



Unit 1: MCQ

Question 1: Which one of the following is not the graphical representation of statistical data:

- (a) Bar graph
- (b) Histogram
- (c) Frequency polygon
- (d) Cumulative frequency distribution

ANSWER:

- (d) Cumulative frequency distribution

We know that bar graph, histogram and frequency polygons are all graphical representation of statistical data.

Hence, the correct answer is option (d).

Question 2:

In a frequency distribution, ogives are graphical representation of

- (a) Frequency
- (b) Relative frequency
- (c) Cumulative frequency
- (d) Raw data

ANSWER:

- (c) Cumulative frequency

In a frequency distribution, ogives are graphical representation of cumulative frequency.

Hence, the correct answer is option (c).

Question 3:

A frequency polygon is constructed by plotting frequency of the class interval and the

- (a) upper limit of the class
- (b) lower limit of the class
- (c) mid value of the class
- (d) any values of the class

ANSWER:



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(c) mid value of the class

Frequency polygon is the plot of frequencies vs. the mid values of the classes.
Hence, the correct answer is option (c)

Question 4:

In a histogram the area of each rectangle is proportional to

- (a) the class mark of the corresponding class interval
- (b) the class size of the corresponding class interval
- (c) frequency of the corresponding class interval
- (d) cumulative frequency of the corresponding class interval

ANSWER:

(c) frequency of the corresponding class interval

In a histogram the area of each rectangle is proportional to the frequency of the corresponding class interval.

Hence, the correct answer is option (c).

Question 5:

In the 'less than' type of ogive the cumulative frequency is plotted against

- (a) the lower limit of the concerned class interval
- (b) the upper limit of the concerned class interval
- (c) the mid-value of the concerned class interval
- (d) any value of the concerned class interval

ANSWER:

(b) the upper limit of the concerned class interval

In the less than type of ogive the cumulative frequency is plotted against the upper limit of the concerned class interval.

Hence, the correct answer is option (b).

Question 6:

In a histogram the class intervals or the group are taken along

- (a) Y-axis
- (b) X-axis



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(c) both of X-axis and Y-axis

(d) in between X and Y axis

ANSWER:

(b) X-axis

In a histogram the class intervals or the groups are taken along the horizontal axis or X-axis. Hence, the correct answer is option (b).

Question 7:

A histogram is a pictorial representation of the grouped data in which class intervals and frequency are respectively taken along

(a) vertical axis and horizontal axis

(b) vertical axis only

(c) horizontal axis only

(d) Horizontal axis and vertical axis

ANSWER:

(d) Horizontal axis and vertical axis

In a histogram the class intervals and frequencies are taken along horizontal and vertical axes respectively.

Hence, the correct option is (d).

Question 8:

In a histogram, each class rectangle is constructed with base as

(a) frequency

(b) class-intervals

(c) range

(d) size of the class

ANSWER:

(b) class-intervals

In a histogram, the class rectangles are constructed with base as the class-intervals.

Hence, the correct answer is option (b).

Question 9:

Consider the following frequency distribution:



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Class interval : 5 – 10 10 – 15 15 – 25 25 – 45 45 – 75
Frequency : 6 12 10 8 15

To draw a histogram to represent the above frequency distribution the adjusted frequency for the class 25-45 is

- (a) 6
- (b) 5
- (c) 3
- (d) 2

ANSWER:D

In the given frequency distribution,

Minimum class size = 5 (10 – 5 = 5 or 15 – 10 = 5)

Class size of the class 25–45 = 45 – 25 = 20

Frequency of the class 25–45 = 8

We know

Adjusted frequency of a class = $\frac{\text{Minimum class size}}{\text{Class size}} \times \text{Frequency of the class}$

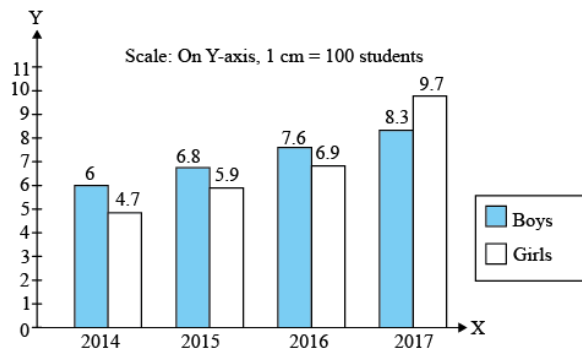
∴ Adjusted frequency for the class 25–45 = $\frac{5}{20} \times 8 = 2$

Thus, in order to draw a histogram to represent the given frequency distribution the adjusted frequency for the class 25–45 is 2.

Hence, the correct answer is option (d).

Question 10:

In the given figure, shows the bar graph of the number of boys and number of girls in a school from 2014 to 2017.



In which year was the difference between the number of boys and the number of girls



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was more?

- (a) 2014
- (b) 2015
- (c) 2016
- (d) 2017

ANSWER:D

From the given bar graph, we have

The difference in the number of boys and girls in 2014 = $(6 - 4.7) \times 100 = 1.3 \times 100 = 130$

∠The difference in the number of boys and girls in 2015 = $6.8 - 5.9 \times 100 = 0.9 \times 100 = 90$

∠The difference in the number of boys and girls in 2016 = $7.6 - 6.9 \times 100 = 0.7 \times 100 = 70$

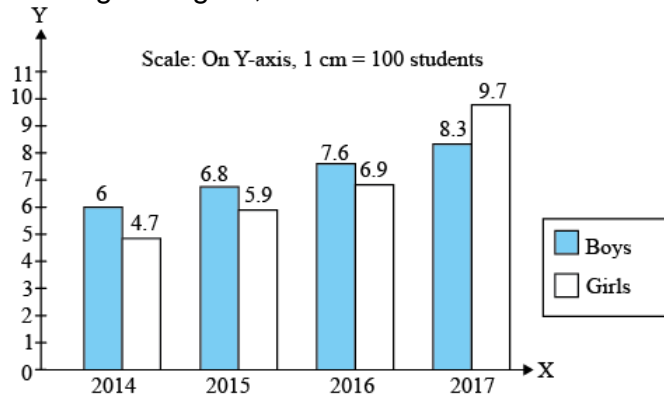
∠The difference in the number of girls and boys in 2017 = $9.7 - 8.3 \times 100 = 1.4 \times 100 = 140$

Thus, in 2017 the difference between the number of boys and the number of girls was more.

Hence, the correct answer is option (d).

Question 11:

In the given figure, total number of students in the year 2015 was



- (a) 1160
- (b) 1270
- (c) 1380
- (d) 1490

ANSWER:B

In 2015 number of boys = 6.8
 $= 6.8 \times 100$
 $= 680$

Similarly,
In 2015 number of girls = 5.9
 $= 5.9 \times 100$



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$$= 590$$

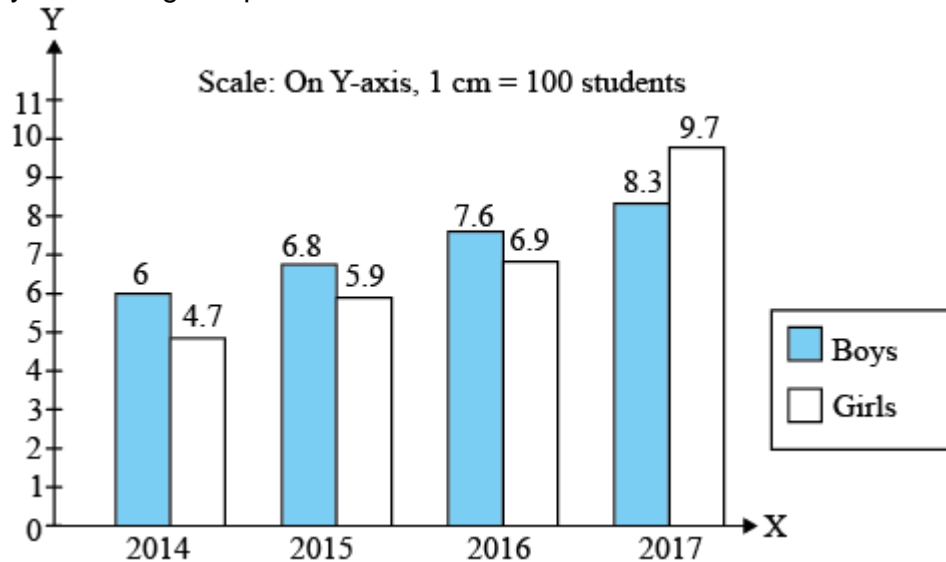
$$\begin{aligned} \text{Total number of students in 2015} &= \text{Number of boys} + \text{Number of girls} \\ &= 680 + 590 \\ &= 1270 \end{aligned}$$

Therefore, total number of students in 2015 was 1270

Hence, the correct answer is option (b).

Question 12:

In the given figure, the minimum difference between the number of boys and girls in any year in the given period was



- (a) 90
- (b) 70
- (c) 50
- (a) 30

ANSWER:B

$$\text{The difference in the number of boys and girls in 2014} = (6 - 4.7) \times 100 = 1.3 \times 100 = 130$$

$$\text{The difference in the number of boys and girls in 2015} = 6.8 - 5.9 \times 100 = 0.9 \times 100 = 90$$

$$\text{The difference in the number of boys and girls in 2016} = 7.6 - 6.9 \times 100 = 0.7 \times 100 = 70$$

$$\text{The difference in the number of girls and boys in 2017} = 9.7 - 8.3 \times 100 = 1.4 \times$$



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$$100 = 140$$

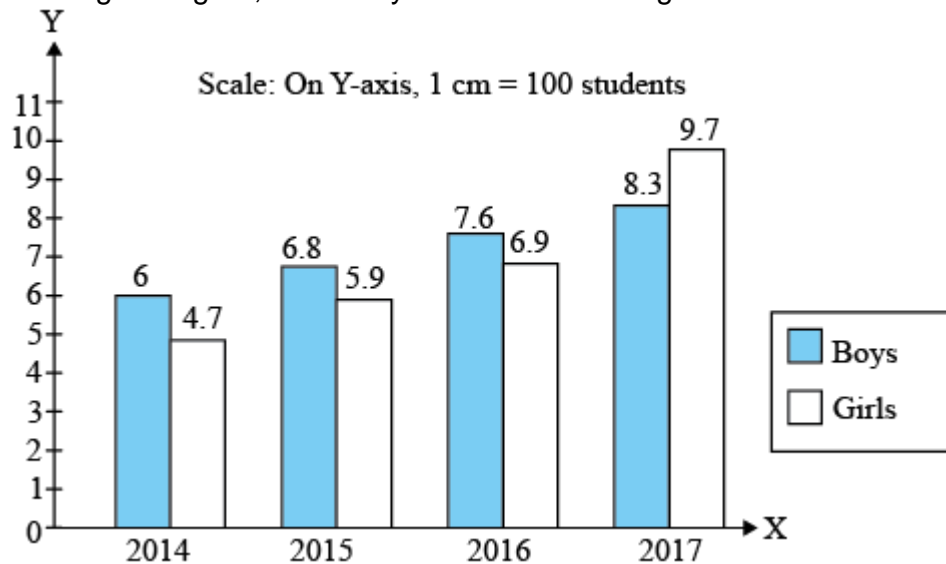
Thus, in 2016 the difference between the number of boys and the number of girls was more.

Thus, the minimum difference between the number of boys and girls was in the year 2016, i.e., 70.

Hence, the correct answer is option (b).

Question 13:

In the given figure, in which year the number of girls was more than the number of boys?



- (a) 2014
- (b) 2015
- (c) 2016
- (d) 2017

ANSWER:D

From the graph, we have

In 2017 the number of girls is more compared to the number of boys.

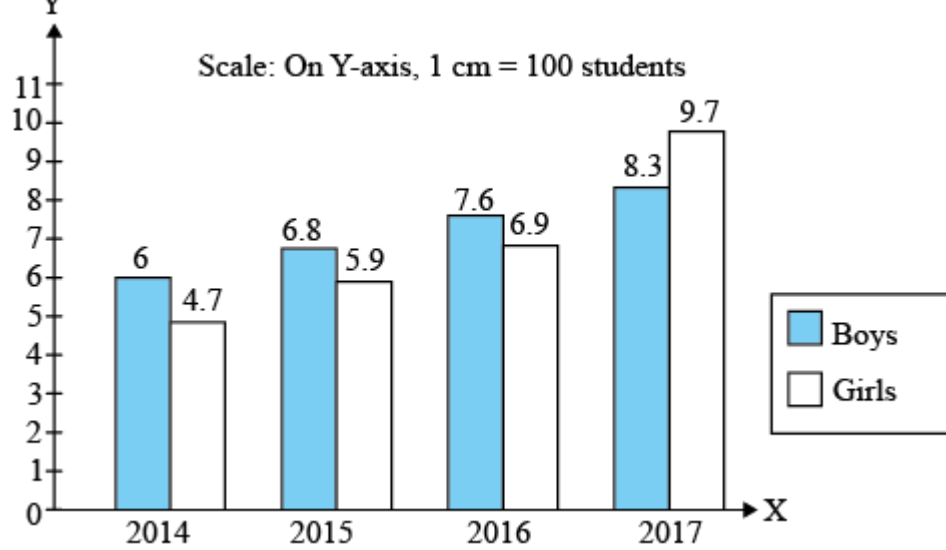
Hence, the correct answer is an option (d).

Question 14:



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In the given figure, the ratio between the number of students in the year 2016 and 2017 was



- (a) 107 : 145
- (b) 127 : 145
- (c) 29 : 36
- (d) 107 : 127

ANSWER:C

We have

$$\begin{aligned} \text{In 2016 number of boys} &= 7.6 \\ &= 7.6 \times 100 \\ &= 760 \end{aligned}$$

Also,

$$\begin{aligned} \text{In 2016 number of girls} &= 6.9 \\ &= 6.9 \times 100 \\ &= 690 \end{aligned}$$

Therefore, total number of students in 2016 was 1450

Similarly,

$$\begin{aligned} \text{In 2017 number of boys} &= 8.3 \\ &= 8.3 \times 100 \\ &= 830 \end{aligned}$$

Also,

$$\begin{aligned} \text{In 2017 number of girls} &= 9.7 \\ &= 9.7 \times 100 \\ &= 970 \end{aligned}$$

Therefore, total number of students in year 2017 was 1800.

Thus, the ratio of the total sales in the year 2016 and that in 2017 = 1450 : 1800
= 29 : 36

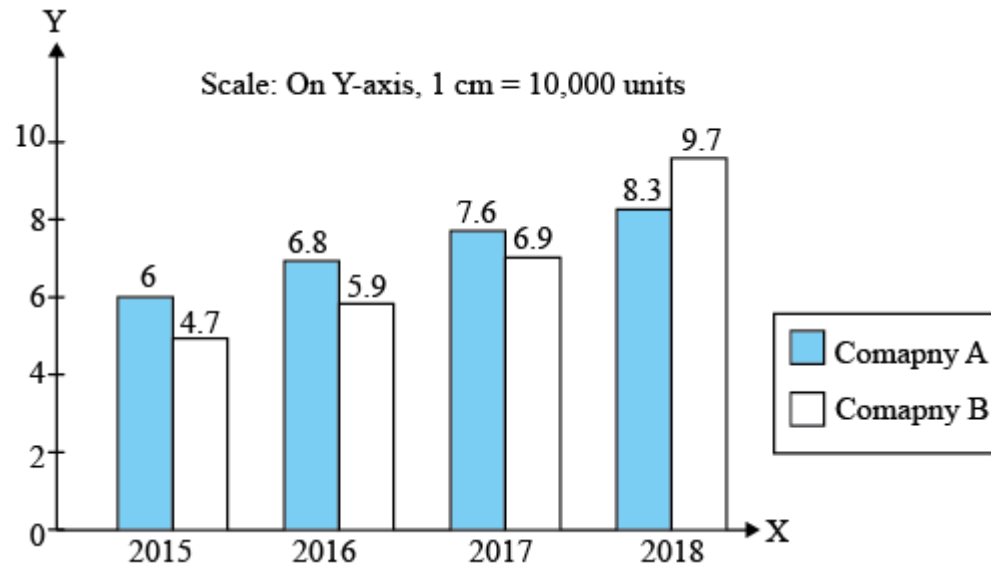


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Hence, the correct answer is option (c).

Question 15:

Following bar graph represents the sales of cold drinks of two companies A and B from 2015 to 2018.



Bar graph represents the sales of cold drinks of two companies A and B from 2015 to 2018

Read the above bar graph and answer the following questions:

(i) The year in which the difference between the sales of two companies was highest, was

- (a) 2018
- (b) 2015
- (c) 2016
- (d) 2017

(ii) Total sales of A and B in the year 2016 was

- (a) 1,160,000 units
- (b) 1,270,000 units
- (c) 1,380,000 units
- (d) 1,490,000 units

(iii) The minimum difference between the sales of company A and B in any year in the given period was



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- (a) 90,000 units
- (b) 70,000 units
- (c) 50,000 units
- (d) 30,000 units

(iv) In which year was the sales of company B more than the sales of company A?

- (a) 2015
- (b) 2016
- (c) 2017
- (d) 2018

(v) The ratio of the total sales in the year 2017 and that in 2018 was

- (a) 107 : 145
- (b) 29 : 36
- (c) 127 : 145
- (d) 107 : 127

ANSWER:

(i) From the given bar graph, we have

The difference in the number of drinks in companies A and B in 2015 = $6 - 4.7 = 1.3$

The difference in the number of drinks in companies A and B in 2016 = $6.8 - 5.9 = 0.9$

The difference in the number of drinks in companies A and B in 2017 = $7.6 - 6.9 = 0.7$

The difference in the number of drinks in companies A and B in 2018 = $9.7 - 8.3 = 1.4$

Thus, in 2018 the difference in the number of drinks in companies A and B was more.

Hence, the correct answer is an option (a).

(ii) We have

$$\begin{aligned} \text{In 2016 sales of A} &= 6.8 \\ &= 6.8 \times 10,000 \text{ units} \\ &= 68000 \text{ units} \end{aligned}$$

Similarly,

$$\begin{aligned} \text{In 2016 sales of B} &= 5.9 \\ &= 5.9 \times 10,000 \text{ units} \\ &= 59000 \text{ units} \end{aligned}$$

Therefore, total sales of A and B in the year 2016 were 127,000.

Disclaimer: In this question the option should be 116,000, 127,000, 138,000 and



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149,000.

Hence, the correct answer is option (b).

(iii) We have,

The minimum difference between the sales of company A and B was in year 2017 and it is 0.7

$$= 0.7 \times 10,000$$

$$= 70,000$$

Hence, the correct answer is option (b).

(iv) In 2018, the sales of company B more than the sales of company A.

Hence, the correct answers option (d).

(v) We have

In 2017 sales of A = 7.6

$$= 7.6 \times 10,000 \text{ units}$$

$$= 76000 \text{ units}$$

Also,

In 2017 sales of B = 6.9

$$= 6.9 \times 10,000 \text{ units}$$

$$= 69000 \text{ units}$$

Therefore, total sales of A and B in the year 2017 was 145,000.

Similarly,

In 2018 sales of A = 8.3

$$= 8.3 \times 10,000 \text{ units}$$

$$= 83000 \text{ units}$$

Also,

In 2018 sales of B = 9.7

$$= 9.7 \times 10,000 \text{ units}$$

$$= 97000 \text{ units}$$

Therefore, total sales of A and B in the year 2018 was 180,000.

Thus, the ratio of the total sales in the year 2017 and that in 2018 = 145,000 : 180,000
= 29 : 36

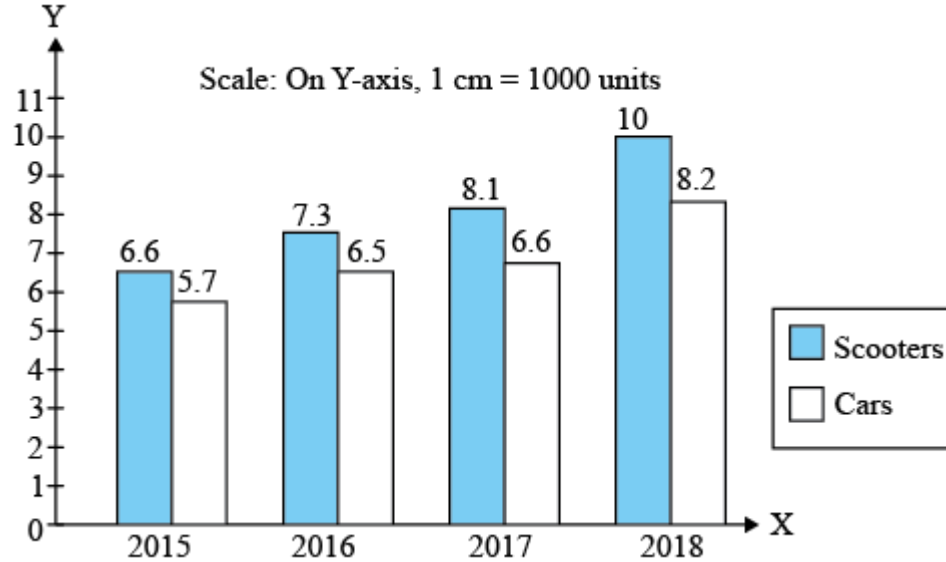
Hence, the correct answer is option (b).



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Question 16:

Read the following bar graph and answer the following questions:



(i) In which year was the difference between the sales of the scooters and the sales of cars the least?

- (a) 2015
- (b) 2016
- (c) 2017
- (d) 2018

(ii) Total number of vehicles (scooters and cars) sold in the year 2015 and 2016 was

- (a) 26,100
- (b) 28,500
- (c) 25,100
- (d) 27,500

(iii) The maximum difference between the sales of scooters and cars, in any year, in the given period was

- (a) 1500
- (b) 1700
- (c) 1800
- (d) 2000

(iv) The total number of scooters sold in the four years was

- (a) 26,000
- (b) 27,000



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- (c) 31,000
- (d) 32,000

(v) The ratio between the total number of vehicles sold (scooters and cars) in the year 2016 and that in the year 2018.

- (a) 41 : 46
- (b) 69 : 91
- (c) 147 : 182
- (d) 46 : 49

ANSWER:

(i) From the given bar graph, we have

The difference in the sales of cars and Scooters in 2015 = $6.6 - 5.7 = 0.9$

The difference in the sales of cars and Scooters in 2016 = $7.3 - 6.5 = 0.8$

The difference in the sales of cars and Scooters in 2017 = $8.1 - 6.6 = 1.5$

The difference in the sales of cars and Scooters in 2018 = $10 - 8.2 = 1.8$

Thus, in 2016 The difference in the sales of cars and Scooters was least

Hence, the correct answer is an option (b).

(ii) We have

In 2015 sales of scooters = 6.6
= 6.6×1000 units
= 6600 units

Also

In 2015 sales of cars = 5.7
= 5.7×1000 units
= 5700 units

Therefore, the total sales of scooters and cars in the year 2015 were 12,300.

Similarly,

In 2016 sales of scooters = 7.3
= 7.3×1000 units
= 7300 units

Also

In 2016 sales of cars = 6.5
= 6.5×1000 units
= 6500 units



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Therefore, the total sales of scooters and cars in the year 2016 were 13,800.

Thus, the total number of vehicles sold in the years 2015 and 2016 was 26,100.

Hence, the correct answer is option (a).

(iii) We have,

The maximum difference between the sales of scooters and cars was in the year 2018 and it is 1.8

$$\begin{aligned} &= 1.8 \times 1000 \\ &= 1800 \end{aligned}$$

Hence, the correct answer is option (c).

(iv) We have,

$$\text{Scooters sold in the year 2015} = 6.6 \times 1000 = 6600$$

$$\text{Scooters sold in the year 2016} = 7.3 \times 1000 = 7300$$

$$\text{Scooters sold in the year 2017} = 8.1 \times 1000 = 8100$$

$$\text{Scooters sold in the year 2018} = 10 \times 1000 = 10,000$$

$$\begin{aligned} \text{Thus, total scooters sold in the 4 years} &= 6600 + 7300 + 8100 + 10,000 \\ &= 32,000 \end{aligned}$$

Hence, the correct answer is option (d).

(v) We have

$$\begin{aligned} \text{In 2016 sales of scooters} &= 7.3 \\ &= 7.3 \times 1000 \text{ units} \\ &= 7300 \text{ units} \end{aligned}$$

Also

$$\begin{aligned} \text{In 2016 sales of cars} &= 6.5 \\ &= 6.5 \times 1000 \text{ units} \\ &= 6500 \text{ units} \end{aligned}$$

Therefore, the total sales of scooters and cars in the year 2016 was 13,800.

$$\begin{aligned} \text{In 2018 sales of scooters} &= 10 \\ &= 10 \times 1000 \text{ units} \\ &= 10000 \text{ units} \end{aligned}$$

Also

$$\begin{aligned} \text{In 2018 sales of cars} &= 8.2 \\ &= 8.2 \times 1000 \text{ units} \\ &= 8200 \text{ units} \end{aligned}$$



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Therefore, the total sales of scooters and cars in the year 2018 was 18,200.

Thus, the ratio of the total sales in the year 2016 and that in 2018 = 13,800: 18,200
= 69 : 91

Hence, the correct answer is option (b).

17. Question: What is the primary purpose of using statistical techniques in business and industry?

- A. Entertainment
- B. Decision Making
- C. Artistic Expression
- D. Historical Documentation

Answer: B. Decision Making

18. Question: Which statistical method is commonly used to analyze the relationship between two variables in business research?

- A. Descriptive Statistics
- B. Regression Analysis
- C. Factor Analysis
- D. T-Test

Answer: B. Regression Analysis

19. Question: In business forecasting, what does time series analysis primarily focus on?

- A. Cross-Sectional Data
- B. Longitudinal Data
- C. Spatial Data
- D. Nominal Data

Answer: B. Longitudinal Data

20. Question: What statistical technique is useful for identifying patterns and relationships among variables in a large dataset?

- A. Cluster Analysis
- B. Analysis of Variance (ANOVA)
- C. Chi-Square Test
- D. Paired T-Test

Answer: A. Cluster Analysis

21. Question: Which measure of central tendency is sensitive to extreme values in a dataset?

- A. Mean



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- B. Median
- C. Mode
- D. Range

Answer: A. Mean

22. Question: What is the purpose of hypothesis testing in business and industry?

- A. To prove a theory
- B. To make predictions
- C. To validate assumptions
- D. To test the significance of a relationship

Answer: D. To test the significance of a relationship

23. Question: Which statistical technique is suitable for comparing the means of two independent groups in a business context?

- A. T-Test
- B. Chi-Square Test
- C. ANOVA
- D. Regression Analysis

Answer: A. T-Test

24. Question: What is the purpose of a Pareto analysis in business?

- A. Identifying the most significant factors
- B. Predicting future trends
- C. Exploring cause-and-effect relationships
- D. Measuring central tendency

Answer: A. Identifying the most significant factors

25. Question: What does the term "correlation coefficient" measure in statistical analysis?

- A. Causation
- B. Strength and direction of a linear relationship
- C. Confidence interval
- D. Variance

Answer: B. Strength and direction of a linear relationship

26. Question: Which statistical technique is commonly used for quality control and process improvement in manufacturing?

- A. Pareto Analysis
- B. Control Charts
- C. Decision Trees



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D. Time Series Analysis

Answer: B. Control Charts

Classification and Tabulation of Data MCQs:

27. What is data classification?

- a. Arranging data in ascending order
- b. Categorizing data into groups or classes
- c. Summarizing data in a table
- d. None of the above

Answer: b

28. Which of the following is not a primary purpose of data classification?

- a. Simplifying complex data
- b. Enhancing data organization
- c. Reducing data redundancy
- d. Calculating data mean

Answer: d

29. What is the purpose of tabulating data?

- a. Sorting data alphabetically
- b. Displaying data in a systematic manner
- c. Performing statistical calculations
- d. Generating graphs and charts

Answer: b

29. Which of the following is an example of quantitative data?

- a. Temperature
- b. Gender
- c. Country
- d. Marital status

Answer: a

30. What is a frequency distribution?

- a. A way to organize qualitative data
- b. A summary of the number of times each value occurs in a dataset
- c. A method of ranking data in ascending order
- d. None of the above

Answer: b



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31. How is the mode calculated in a frequency distribution?
- The value that appears most frequently
 - The average of all values
 - The middle value when data is arranged in ascending order
 - None of the above

Answer: a

32. In data classification, what is a class interval?
- The range between the highest and lowest values
 - A group or range in which data is divided
 - The average of a set of values
 - The difference between the mean and median

Answer: b

33. What is the purpose of a cumulative frequency distribution?
- Displaying the total frequency up to a certain class
 - Sorting data in descending order
 - Calculating the mean of the dataset
 - None of the above

Answer: a

34. Which of the following is an example of qualitative data?
- Age
 - Weight
 - Color
 - Height

Answer: c

35. What does the term 'relative frequency' refer to?
- The percentage of total frequency
 - The difference between two frequencies
 - The highest frequency in the dataset
 - The range of the data

Answer: a

36. What is the purpose of a pivot table in data analysis?
- Sorting data alphabetically
 - Summarizing and analyzing data
 - Creating graphs and charts
 - None of the above



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Answer: b

37. What is cross-tabulation?

- a. Arranging data in a table
- b. Comparing two or more variables simultaneously
- c. Calculating the mean of a dataset
- d. None of the above

Answer: b

38. Which of the following is an example of a nominal scale?

- a. Temperature
- b. Height
- c. Gender
- d. Weight

Answer: c

39. What is the purpose of a contingency table?

- a. Displaying the frequency of two or more variables
- b. Sorting data in ascending order
- c. Calculating the mean and median
- d. None of the above

Answer: a

40. What is the difference between qualitative and quantitative data?

- a. Qualitative data is numerical, while quantitative data is non-numerical
- b. Qualitative data is categorical, while quantitative data is numerical
- c. There is no difference between the two
- d. Both a and b

Answer: b

41. Which of the following is an example of an ordinal scale?

- a. Age
- b. Height
- c. Education level
- d. Weight

Answer: c

42. What is the purpose of a pie chart?

- a. Displaying the distribution of numerical data



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- b. Comparing different categories
- c. Showing the relationship between two variables
- d. None of the above

Answer: b

43. In data tabulation, what is the role of a stub column?
- a. Displaying the total frequency
 - b. Representing the main categories
 - c. Calculating the mean of the dataset
 - d. None of the above

Answer: b

44. What is the mean deviation?
- a. The sum of the squared deviations from the mean
 - b. The average of the absolute deviations from the mean
 - c. The range of the dataset
 - d. None of the above

Answer: b

45. Which of the following is an example of a continuous variable?
- a. Number of children in a family
 - b. Gender
 - c. Country of residence
 - d. Marital status

Answer: a

Frequency Distribution MCQs:

46. What is the purpose of a frequency distribution?
- a. Sorting data in alphabetical order
 - b. Displaying data in a systematic manner
 - c. Calculating the mean of a dataset
 - d. None of the above

Answer: b

47. In a frequency distribution, what does the term "frequency" represent?
- a. The range of the data
 - b. The number of times a value occurs in the dataset
 - c. The average of the dataset
 - d. The highest value in the dataset



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Answer: b

48. What is a class interval in a frequency distribution?

- a. The average of a set of values
- b. The range between the highest and lowest values
- c. A group or range in which data is divided
- d. The difference between the mean and median

Answer: c

49. How is the midpoint of a class interval calculated?

- a. The average of the upper and lower class limits
- b. The sum of the upper and lower class limits
- c. The difference between the upper and lower class limits
- d. None of the above

Answer: a

50. What is a cumulative frequency in a frequency distribution?

- a. The total frequency up to a certain class
- b. The average frequency of the dataset
- c. The difference between two frequencies
- d. None of the above

Answer: a

51. Which of the following is true about an exclusive class interval?

- a. It includes both the upper and lower limits
- b. It excludes both the upper and lower limits
- c. It includes the lower limit but excludes the upper limit
- d. It includes the upper limit but excludes the lower limit

Answer: c

52. What is the purpose of an inclusive class interval?

- a. It simplifies the calculation of the mean
- b. It includes both the upper and lower limits
- c. It excludes both the upper and lower limits
- d. None of the above

Answer: b

53. Which of the following is a measure of central tendency used in a frequency distribution?

- a. Mean



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- b. Range
- c. Standard Deviation
- d. None of the above

Answer: a

54. How is the range of a frequency distribution calculated?

- a. The difference between the highest and lowest values
- b. The average of the dataset
- c. The sum of the squared deviations from the mean
- d. None of the above

Answer: a

55. What does the term "relative frequency" refer to in a frequency distribution?

- a. The percentage of total frequency
- b. The difference between two frequencies
- c. The highest frequency in the dataset
- d. The range of the data

Answer: a

56. What is the difference between a discrete frequency distribution and a continuous frequency distribution?

- a. Discrete distribution deals with non-numeric data, while continuous distribution deals with numeric data
- b. Discrete distribution deals with individual values, while continuous distribution deals with ranges of values
- c. There is no difference between the two
- d. Both a and b

Answer: b

57. What is the purpose of a histogram in a frequency distribution?

- a. Displaying the distribution of numerical data
- b. Comparing different categories
- c. Showing the relationship between two variables
- d. None of the above

Answer: a

58. In a frequency distribution, what is the purpose of a relative frequency histogram?

- a. Displaying the total frequency
- b. Showing the percentage distribution of each class
- c. Sorting data in ascending order



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d. None of the above

Answer: b

59. What is the class width in a frequency distribution?

- a. The difference between the upper and lower class limits
- b. The range between the highest and lowest values
- c. The average of the dataset
- d. None of the above

Answer: a

60. How is the mean calculated in a frequency distribution?

- a. The value that appears most frequently
- b. The average of all values
- c. The sum of the squared deviations from the mean
- d. None of the above

Answer: b

61. What is a polygon in a frequency distribution?

- a. A line graph connecting midpoints of each class interval
- b. A table displaying the frequency of each value
- c. A bar graph showing the distribution of data
- d. None of the above

Answer: a

62. What is the purpose of an ogive in a frequency distribution?

- a. Displaying the total frequency
- b. Showing the cumulative frequency distribution
- c. Sorting data in descending order
- d. None of the above

Answer: b

63. What is the mode of a frequency distribution?

- a. The value that appears most frequently
- b. The average of the dataset
- c. The middle value when data is arranged in ascending order
- d. None of the above

Answer: a

64. How is the median calculated in a frequency distribution?



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- a. The value that appears most frequently
- b. The average of the dataset
- c. The middle value when data is arranged in ascending order
- d. None of the above

Answer: c

65. What is a skewed distribution in a frequency distribution?

- a. A distribution with a symmetrical shape
- b. A distribution with a long tail on one side
- c. A distribution with equal frequencies in each class
- d. None of the above

Answer: b

Diagrammatic and Graphical Presentation of Statistical Data:

66. Which of the following is not a type of diagrammatic presentation of data?

- a) Bar Chart b) Pie Chart c) Scatter Plot d) T-Test

Answer: d) T-Test

67. What type of graph is best suited for showing the distribution of a continuous variable?

- a) Bar Chart b) Histogram c) Line Chart d) Pie Chart

Answer: b) Histogram

68. In a Pie Chart, each sector represents what percentage of the whole?

- a) Absolute Frequency b) Cumulative Frequency c) Relative Frequency d) Standard Deviation

Answer: c) Relative Frequency

69. Which graphical representation is suitable for displaying the relationship between two continuous variables?

- a) Bar Chart b) Scatter Plot c) Line Chart d) Pie Chart

Answer: b) Scatter Plot

70. What type of diagram is used to represent the frequency distribution of a set of data?

- a) Line Chart b) Scatter Plot c) Box-and-Whisker Plot d) Histogram

Answer: d) Histogram



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71. Which of the following is not a measure of central tendency?
a) Mean b) Median c) Mode d) Range

Answer: d) Range

72. A bar chart is used to represent:
a) Continuous data b) Categorical data c) Both a and b d) Neither a nor b

Answer: b) Categorical data

73. What does the height of a bar in a bar chart represent?
a) Median b) Range c) Frequency d) Standard Deviation

Answer: c) Frequency

74. Which of the following is a measure of variability in a set of data?
a) Mean b) Median c) Range d) Mode

Answer: c) Range

75. What type of graph is used to show the relationship between three variables simultaneously?
a) Bar Chart b) Scatter Plot c) Line Chart d) 3D Scatter Plot

Ans. D

Bar Diagram and Histogram MCQs:

76. What is the primary difference between a Bar Diagram and a Histogram?
a) Bar Diagrams are used for categorical data, while Histograms are used for continuous data.
b) Histograms are used for categorical data, while Bar Diagrams are used for continuous data.
c) They are the same; the terms are interchangeable.
d) Bar Diagrams are 2D, while Histograms are 3D.

Answer: a) Bar Diagrams are used for categorical data, while Histograms are used for continuous data.

77. In a Histogram, what does the area of each bar represent?
a) Mean b) Frequency c) Median d) Range

Answer: b) Frequency

78. Bar Diagrams are suitable for representing:



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a) Frequency distribution b) Cumulative frequency c) Probability distribution d) All of the above

Answer: a) Frequency distribution

79. What is the main purpose of a Bar Diagram?

- a) Showing the distribution of a continuous variable.
- b) Comparing the sizes or frequencies of different categories.
- c) Displaying the relationship between two continuous variables.
- d) Representing the variability in a dataset.

Answer: b) Comparing the sizes or frequencies of different categories.

80. In a Bar Diagram, the length of each bar is proportional to:

- a) The mean of the data.
- b) The median of the data.
- c) The cumulative frequency.
- d) The frequency of the corresponding category.

Answer: d) The frequency of the corresponding category.

81. Which of the following statements is true for both Bar Diagrams and Histograms?

- a) They are only suitable for categorical data.
- b) They are used to represent the central tendency of data.
- c) They use bars to represent data values.
- d) They are mainly used in inferential statistics.

Answer: c) They use bars to represent data values.

82. In a Histogram, what is represented on the horizontal axis?

- a) Frequency b) Cumulative frequency c) Data categories d) Data values or ranges

Answer: d) Data values or ranges

83. What type of data is most appropriate for a Bar Diagram?

- a) Nominal b) Ordinal c) Interval d) Ratio

Answer: a) Nominal

84. Which of the following is a common mistake when interpreting a Histogram?

- a) Assuming a linear relationship.
- b) Ignoring outliers.
- c) Ignoring the scale of the vertical axis.
- d) All of the above.



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Answer: c) Ignoring the scale of the vertical axis.

85. What is the shape of a Histogram that indicates symmetry?

- a) Skewed left b) Skewed right c) Bell-shaped d) Uniform

ANS. C

Frequency Polygon MCQs:

86. What is a Frequency Polygon used to represent?

- a) Central tendency b) Variability c) Frequency distribution d) Probability distribution

Answer: c) Frequency distribution

87. In a Frequency Polygon, what is plotted on the x-axis?

- a) Cumulative frequency b) Frequency c) Data categories d) Data values

Answer: d) Data values

88. What is the main advantage of using a Frequency Polygon over a Histogram?

- a) Frequency Polygons are better for displaying nominal data.
b) Frequency Polygons are better for displaying ordinal data.
c) Frequency Polygons provide a smoother representation of the data.
d) Frequency Polygons are quicker to construct.

Answer: c) Frequency Polygons provide a smoother representation of the data.

89. How is a Frequency Polygon constructed?

- a) By connecting the midpoints of the bars in a histogram.
b) By connecting the data points with straight lines.
c) By connecting the medians of the data.
d) By connecting the upper and lower quartiles.

Answer: b) By connecting the data points with straight lines.

90. In a Frequency Polygon, what does the height of each point represent?

- a) Median b) Cumulative frequency c) Frequency d) Mode

Answer: c) Frequency

91. When should a Frequency Polygon be used instead of a Histogram?

- a) When there are fewer data points.
b) When there are many data points.
c) When the data is categorical.
d) When the data is ordinal.



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Answer: b) When there are many data points.

92. What is the shape of a Frequency Polygon that indicates a positively skewed distribution?

- a) Downward slope to the right
- b) Downward slope to the left
- c) Upward slope to the right
- d) Upward slope to the left

Answer: c) Upward slope to the right

93. What type of data is most suitable for a Frequency Polygon?

- a) Nominal
- b) Ordinal
- c) Interval
- d) Ratio

Answer: c) Interval

94. In a Frequency Polygon, what does a peak indicate?

- a) Outliers in the data
- b) A mode in the distribution
- c) Symmetry in the data
- d) Skewness in the data

Answer: b) A mode in the distribution

95. How can you identify a bimodal distribution from a Frequency Polygon?

- a) Two peaks in the polygon
- b) One peak in the polygon
- c) A flat line in the polygon
- d) No peaks in the polygon

ANS. A

Frequency Curves And Ogives:

96. What is a frequency curve used to represent?

- a. Cumulative frequency
- b. Individual frequencies
- c. Relative frequency
- d. Both a and c

Answer: d. Both a and c

97. In a frequency distribution, what does the area under the frequency curve represent?

- a. Frequency density



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- b. Cumulative frequency
- c. Relative frequency
- d. Frequency distribution

Answer: b. Cumulative frequency

98. What type of data is often represented by an ogive?

- a. Categorical data
- b. Qualitative data
- c. Cumulative frequency data
- d. Discrete data

Answer: c. Cumulative frequency data

99. In an ogive, what does each point on the curve represent?

- a. Frequency
- b. Cumulative frequency
- c. Relative frequency
- d. Midpoint of the interval

Answer: b. Cumulative frequency

100. Which of the following is true about a bell-shaped frequency curve?

- a. It is symmetric
- b. It represents uniform distribution
- c. It is appropriate for qualitative data
- d. It has no central tendency

Answer: a. It is symmetric

101. What does the slope of an ogive represent?

- a. Frequency
- b. Cumulative frequency
- c. Relative frequency
- d. Frequency density

Answer: d. Frequency density

102. In a frequency curve, what does the peak indicate?

- a. Median
- b. Mode
- c. Mean
- d. Range

Answer: b. Mode



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103. Which type of frequency curve is suitable for representing continuous data?

- a. Histogram
- b. Polygon
- c. Ogive
- d. Bar chart

Answer: c. Ogive

104. How is the cumulative frequency calculated for an ogive?

- a. Adding frequencies
- b. Multiplying frequencies
- c. Summing up frequencies from the highest interval
- d. Dividing frequencies

Answer: c. Summing up frequencies from the highest interval

105. Which of the following statements is correct regarding a right-skewed frequency curve?

- a. Median > Mean
- b. Mean > Median
- c. Median = Mean
- d. Mode > Median

Answer: b. Mean > Median

