

SEMESTER-V
DATA ANALYSIS AND VISUALIZATION

Programme: B.Com (IPP)

Course Code: U20/COM/SEC/501

Course Type : SEC-2

No. of Credits: 2

Max. Hours: 45

Max Marks: 50(20:30)

Hours per week: 3

Course Objective:

To develop understanding of machine learning through optimal data processing and structured representation

Course Outcomes:

CO1: To optimize the use of MS-Excel for powerful data analysis

CO2: To apply correct data visualization technique to gain optimal presentation of data

CO3: To apply enhanced features of MS-Excel

MODULE I: DATA REPRESENTATION**(15 Hrs)**

Review of Excel - Worksheet Basics, Protecting Workbook, Importing and Exporting data, sharing in Excel; **Formulas and functions** – understanding formulas; operators in formula; named ranges; calculations; functions in formulas; relative and absolute addressing; referencing cells outside the worksheet and workbook; functions - logical, summarizing, text, lookup, reference, data and time, math functions; error handling, formula auditing

MODULE II: DATA VISUALIZATION**(15 Hrs)**

Charts–waterfall, histogram, pareto, box and whisker, treemap, sunburst, sparkline, 3D map charts and their uses; **Advanced charts** - Gantt chart, milestone chart, smartart graphics, organization chart

MODULE III: DATA ANALYSIS**(15 Hrs)**

Pivot tables – verify data source, format data, recommended pivot tables, adding slicers, timelines, calculated fields and group fields in pivot. Interactive dashboard with pivot tables, consolidating data from different sources, using power pivot, powerquery tool;

Complex Data analysis using toolpak – enabling toolpak, descriptive statistics and ANOVA in Excel, Forecasting in Excel – one click forecasting, forecast functions,, what-if analysis

Suggested Readings:

Manisha Nigam, “Data Analysis with Excel”, BPP publications

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MODEL QUESTION PAPER

Course Code: U20/COM/SEC/501
Credits: 2

Max Marks: 30
Time : 1 Hr

I. Answer the following

3 x 10 = 30 M

1.

OR

2.

3.

OR

4.

5.

OR

6.