

Data Management and Care

L-T-P

1-0-1

Duration: 45 Hours (in 45 Working Days)

Credits: 2 Marks: 50

Course Outcome:

After passing the course the student will be able to:

CO1: Apply Functions and Formula in spreadsheet for managing data

CO2: Analyze data in the spreadsheet using Filters, Charts, Pivot Tables, What-If Analysis, etc.

CO3: Comprehend Fundamentals of Database Management System

CO4: Apply different SQL commands and queries for interaction with database management system

Pre-requisites/Eligibility

- Must have passed 10+2 in any stream with 50% marks and having basic knowledge of Computer operations

Examination Pattern

A) 10 marks for Multiple Choice Questions (10) each of 1 mark.

B) 40 marks for competence based practical.

Course Content

1. Basics
 - a. Introduction to Spreadsheet
 - b. Components of Excel Window
 - c. Creation, Saving, Opening and closing workbook.
 - d. Worksheet
2. Data Entry in sheet
 - a. Editing Data
 - b. Formatting Data

- c. Sort and Filters
- 3. Formula and Functions
 - a. Ways to Enter Formula in sheet
 - b. Operators
 - c. Types of functions
 - d. Application of functions
- 4. Data Representation in Sheet
 - a. Inserting Graphs
 - b. Managing Graph Data
 - c. Modifying Graph Elements
 - d. Printing of Worksheet
- 5. Advanced Concepts
 - a. What-if Analysis
 - b. Advance Filters
 - c. Pivot Tables
 - d. Data handling with Excel
- 6. Fundamentals of Database
 - a. Data and Information
 - b. Fields and Records
 - c. File and Database
 - d. Database Management System
 - e. Relations
 - f. Constraints and Keys in Database
- 7. SQL Commands
 - a. DDL Commands
 - i. CREATE
 - ii. ALTER
 - iii. DROP
 - iv. RENAME
 - v. TRUNCATE
 - vi. Adding Constraints
 - b. DML Commands
 - i. INSERT
 - ii. DELETE
 - iii. UPDATE
 - c. Query Data
 - i. SELECT CLAUSE
 - ii. FROM CLAUSE
 - iii. WHERE CLAUSE
 - iv. Operators
 - v. ORDER BY CLAUSE
 - vi. Aggregate Functions
 - vii. GROUP BY CLAUSE

viii. HAVING CLAUSE

ix. Wildcards

8. Report Generation and Backup
 - a. Generate Consolidated Report
 - b. Generate Customized Report
 - c. Database Backup

Suggested Readings:

- Joyce Cox, Joan Lambert and Curtis Frye, Microsoft office Professional 2010 Step by Step, Microsoft Press, 2010.
- Peter Norton, Peter Norton's Computing Fundamentals, McGraw-Hill Technology Education, 2006.
- C.J. Date, An Introduction to Database Systems, Pearson Education 2000.
- H. F. Korth, Silverschatz A., Database System Concepts, Tata McGraw Hill, 2010.
- Elmasri, Navathe, Fundamentals of Database Systems, Addison-Wesley, 2011.