

MARIS STELLA COLLEGE, VIJAYAWADA-8

(An autonomous college affiliated to Krishna University)

Department of Computer Science

Academic Year 2019 - 2020

Title : Database Management Systems Semester : V

Paper Code : COMPC067

Course Outcomes: On completing the subject, students will be able to:

CO1. Store, retrieve data in database.

CO2. Differentiate database systems from file systems by enumerating the features provided by database systems and describe each in both function and benefit.

CO3. Define the terminology, features, classifications, and characteristics embodied in database systems.

CO4. Analyze an information storage problem and derive an information model expressed in the form of an entity relation diagram and other optional analysis forms, such as a data dictionary.

CO5. Demonstrate an understanding of the relational data model.

CO6. Transform an information model into a relational database schema and to use a data definition language and/or utilities to implement the schema using a DBMS.

CO7. Formulate, using SQL, solutions to a broad range of query and data update problems.

SYLLABUS

UNIT – I

6 Hours

The Database Environment: Overview of DBM, Basic concepts & definitions, File-Based System, Drawbacks of File-Based System, DBMS Approach, Advantages of DBMS, Data Models, Components of database environment, the range of database applications, Database Architecture.

UNIT –II

6 Hours

Modeling data in the organization: The E- R model an overview, modeling entities & attributes, Modeling relationships.

The Enhanced ER Model & Business rules: Representing super types & sub types, specifying constraints in super type / sub type relationships.

UNIT – III

12 Hours

Logical Database Design & Relational Model: The Relational data model, Integrity constraints, Introduction to Normalization, Normalization example.

UNIT – IV

10 Hours

Interactive SQL: Data Manipulation in DBMS, The Component parts of a two dimensional matrix, the data types that a cell can hold, two dimensional matrix creation, insertion of data into tables, viewing data into tables, deletion operations, updating the contents of a table, modifying the structure of tables, renaming tables, destroying tables, examining objects created by a user.

More on SQL: Computations on table data, the oracle table ‘dual’, sysdate, oracle functions, data constraints, grouping data from tables in sql, joins.

UNIT-V

11 Hours

PL/SQL: Introduction, Structure of PL/SQL, PL/SQL Language Elements, Data Types, Control Structure,, Steps to Create a PL/SQL Program, Iterative Controls.

Data and database administration: Role of data and DBA, managing data security, repositories.

Prescribed Book:

1. Title: Modern Database Management

Author: Jeffrey A. Hoffer, Mary B.Prescott, Fred R. McFadden.

Edition: 8th Edition, Pearson Education, Year - 2008

Chapters: 1, 2,3,4,5,6,7,8,9,12

2. Title: SQL, PL/SQL The Programming Language of Oracle.

Edition:2nd revised edition

Author: Ivan Bayross.

Publication: BPB Publication.

MARIS STELLA COLLEGE, VIJAYAWADA-8

(An autonomous college affiliated to Krishna University)

Department of Computer Science

BLUE PRINT OF MODEL PAPER

- ❖ The paper consists of two sections.
- ❖ All questions are compulsory from all parts.

SECTION – A

- ❖ Consists of Ten short answer questions from five units.
- ❖ Each question carries **1 Mark**.

SECTION – B

- ❖ Consists of five essay answer questions from **five units** with internal choice.
- ❖ Each question carries **10 Marks**.