

Subject :- EDS Practice Session

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1. Bar Graph

- **Significance:**

- Best for comparing **categories** or **groups**.
- Quickly shows **differences** between items.
- Useful for **discrete data** (like sales by product, students per department).

2. Line Graph

- **Significance:**

- Shows **trends** over **time**.
- Great for **time series data** (like stock prices, temperature changes).
- Helps in identifying **increases**, **decreases**, or **constant patterns**.

3. Pie Chart

- **Significance:**

- Represents **parts of a whole**.
- Best when you want to show **percentage** or **proportional data**.
- Useful for visualizing **market share**, **budget distribution**, etc.

4. Histogram

- **Significance:**

- Displays the **distribution** of continuous data.
- Helps identify **frequencies**, **skewness**, and **outliers**.
- Common in **statistical analysis** (like marks distribution in a class).

5. Scatter Plot

- **Significance:**

- Shows **relationships** between **two variables**.

- Helps in finding **correlations** (positive, negative, or none).
- Useful for **predictive modeling** and **regression analysis**.

6. Box Plot (Box-and-Whisker Plot)

. Significance:

- Summarizes **distribution** with **median**, **quartiles**, and **outliers**.
- Best for **comparing distributions** across groups.
- Quickly shows **spread** and **symmetry** of data.

7. Area Chart

. Significance:

- Like a line graph, but with the area under the line **filled**.
- Shows **cumulative data** trends over time.

- Useful when you want to emphasize **volume** changes.

8. Heatmap

- **Significance:**
 - Represents **data density** using **colors**.
 - Best for visualizing **complex relationships** in matrices.
 - Helps to find **patterns** in **large datasets** (like correlation matrices).

9. Bubble Chart

- **Significance:**
 - Extension of scatter plot where **size** of the bubble shows an **extra dimension**.
 - Useful for **multivariable comparisons**.

10. Radar Chart (Spider Chart)

- **Significance:**
 - Compares **multiple variables** at once.

- Best for displaying **performance metrics** or **skill comparisons**.