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| **LESSON PLAN** | | | | | |
|  |  | |  |  |  |
| Sub : Database Management System(DBMS) | | | | |  |
| Class : B.E II/IV (C.S.E) (Sec-1) Semester: IV [AICTE] | | | | |  |
| Syllabus Code : PC403CS Instruction Period :10weeks | | | | |  |
| Teacher : G.Srishailam | | | | |  |
|  | |  |  |  |  |
| **Week** | | **Period** | **Unit** | **Topic** | **Date** |
| 1 | | 1 | I | **Introduction to Database**: File System Organization:Sequential - Pointer - Indexed – Direct | 29-03-2022 |
|  | | 2 |  | Purpose of Database System - Database Characteristics - Users of Database System. | 30-03-2022 |
|  | | 3 |  | Advantages of DBMS Approach - Schemas and Instances . | 30-03-2022 |
|  | | 4 |  | Three Schema Architecture and Data Independence. | 06-04-2022 |
| 2 | | 5 |  | The Database System Environment , Data Base architecture ,Data base users and Administrators. | 08-04-2022 |
|  | | 6 | II | **Logical Database Design:** Relational DBMS | 08-04-2022 |
|  | | 7 |  | Codd's Rule - Entity-Relationship model. | 12-04-2022 |
|  | | 8 |  | Extended ER Normalization. | 13-04-2022 |
| 3 | | 9 |  | Functional Dependencies - Anomaly - 1NF to 5NF. | 16-04-2022 |
|  | | 10 |  | 1NF to 5NF. | 23-04-2022 |
|  | | 11 |  | Domain Key Normal Form – Denormalization. | 23-04-2022 |
|  | | 12 |  | **Tutorials – revisions** | 26-04-2022 |
| 4 | | 13 | III | **Indexing:** Types of Single Level Ordered Indexes. | 26-04-2022 |
|  | | 14 |  | Multilevel Indexes. | 28-04-2022 |
|  | | 15 |  | Dynamic Multilevel Indexes. | 06-05-2022 |
| 5 | | 16 |  | Transaction Processing and Concurrency Control. | 07-05-2022 |
|  | | 17 |  | Transaction concepts. | 07-05-2022 |
|  | | 18 |  | ACID Properties - Transaction States. | 10-05-2022 |
| 6 | | 19 |  | Concurrency Control Problems – Serializability. | 11-05-2022 |
|  | | 20 | IV | Recoverability - Pessimistic and Optimistic Concurrency Control Schemes. | 13-05-2022 |
|  | | 21 |  | **Introduction to the Relational Model** – Integrity Constraint Over relations – Enforcing Integrity constraints. | 01-06-2022 |
| 7 | | 22 |  | Querying relational data – Logical data base Design. | 01-06-2022 |
|  | | 23 |  | Introduction to views, Destroying /altering Tables and Views. | 03-06-2022 |
|  | | 24 |  | Relational Algebra – Selection and projection set operations. | 04-06-2022 |
|  | |  |  | **CIE-1** | 6-06-2022to 9-06-2022 |
| **Week** | | **Period** | **Unit** | Renaming – Joins – Division – Examples of Algebra overviews. | 10-06-2022 |
|  | | 25 |  | Relational calculus – Tuple relational Calculus with examples. | 14-06-2022 |
| 8 | | 26 |  | Domain relational calculus with examples. | 15-06-2022 |
|  | | 27 |  | Expressive Power of Algebra and calculus. | 16-06-2022 |
|  | | 28 | V | **Structured query language:** data definition **,**basic structure of sql queries | 17-06-2022 |
|  | | 29 |  | Introduction to Nested Queries . | 17-06-2022 |
| 9 | | 30 |  | Correlated Nested Queries Set . | 17-06-2022 |
|  | | 31 |  | Comparison Operators – Aggregative Operators – NULL values. | Covered during lab |
|  | | 32 |  | Comparison using Null values – Logical connectivity‘s – AND, OR and NOT. |
|  | | 33 |  | Impact on SQL Constructs – Outer Joins. |
| 10 | | 34 |  | Disallowing NULL values – Complex Integrity Constraints in SQL Triggers and Active Data bases. |
|  | | 35 |  | Advanced Topics: Overview: Parallel Database - Multimedia Database. | 22-06-2022 |
|  | | 36 |  | Mobile Database - Web Database - Multidimensional Database, Data Warehouse - OLTP Vs OLAP - NoSQL Database. | 25-06-2022 |
|  | | 37 |  | **CIE-2** | 30-06-2022 to 02-07-2022 |