

DegreeLive

B.Com Honours

Semester II

Calicut University

Fundamentals of Business Mathematics and Statistics

Course Code: COM2MN104 • Module 3 Notes

1. Data Presentation: Diagrams, Graphs, and Distributions

Raw data is difficult to interpret. To make informed business decisions, managers must summarize and present statistical data visually. This module covers the rules for constructing diagrams, types of bar diagrams and pie charts, time series graphs, ratio charts, and frequency distribution graphs (Histograms, Frequency Polygons, Ogives).

Diagrams vs. Graphs

Comparative Basis	Diagrams (Bar / Pie)	Graphs (Time Series / Frequency)
Grid Paper	Constructed on plain paper; does not require grid lines.	Constructed strictly on coordinate grid paper.
Information Detail	Used for comparison and general audience illustration.	Used for detailed scientific and statistical analysis.
Data Types	Best suited for discrete, categorical data.	Best suited for continuous variables and time series.

Types of Diagrams

- **One-Dimensional:** Bar diagrams where only length is proportional to value (e.g., Simple Bar, Multiple Bar for comparing variables, and Component/Sub-divided Bar for showing parts of a total).
- **Two-Dimensional:** Diagrams where both length and width are proportional (e.g., Pie Chart showing percentage composition of a whole).
- **Pictograms & Cartograms:** Pictograms use pictures to represent values; Cartograms present statistics on geographic maps.

Graphs of Frequency Distribution

Continuous variable data is grouped into frequency distributions and graphed using three main methods:

1. Histogram & Frequency Polygon

Histogram: Adjacent vertical rectangles where the class interval is the width and class frequency is the height.

Frequency Polygon: Connecting the midpoints of the top of the histogram bars with straight lines.

2. Ogives (Cumulative Frequency Curves)

S-shaped curves plotting cumulative frequencies.

- **Less-Than Ogive:** Slopes upward, plotting cumulative frequency against upper class limits.

- **More-Than Ogive:** Slopes downward, plotting cumulative frequency against lower class limits.

The intersection point of the two curves gives the **Median**.

Acing your exams is just a click away!

Visit www.degreeelive.in to download the next module for free.

DegreeLive