

Study Notes On Bar Graph



BAR GRAPH

Bar graph is a part of Data Interpretation. Bar Graph is normally said to be one of the simplest and the most common types DI that comes in the examination. It consists of a number of rectangular bars, one for each category of the data in which the magnitudes are represented by the length or height of the rectangles, whereas width of rectangles is arbitrary and immaterial.

For solving Bar Graph question, one must be aware of the following arithmetical topic-

- Ratios
- Averages
- Percentages

Now let's go through the most common type of BAR Graph that were asked in the examination-

TYPES OF BAR GRAPH

The various types of bar diagrams which are most commonly used are mentioned below:

1. Percentage Bar Diagram
2. Multiple Bar Graph
3. Simple Bar Graph
4. Sub-divided Bar Graph

1. Percentage Bar Diagram

The bar diagram which is presented graphically on percentage basis is known as percentage bar diagram. It is very useful for diagrammatic representation of the relative changes in the data. A percentage bar diagram is mainly used to highlight the relative importance of the different component parts to the whole. In this type of bar diagram all totals are taken as 100 & then represented by bars of same length. The component parts are expressed as total percentage.

2. Multiple Bar Graph

This bar graph shows the relationship between different values of data. In multiple bar graph each data value is represented by a column in the graph. In this type of bar graph, multiple data points for each category of data are displayed with addition of columns. These are also used to show two or more sets of interrelated data.

The labels are kept in the X-axis and their respective frequencies are used in the Y-axis. These frequencies are plotted in the column section. The bars for different phenomena for particular year are displayed adjacent to each other. Proper & equal spacing is given between the different set of bar graph.

3. Simple Bar Graph

Simple bar graph is used to represent data involving only one variable classified on a quantitative or temporary basis. In this type of bar graph, the bars of equal width but variable length are displayed. Means that the magnitude of a variables is represented by the height or length or rectangles of the bars.

Simple bar diagram is known as the simplest and the easiest form of bar graph.

4. Sub-divided Bar Graph

Sub-divided bar diagram is used to present data which are having two or more components. Sub-divided bar graph is used to represent data in which the total magnitude is divided into different information or components.

A simple bar graph is able to represent only one characteristic at a time. So for this limitation simple bar graph is overcome by subdivided bar graph. In this, the total bar is divided into its component parts.

NOW LETS US UNDERSTAND THIS THROUGH SOME EXAMPLES THAT WILL MAKE YOUR CONCEPT CLEAR REGARDING BAR GRAPH-

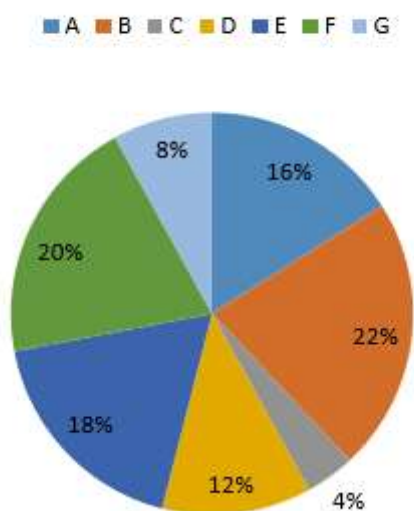
1. Percentage Bar Diagram

Direction: Study the following information carefully and answer the related questions.

Pie-chart shows the percentage of valid votes obtained by seven candidates of a college who were nominated for the post of college secretary.

Total votes = 5000

Percentage of valid votes



It is given that 7% votes are invalid.

Valid votes obtained by A, E and F together is how much more than the valid votes obtained by remaining four candidates?

- A. 300
- B. 372
- C. 420
- D. None of these

Answer-B

Solution- Total valid votes = $\frac{100-7}{100} \times 5000 = 4650$

Votes of A = $\frac{16}{100} \times 4650 = 744$

Votes of B = $\frac{22}{100} \times 4650 = 1023$

Votes of C = $\frac{4}{100} \times 4650 = 186$

Votes of D = $\frac{12}{100} \times 4650 = 558$

Votes of E = $\frac{18}{100} \times 4650 = 837$

$$\text{Votes of F} = \frac{20}{100} \times 4650 = 930$$

$$\text{Votes of G} = \frac{8}{100} \times 4650 = 372$$

$$\text{Votes obtained by A, E and F together} = 744 + 837 + 930 = 2511$$

$$\text{Valid votes obtained by remaining four candidates} = 1023 + 186 + 558 + 372 = 2139$$

$$\text{Difference} = 2511 - 2139 = 372$$

Hence, votes obtained by A, E and F is 372 more than votes obtained by remaining four candidates.

2. Multiple Bar Graph

The given bar graph shows the imports and exports (in ` crores) of steel by a country from 2013 to 2017.



The total imports of steel in 2014, 2016 and 2017 Is what percent less than the total exports in 2013, 2015 and 2017 (correct to one decimal place)?

- A. 16.2
- B. 13.4
- C. 14.5
- D. 15.8

Answer-C

Solution-

$$\text{Import}_{(2014 + 16 + 17)} = 360 + 500 + 550 = 1410$$

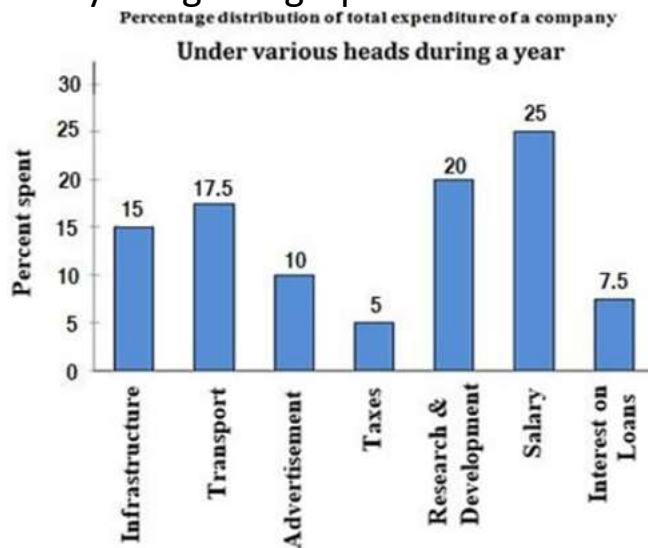
$$\text{Export}_{(2013 + 15 + 17)} = 400 + 600 + 650 = 1650$$

$$\text{Required \%} = \frac{1650 - 1410}{1650} \times 100$$

$$\frac{24}{165} \times 100 = 14.5$$

3. Simple Bar Graph

Study the given graph and answer the question that follows.



The expenditure on Interest on Loans is by what percentage more than the expenditure on Taxes?

- A. 50%
- B. 40%
- C. 25%
- D. 30%

Answer-A

Solution-

Percentage of expenditure on Interest on Loans = 7.5%

Percentage of expenditure on taxes = 5%

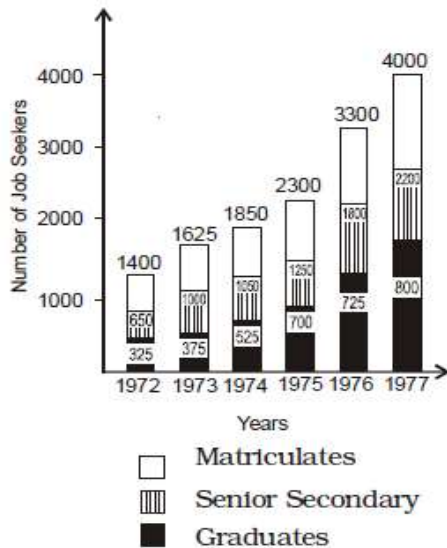
Difference = 7.5% - 5% = 2.5%

Required percentage = $\frac{7.5\% - 5\%}{5\%} \times 100 = \frac{2.5}{5} \times 100 = 50\%$

4. Sub-divided Bar Graph

The bar graph given here shows the number of jobseekers of a state in various years at different stages of education.

Job-Seekers in Various Years



In which year was the number of Graduate job-seekers the same as that of Senior Secondary jobseekers?

- (A) 1973
- (B) 1974
- (C) 1975
- (D) 1976

Answer-(B)

Solution-

Number of Graduate jobseekers in 1974 = 525

Number of Senior secondary job-seekers in

1974 = 1050 – 525 = 525

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