BAPATLA ENGINEERING COLLEGE

COURSE PLAN

1.	Department	I.T
2.	Program	B.Tech
3.	Semester/Year	V Semester/3rd Year
4.	Course title /code	Advanced Database Management Systems/20ITH52E
5.	Prerequisite – Code and Title	Database Management Systems (20IT403)
6.	Number of hours tuition	4 hours
7.	Date of Preparation	02/07/2022
8.	Syllabus	

UNIT - I   (12 Periods)

Algorithms for Query Processing and Optimization: Translating SQL queries into relational algebra-algorithms for external sorting-algorithms for select and join operations-algorithms for project and set operations-implementing aggregate operations and outer joins-combining operations using pipelining-using heuristics in query optimization. Catalogs for Relational DBMSs,

UNIT - II   (12 Periods)

Distributed DBMS Concepts and Design: Introduction-function and architecture of a Distributed DBMS-Distributed Relational Database Design-transparencies in a Distributed DBMS-Date's Twelve Rules for Distributed DBMS.

Distributed DBMS Advanced Concepts: Distributed Transaction Management, Distributed Concurrency Control, Distributed Deadlock Management.

UNIT - III   (12 Periods)

Introduction to Object DBMSs: Advanced Database Applications-Weaknesses of RDBMSs-Object oriented Concepts-Storing objects in a Relational Database.

Introduction to Object-Oriented Data Models and DBMSs-The object-Oriented Database System Manifesto-Advantages and Disadvantages of OODBMSs

UNIT-IV   (12 Periods)

No SQL Database concepts: Definition of NOSQL, History of NOSQL, Why No SQL, Types of No SQl databases- Document Databases, Key-value databases , Column Oriented databases, Graph databases , When to use NoSQL and when not.

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