model | 45 | BB | R2 |
| 5 | ER to relational mappings | 45 | BB | R2 |
| 6 | Data definition in SQL | 45 | BB | R2 |
| 7 | Queries and update statements, | 45 | BB | R2 |
| 8 | Views | 45 | BB | R2 |
| 9 | Integrity constraints | 45 | BB | R2 |
| UNIT -3DATABASE DESIGN USING RELATIONALMODEL | | | | |
| 1 | Functional dependencies | 45 | BB | R1 |
| 2 | , Keys in a relational model | 45 | BB | R1 |
| 3 | Concept of functional dependencies | 45 | BB | R1 |
| 4 | first normal form, | 45 | BB | R1 |
| 5 | second normal form, | 45 | BB | R1 |
| 6 | third normal form | 45 | BB | R1 |
| 7 | Boyce-Codd Normal Forms, | 45 | BB | R1 |
| 8 | Multi-values dependencies | 45 | BB | R3 |
| 9 | fourth normal form, Join dependencies | 45 | BB | R3 |
| UNIT -4 (STORAGE AND INDEXING STRUCTURES) | | | | |
| 1 | Storage structures | 45 | BB | R1 |
| 2 | Secondary storage devices, | 45 | BB | R1 |
| 3 | ,Buffering of blocks | 45 | BB | R1 |

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| 4 | File Organization | 45 | BB | R1 |
| 5 | Heaps, Sorted Files, Hashing | 45 | BB | R1 |
| 6 | overflow handling techniques | 45 | BB | R1 |
| 7 | Dynamic hashing, Extensible hashing | 45 | BB | R1 |
| 8 | trees, B+ trees | 45 | BB | R1 |
| UNIT -5 (TRANSACTION PROCESSING AND CONCURRENCY CONTROL) | | | | |
| 1 | Transaction Fundamentals | 45 | BB | R1 |
| 2 | Necessary properties of transactions (ACID properties) | 45 | BB | R1 |
| 3 | Transaction states, serializability | 45 | BB | R1 |
| 4 | Serial schedules, | 45 | BB | R1 |
| 5 | Conflict serializability, | 45 | BB | R1 |
| 6 | View serializability | 45 | BB | R1 |
| 7 | , Recoverable and non-recoverable schedules, | 45 | BB | R1 |