



INDIAN SCHOOL AL WADI AL KABIR

Class: XI

Department: Commerce

Worksheet: 1

Topic: Statistics-Presentation of Data

MCQs

- When data is presented in a table, the percentage of a part to the whole is best shown through:
 - Histogram
 - Bar Diagram
 - Pie Diagram
 - Ogive
- Captions is the title given to:
 - Columns
 - Rows
 - Headnote
 - Stubs
- Special purpose table is also known as:
 - Reference table
 - Simple table
 - Complex table
 - Summary table
- The main objective of presentation of data is to:
 - Make data lengthy
 - Make data attractive only
 - Make data easy to understand
 - Avoid analysis
- Which of the following is the most attractive method of data presentation?
 - Textual presentation
 - Diagrammatic presentation
 - Tabular presentation
 - Numerical presentation
- What will be the degree measure of an angle in the pie diagram if a household spends 80% of his income on goods?
 - 180 Degree
 - 228 Degree
 - 90 Degree
 - 72 Degree
- Arithmetic line graphs are also known as:
 - Linear graphs
 - Non-linear graphs

- c) Time-Series graphs
- d) None of these

8. While preparing Arithmetic line graph, we show ----- on the X – axis.
- a) time
 - b) expense
 - c) income
 - d) all of the above
10. Diagrammatic representation of the cumulative frequency distribution is:
- e) frequency polygon
 - f) ogive
 - g) histogram
 - h) none of the above

AR Questions

Alternatives:

- (a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A)**
- (b) Both Assertion (A) and Reason (R) are true and Reason (R) is not the correct explanation of Assertion (A)**
- (c) Assertion (A) is true but Reason (R) is false.**
- (d) Assertion (A) is false but Reason (R) is true.**

Read the following statements carefully–Assertion (A) and Reason (R) and choose the correct alternative

1. Assertion(A): In the process of tabulation of data, title of the table should be self-explanatory.
Reason(R): Raw data presented in a tabular form organizes the data to enhance understanding.
2. Assertion (A): Simple bar graphs are drawn on a three dimensional plane.
Reason(R): Bar graphs can be either vertical or horizontal to represent same information.

Statement Based Questions:

Alternatives:

- a) Both the statement are true**
 - (b) Both the statement are false**
 - (c) Statement 1 is true and Statement 2 is false**
 - (d) Statement 2 is true and Statement 1 is false**
1. **Statement I:** Tabular presentation helps in arranging data systematically.
Statement II: A pie chart is used to show parts of a whole.
 2. **Statement I:** A line graph is suitable for showing data over time.
Statement II: Histogram is used for categorical data only.

Case Study:

1. A manager was required to submit the report of components of cost of his senior. The cost had reduced in absolute terms but increased in percentage. He used a subdivided bar diagram to present the data.

i) Do you think there was some motive behind it? Which diagram will you recommend to be used?

Ans. Yes, there was a motive for misrepresentation and manipulation of data. It reflects the dishonesty of the manager. In my opinion, he should have used either a percentage bar diagram or a pie chart as both show related changes and will show the true picture.

ii) According to you, list out the limitations of diagrammatical presentation.

Ans. Diagrams are very useful tools in presentation of data but they cannot be substituted for classification or tabulation. It is not free from limitations.

- 1. Diagrams do not present the small differences properly.**
- 2. These can easily be misused.**
- 3. Only artists can draw multi-dimensional diagrams**
- 4. In statistical analysis, diagrams are of no use.**
- 5. Diagrams are just supplementing to tabulation.**

It must be remembered that a diagram which is suitable in 1 situation may not be suitable for another situation. We need to choose a proper diagram considering the type of data available and the purpose of diagram.

iii) Differentiate between sub-divided and percentage bar diagrams.

Sub-divided Bar Diagram	Percentage Bar Diagram
Sub-divided bar diagram, components are shown in absolute quantities.	The percentages bar diagram, quantities are shown in percentages.
Sub divided bar diagrams, all bars are of different sizes.	The Percentage bar diagram, all bars are of equal height.
It cannot be used to compare the relative importance of different components.	It can be used to compare the relative importance of different components.

Numericals:

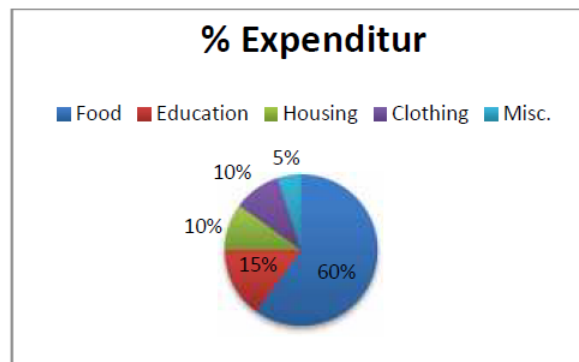
1. Show the following data using a Pie- Diagram.

Production of Tea, Cocoa, Coffee

Items of expenditure	% expenditure
Food	60
Education	15
Housing	10
Clothing	10
Misc.	5
Total	100

SOLUTION:

Items of expenditure	% expenditure	Degree measure/360
Food	60	$60 / 100 \times 360 = 216$
Education	15	$15 / 100 \times 360 = 54$
Housing	10	$10 / 100 \times 360 = 36$
Clothing	10	$10 / 100 \times 360 = 36$
Misc.	5	$5 / 100 \times 360 = 18$
Total	100	360



Ans.

2. In a firm of 400 employees, the percentage of monthly salary saved by each employee is given in the following table. Represent it through a bar graph.

Savings (in percentage)	Number of Employees(Frequency)
20	105
30	199
40	29
50	73
Total	400

3. Draw 'less than' as well as 'more than' ogives for the following data:

Weight (in kg)	30-34	35-39	40-44	45-49	50-54	55-59	60-64
Frequency	3	5	12	18	14	6	2

4. Draw a multiple-bar diagram to show the following data:

Student	A	B	C
Marks in Economics	40	35	30
Marks in English	30	15	25

5. The population of a town is given below. Draw a line graph to represent the data.

Year	Population
2018	12,000
2019	13,500
2020	14,000
2021	15,200
2022	16,800