FACULTY OF COMPUTER SCIENCE & IT

SYLLABUS

of

Add On Course

DATA MANAGEMENT AND CARE

Session: 2022-23

The Heritage Institution

KANYA MAHA VIDYALAYA JALANDHAR
(Autonomous)

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.