1. Introduction

Statistics is the study of collecting, organizing, presenting, analyzing, and interpreting numerical data.

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2. Important Terms

- Data: Collection of information (e.g. marks of students).
- Primary Data: Collected directly by the investigator.
- Secondary Data: Already collected and used from other sources.
- Ungrouped Data: Raw data not classified into groups.
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Grouped Data: Data organized into intervals or classes.

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3. Presentation of Data

- Frequency Distribution Table: Shows how often each value occurs.

  Example:

Marks	Frequency
0-10	3
10-20	5
20-30	7

- Bar Graph: Shows data using bars of equal width.
- Histogram: Special type of bar graph for grouped data (no gaps).
- Frequency Polygon: Line graph connecting midpoints of class intervals.

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4. Measures of Central Tendency

These are values that represent a dataset:

Mean (Average)

Mean=Sum of all observationsNumber of observations\text{Mean} = \frac{\text{Sum of all observations}}{\text{Number of observations}}Mean=Number of observationsSum of all observations

Median

The middle value when data is arranged in ascending order.

- If odd number of values: Middle one.
- If even: Average of two middle values.

Mode

The value that occurs most frequently in the data.

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5. Types of Graphs Used

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Bar Graph – For comparing categories.

- Histogram – For continuous data (grouped).

- Frequency Polygon – Often used with histogram or independently.

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6. Tips for Exams

 Always arrange data before finding the median.
 Double-check calculations for mean and mode.
 Clearly label axes and intervals in graphs.
 Practice interpreting real-life statistics problems.
 Remember formulas and units.