SEC

B.A. Part-II Sem-III

BA327: DATA HANDLING USING SPREADSHEETS

Internal Assessment: 30	Maximum Marks: 100
University Examination: 50	Maximum Time: 3 Hrs
Viva: 20	Min Pass Marks: 35%
Lectures to be delivered: 45-55 Hrs	Credit:3

Instructions for paper-setter

The End-Semester examination will be of 3 hours duration and total 50 marks. The question paper will consist of three sections. Section A, B and C. Section A and B will have four questions each from the respective sections of the syllabus out of which the student will be required to attempt two questions from each Section. Each question will carry 10 marks. Section C will be compulsory with 5 short-answer type questions of 02 marks each which will cover the entire Syllabus.

COURSE OBJECTIVES

This course provides basic understanding to the fundamentals of Excel, develop proficiency in Excel for data manipulation and analysis, learn to clean and prepare data for analysis, create effective data visualizations, apply advanced Excel functions and features to solve complex problems.

Course Contents

Activity 1: Introduction to Excel: Overview of Microsoft Excel, understanding the Excel interface, setting up the workspace and preferences, basic data entry and formatting.

Activity 2: Basic Excel Functions and Formulas: Understanding Excel formulas and functions, basic arithmetic functions (SUM, AVERAGE,MIN,MAX),text functions (CONCATENATE, LEFT, RIGHT, MID), logical functions (IF, AND, OR, NOT)

Activity 3: Data Cleaning and Preparation: Importing data from various sources, data cleaning techniques: removingduplicates, handling missing values, data validation, text functions for data cleaning.

Activity 4: Data Manipulation and Transformation: Sorting and filtering data, using table an I structured references, using lookup functions(VLOOKUP,HLOOKUP,INDEX-MATCH), working with Pivot Tables for data summarizations.

Activity 5: Basic Data Analysis Techniques: Descriptive statistics in Excel: mean, median, mode, standard deviationand variance, frequency distributions, using Excel's Data Analysis Tool pack.

Activity 6: Introduction to Data Visualization: Principles of data visualization, creating basic charts in Excel: bar charts,line charts, pie charts, customizing charts for better clarity.

Activity 7: Advanced Data Visualization Techniques: Creating advanced charts: scatter plots, histograms, box plots,Introduction to Pivot Charts, using sparklines for data trends.

Activity 8: Advanced Excel Functions: Advanced functions: SUMIFS, COUNTIFS, AVERAGEIFS, array formulas,performing scenario analysis and what-if analysis, using Solver for optimization problems.

Activity 9: Working with Macros: Introduction to Excel macros, recording and running macros, bas. VBA programmingfor Excel, automating repetitive tasks.

Recommended Texts

1. For Open Source: Documentation Team, LibreOffice, Getting Started with LibreOffice 6.0. Australia, Friends of OpenDocument, Incorporated, 2019.
2. For Proprietary: Working in Microsoft Office - Richard Mansfield - Tata McGraw Hill Education