CHAPTER - 13
STATISTICAL DESCRIPTION OF DATA

COLLECTION OF DATA

Applications of Statistics

- **Collection of Data**
  - **Primary Data**
  - **Secondary Data**

- **Present data in Textual and Tabular form**
  - **Frequency Distribution**
    - **Cumulative Frequency**

- **Present Data Graphically**
  - **Line Chart or Histogram**
  - **Pie Chart**
  - **Frequency Polygon**
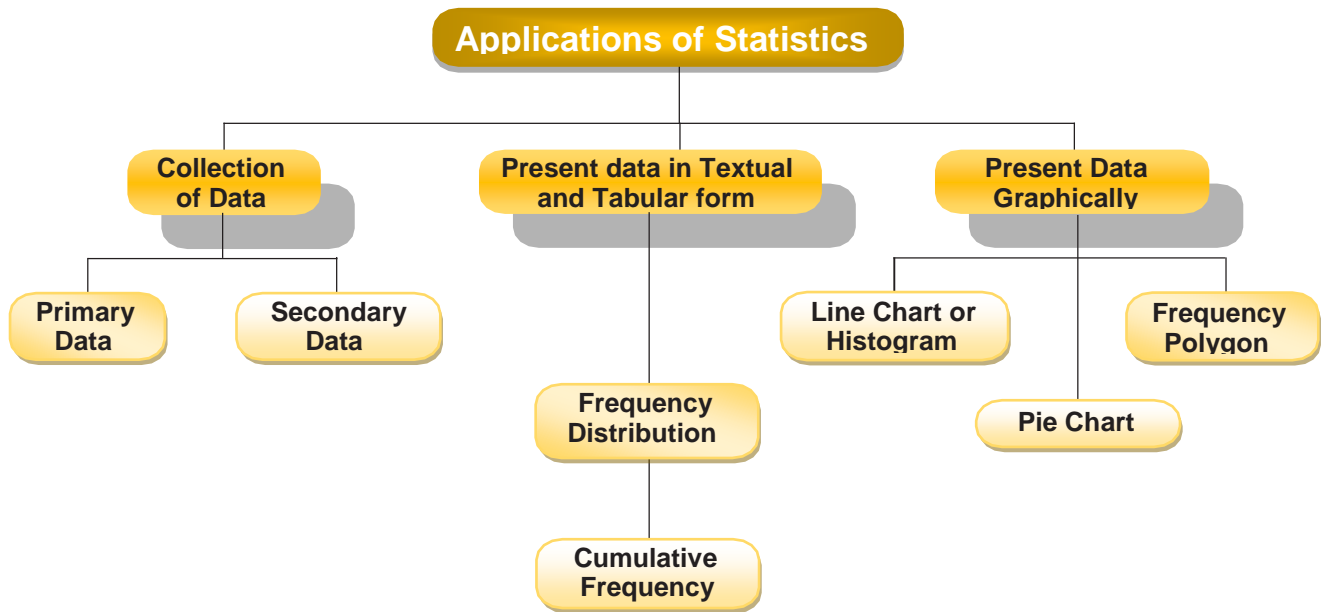
PRIMARY METHOD
- Interview
- Mailed questionnaire
- Observation
- Questionnaries filled and sent by enumerators.

SECONDARY METHOD
- International sources
- Unpublished sources of various research institutes, researchers
- Government sources
- Private and quasi-government sources

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PRESENTATION OF DATA	Classification or Organization of Data	The process of arranging data on the basis of the characteristic under consideration into a number of groups or classes according to the similarities of the observations.
	Data may be classified as	(i) Chronological or Temporal or Time Series Data; (ii) Geographical or Spatial Series Data; (iii) Qualitative or Ordinal Data; (iv) Quantitative or Cardinal Data.

	Mode of Presentation of Data	(a) **Textual presentation**
		 (b) **Tabular presentation or Tabulation**
		 (c) **Diagrammatic representation**
		    I. Line diagram or Histogram
		    II. Bar diagram
		    III. Pie chart

FREQUENCY DISTRIBUTION	Tabular representation of statistical data, usually in an ascending order, relating to a measurable characteristic according to individual value or a group of values of the characteristic under study
Class Limit (CL)	Corresponding to a class interval, the class limits may be defined as the minimum value and the maximum value the class interval may contain.
Class Boundary (CB)	Class boundaries may be defined as the actual class limit of a class interval LCB = LCL - $\frac{D}{2}$
Mid-point or Mid-value or class mark	Corresponding to a class interval, this may be defined as the total of the two class limits or class boundaries to be divided by 2. Thus, we have mid-point= $\frac{LCL + UCL}{2}$
Cumulative Frequency	Thecumulativefrequencycorrespondingtoavalueforadiscretevariableandcorrespondingto a class boundary for a continuous

	variable may be defined as the number of observations less than the value or less than or equal to the class boundary.
GRAPHICAL REPRESENTATION OF A FREQUENCY DISTRIBUTION	•Histogram or Area diagram: A histogram is an accurate representation of the distribution of numerical data. It is an estimate of the probability distribution of a continuous variable (quantitative variable) and was first introduced by Karl Pearson. •Frequency Polygon: Frequency polygons are a graphical device for understanding the shapes of distributions. They serve the same purpose as histograms, but are especially helpful for comparing sets of data. Frequency polygons are also a good choice for displaying cumulative frequency distributions. •Ogives or Cumulative Frequency Graph: Cumulative histograms, also known as ogives, are graphs that can be used to determine how many data values lie above or below a particular value in a data set. The cumulative frequency is calculated from a frequency table, by adding each frequency to the total of the frequencies of all data values before it in the data set.
Frequency Curve	A frequency curve is a smooth curve for which the total area is taken to be unity. It is a limiting form of a histogram or frequency polygon. Types of frequency curves namely: (a) Bell-shaped curve (b) U-shaped curve (c) J-shaped curve (d) Mixed curve.
STATISTICS	The term statistics is ultimately derived from the New Latin statisticum collegium ("council of state") and the Italian word statista ("statesman" or "politician"). ... Thus, the original principal purpose of Statistik was data to be used by governmental and (often centralized) administrative bodies.

Question 1
What percentage of candidates passed the exam from Institute T out of the total number of candidates enrolled from the same institute?
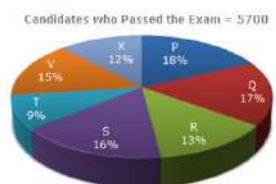
(a) 50%   (b) 62.5%
(c) 75%   (d) 80%
Answer: C
Explanation:
Required percentage = $\langle\frac{9\% \ of \ 5700}{8\% \ of \ 8550} \times 100\rangle\%$ = $\langle\frac{9 \times 5700}{8\% \ of \ 8550} \times 100\rangle\%$ = 75%.

Question 2
Which institute has the highest percentage of candidates passed to the candidates enrolled?
(a) Q   (b) R
(c) V   (d) T
Answer: B
Explanation:
The percentage of candidates passed to candidates enrolled can be determined for each institute as under:
(i) P = $\left[\left(\frac{18\% \ OF \ 5700}{22\% \ OF \ 8550}\right) \times 100\right]\%$ = $\left[\frac{18 \times 5700}{22 \times 8550} \times 100\right]\%$ = 54.55%

(ii) Q = $\left[\left(\frac{17\% \ OF \ 5700}{15\% \ OF \ 8550}\right) \times 100\right]\%$ = 75.56%

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(iii) R = $\left[\left(\frac{13\% \ OF \ 5700}{10\% \ OF \ 8550}\right) \times 100\right]\% = 86.67\%$

(iv) S = $\left[\left(\frac{16\% \ OF \ 5700}{17\% \ OF \ 8550}\right) \times 100\right]\% = 62.75\%$

(v) T = $\left[\left(\frac{9\% \ OF \ 5700}{8\% \ OF \ 8550}\right) \times 100\right]\% = 75\%$

(vi) V = $\left[\left(\frac{15\% \ OF \ 5700}{12\% \ OF \ 8550}\right) \times 100\right]\% = 83.33\%$

(vii) X = $\left[\left(\frac{12\% \ OF \ 5700}{16\% \ OF \ 8550}\right) \times 100\right]\% = 50\%$

Highest of these is 86.67% corresponding to institute R.

Question 3
The number of candidates passed from institutes S and P together exceeds the number of candidates enrolled from institutes T and R together by:
(a) 288   (b) 279
(c) 399   (d) 407
Answer: C
Explanation:
Required difference = [(16% + 18%) of 5700] – [(8% + 10%) of 8550]
                = [(34% of 5700) – (18% of 8550)]
                = (1938 – 1539)
                = 399.

Question 4
What is the percentage of candidates passed to the candidates enrolled for institutes Q and R together?
(a) 68%   (b) 80%
(c) 74%   (d) 65%
Answer: b
Explanation:
Candidates passed from institute Q
And R together   = [(13% + 17%) of 5700]
                                              = 30% of 5700.
Candidates enrolled from institute Q at = [(15% + 10%) of 8550]
            = 25% of 8550.
∴ Required
Percentage $= \left(\frac{30\% \ of \ 5700}{25\% \ of \ 8550} \times 100\right)\%$

$$= \left(\frac{30 \times 5700}{25 \times 8550} \times 100 \right)\%$$

$$= 80\%$$

Question 5
What is the ratio of candidates passed to the candidates enrolled from institute P?
(a) 9: 11   (b) 14: 17
(c) 6: 11   (d) 9: 17
Answer: C
Explanation:
Required ratio = $\left(\frac{18\% \, of \, 5700}{22\% \, of \, 8550} \right) = \left(\frac{18 \times 5700}{22 \times 8550} \right) = \frac{6}{11}$

Directions (for Q. Nos'. 6 – 10):

Two different finance companies declare fixed annual rate of interest on the amounts invested with them by investors. The rate of interest offered by these companies may differ from year to year depending on the variation in the economy of the country and the banks rate of interest. The annual rate of interest offered by the two companies P and Q over the years are shown by the line graph provided below.
Annual rate of Interest offered by two finance companies over the years.
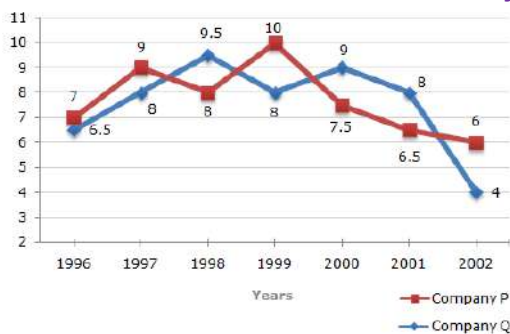
Question 6
A sum of Rs. 4.75 lakhs were invested in Company Q in 1999 for one year. How much more interest would have been earned if the sum was invested in company P?
(a) Rs. 19,000   (b) Rs. 14, 250
(c) Rs. 11,750   (d) Rs. 9500
Answer: D
Explanation:
Difference
= Rs. [(10% of 4.75) – (8% of 4.75) lakhs
= Rs. (2% of 4.75) lakhs

= Rs. 0.095 lakhs
= Rs. 9500

Question 7
If two different amounts in the ratio 8:9 are invested in company's P and Q respectively in 2002, then the amounts received after one year as interests from company's P and Q are respectively in the ratio?
(a) 2:3   (b) 3;4
(c) 6:7   (d) 4:3
Answer: D
Explanation:
Let the amounts invested in 2002 in Companies P and Q be Rs. 8x and Rs. 9x respectively.

Then, interest received after one year from company P = Rs. (6% of 8x) = Rs $\frac{48x}{100}$.

And interest received after one year from company Q = Rs. (4% of 9x) = Rs. $\frac{36x}{100}$

∴ Required ratio = $\frac{\left(\frac{48x}{100}\right)}{\left(\frac{36x}{100}\right)}$ = $\frac{4}{3}$

Question 8
In 2000, a part of Rs. 30 lakhs was invested in company P and the rest was invested in company Q for one year. The total interest received was Rs. 2.43 lakhs. What was the amount invested in company P?
(a) Rs. 9 lakhs   (b) Rs. 11 lakhs
(c) Rs. 12 lakhs   (d) Rs. 18 lakhs
Answer: D
Explanation:
Let Rs. X lakhs be invested in company P in 2000, the amount invested in company Q in 2000 = Rs. (30 – x) lakhs.
Total interest received from the two companies after 1 year
= Rs. [(7.5% of x) + {9% of (30 – x)}] lakhs
= $\left[Rs.\,2.7 - \left(\frac{1.5x}{100}\right) lakhs\right]$
∴ $\left[2.7 - \left(\frac{1.5x}{100}\right)\right]$ = 2.43   =>   x = 18

Question 9
An investor invested a sum of Rs. 12 lakhs in company P in 1998. The total amount received after one year was re-Invested in the same company for one more year. The total appreciation received by the investor on his investment was?
(a) Rs. 2, 96,200   (b) Rs. 2, 42,200
(c) Rs. 2, 25, 600   (d) None

Answer: C
Explanation:
Amount received from Company P after one year (i.e., in 199) on investing Rs. 12 lakhs in it.

> = Rs. [12 + (8% of 12)]lakhs
> = Rs, 12.96 lakhs
> = Rs. 12.96 lakhs

Amount received from company P after one year on investing Rs. 12.96 lakhs in the year 1999

> = Rs. [12.96 + {10% of 12.96)}] lakhs
> = Rs. 14.256

Appreciation received on investment during the period of two years

> = Rs. (14.256 – 12) lakhs
> = Rs. 2.256 lakhs
> = Rs. 2, 25,600.

Question 10
An investor invested Rs. 5 lakhs in company Q in 1996. After one year, the entire amount along with the interest was transferred as investment to Company P in 1997 for one year. What amount will be received from Company P, by the investor?
(a) Rs. 5,94,550   (b) Rs. 5, 80,425
(c) Rs. 5,77,800   (d) Rs. 5,77,500
Answer: B
Explanation:
Amount received from Company Q after one year on investment of Rs. 5 lakhs in the year 1996

> = Rs. [5 + (6.5% of 5)] lakhs
> = Rs. 5.325 lakhs.

Amount received from company P after one year on investment of Rs. 5.325 lakhs in the year 1997.

> = Rs.[5.325 + (9% of 5.325)] lakhs
> = Rs. 5.80425 lakhs
> = Rs. 5, 80,425.

Direction (for Q. Nos. 11 – 15):

The following table gives the sales of batteries manufactured by a company over the years.
Number of Different Types of Batteries Sold by a Company Over the Years (Numbers in Thousands)

Year	Types of Batteries					
	4AH	7AH	32AH	35AH	55AH	Total
1992	75	144	114	102	108	543
1993	90	126	102	84	126	528
1994	96	114	75	105	135	525
1995	105	90	150	90	75	510
1996	90	75	135	75	90	465
1997	105	60	165	45	120	495
1998	115	85	160	100	145	605

Question 11
What was the approximate percentage increase in the sales of 55AH batteries in 1998 compared to that in 1992?
(a) 28%   (b) 31%
(c) 33%   (d) 34%
Answer: D
Explanation:

Require d percentage = $\left[\frac{(145-108)}{108} \times 100\right]\%$
$$= 34.26\%$$
$$= 34\%$$

Question 12
The total sales of all seven years in the maximum for the maximum for which battery?
(a) 4AH   (b) 7AH
(c) 32AH   (d) 35AH
Answer: D
Explanation:
The total sales (in thousands) of all the seven years for various batteries are:
For 4AH = 75 + 90 + 96 + 105 + 90 + 105 + 115 = 676
For 7AH = 144 + 126 + 114 + 90 +75 +60 + 85 = 694
For 32AH = 114 + 102 + 75 + 150 + 135 + 165 + 160 = 901
For 35AH = 102 + 84 + 105 + 90 + 75 + 45 + 100 = 601
For 55AH =108 + 126 + 135 + 75 + 90 + 120 + 145 = 799.
Clearly sales are maximum in case of 32AH batteries.

Question 13
What is the difference in the number of 35AH batteries sold in 1993 and 1997?
(a) 24000   (b) 28000
(c) 35000   (d) 39000

Answer: D
Explanation:
Required difference = [(84 – 45) × 1000] = 39000.

Question 14
The percentage of 4AH batteries sold to the total number of batteries sold was maximum in the years?
(a) 1994   (b) 1995
(c) 1996   (d) 1997
Answer: D
Explanation:
The percentage of sales of 4AH batteries to the total sales in different years are;
for 1992 = $(\frac{75}{543} \times 100)$% = 13.81%
for 1993 = $\left(\frac{90}{528} \times 100\right)$ % = 17.05%
for 1994 = $\left(\frac{96}{525} \times 100\right)$ % = 18.29%
for 1995 = $\left(\frac{105}{510} \times 100\right)$ % = 20.59%
for 1996 = $\left(\frac{96}{465} \times 100\right)$ % = 19.35%
for 1997 = $\left(\frac{105}{495} \times 100\right)$ % = 21.21%
for 1998 = $\left(\frac{105}{605} \times 100\right)$ % = 19.01%
Clearly the percentage in maximum in 1997

Question 15
In case of which battery there was a continuous decrease in sales from 1992 to 1997?
(a) 4AH   (b) 7AH
(c) 32AH   (d) 35AH
Answer: B
Explanation:
From the table it is clear that the sales of 7AH batteries have been decreasing continuously from 1992 to 1997.

Direction (for Q. Nos. 16-20):

The bar graph given below shows the percentage distribution of the total production of a car manufacturing company into various models over two years.
Percentage of Six different types of Cars manufactured by a Company over Two Years

Total No. of
Cars Produced = 3,50,000

Total No. of
Cars Produced = 4,40,000
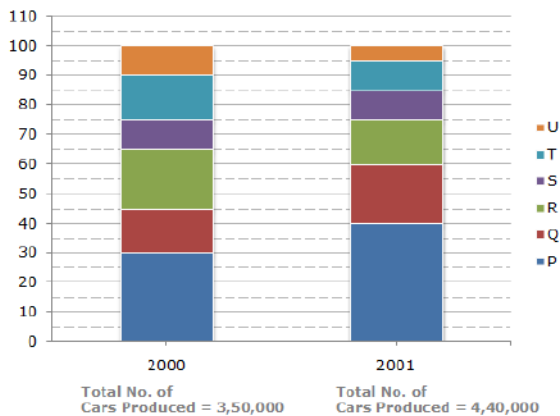
Question 16
What was the difference in the number of Q type cars product in 2000 and that produce in 2001?
(a) 35,500   (b) 27,000
(c) 22,500   (d) 17,500
Answer: A
Explanation:
Total numbers of Q type cars produced in 2001
= (60 – 40) % of 4, 40,000 = 88,000.
Total numbers of Q type cars produced in 2000
= (45 – 30) % of 3, 50,000 = 52,500.
∴ Required difference = (88000 – 52500) = 35,500.

Question 17
Total number of cars of models P, Q and T manufactured in 2000 is?
(a) 2,45,000   (b) 2,27,500
(c) 2,10,000   (d) 1,92,500
Answer: C
Explanation:
Analysis of the graph:
We shall first determine the number of cars of each model produced by the company during the two years:
In 2000: Total number of cars produced = 3, 50, 000
P = (30 – 0) % OF 3, 50,000 = 30% OF 3, 50,000 = 1, 05,000.
Q= (45 – 30) % OF 3, 50, 000 = 15% OF 3, 50,000 = 52,500.
R = (65 – 45) % OF 3, 50,000 = 20% OF 3, 50,000 = 70,000
S = (75 – 65) % OF 3, 50,000 = 10% OF 3, 50,000 = 35,000
T = (90 – 75) % OF 3, 50,000 = 15% OF 3, 50,000 = 52,500
U = (100 -90) % OF 3, 50,000 = 10% OF 3, 50,000 = 35,000

In 2001: Total number of cars produced = 4, 40,000.

P = (40 – 0) % OF 4, 40,000 = 40% OF 4, 40,000 = 1, 76,000.
Q = (60 - 40) %OF 4, 40,000 = 20% OF 4, 40,000 = 88, 000
R = (75 – 60) % OF 4, 40,000 = 15% OF 4, 40,000 = 66, 000
S = (85 – 75) % OF 4, 40,000 = 10% OF 4, 40,000 = 44, 000
T = (75 + 60) % OF 4, 40,000 = 10% OF 4, 40,000 = 44, 000.
U = (100 – 95) % OF 4, 40,000 = 5% OF 4, 40,000 = 22, 000
Total number of cars of models P, Q, and T manufacturing in 2000
     = (105000 + 52500 + 52500)
     = 2, 10,000.

Question 18
If the percentage production of P type cars in 2001 was the same as that in 2000, then the number of P type cars produced in 2001 would have been?
(a) 1,40,000   (b) 1,32,000
(c) 1,17,000   (d) 1,05,000
Answer: B
Explanation:
If the percentage production of P type in cars in 2001
     = Percentage production of P type cars inn 2000
     = 30%
Then, number of P type cars produced in 2001
     = 30% of 4, 40,000
     = 1, 32,000.

Question 19
If 85% of the cars produced in each year were sold by the company, how many S type cars remain unsold?
(a) 7650   (b) 9350
(c) 11,850   (d) 12,250
Answer: C
Explanation:
Number of S type cars which remained unsold in 2000 = 15% of 35,000
And number of S type cars which remained unsold in 2001 = 15% of 44, 00.
∴ Total number of S type cars which remained unsold
     = 15% of (35,000 + 44,000)
     = 15% of 79,000
     = 11,850

Question 20
For which model the percentage rise/fall in production from 2000 to 2001 was minimum?
(a) Q   (b) R

(c) S   (d) T

Answer: B

Explanation:

The percentage change (rise/fall) in production from 2000 to 2001 for various models is:

For P = $\left[\frac{(176000-105000)}{105000} \times 100\right]$% = 67.62% rise.

For Q = $\left[\frac{(88000-52500)}{52500} \times 100\right]$% = 67.62% rise.

For R = $\left[\frac{(70000-66000)}{70000} \times 100\right]$% = 5.71% fail.

For S = $\left[\frac{(44000-35000)}{35000} \times 100\right]$% = 25.71% rise.

For T= $\left[\frac{(52500-44000)}{52500} \times 100\right]$% = 16.19% fail.

For U = $\left[\frac{(35000-22000)}{35000} \times 100\right]$% = 37.14% fail.

$\therefore$ Minimum percentage ride/fail is production is the cash of model R.

Direction (for Q.Nos. 21 – 24):

Study the following graph and tables and answer the questions given below. Distribution of candidates who were enrolled for MBA entrance exam and the candidates (out of those enrolled) who passed the exam in different institutes:

Candidates Enrolled = 8550

Candidates who Passed the Exam = 5700
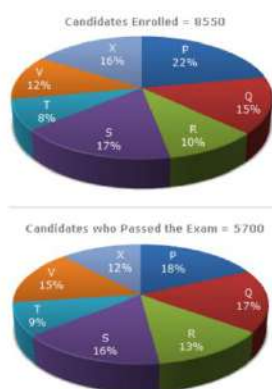
Question 21

What will be the percentage of total number of males in U.P., M.P. and Goa together to the total population of all the given states?

(a) 25%   (b) 27.5%

(c) 38.5%   (d) 31.5%

Answer: C

Explanation:

Number of males in U.P = $\left[\frac{3}{5} \text{ of } (15\% \text{ OF N})\right] = \frac{3}{5} \times \frac{15}{100} \times N = 9 \times \frac{N}{100}$

Where N = 3276000.

Number of males in M.P. = $\left[\frac{3}{4} \text{ of } (20\% \text{ OF N})\right] = \frac{3}{4} \times \frac{20}{100} \times N = 15 \times \frac{N}{100}$

Number of males in Goa = $\left[\frac{3}{8} \text{ of } (12\% \text{ OF N}\right] = \frac{3}{8} \times \frac{12}{100} \times N = 4.5 \times \frac{N}{100}$

∴ Total numbers of males in these three states = $(9 + 15 + 4.5) \times \frac{N}{100}$

$$= \left(28.5 \times \frac{N}{100}\right).$$

∴ Required Percentage = $\left[\frac{\left(28.5 \times \frac{N}{100}\right)}{N} \times 100\right]\% = 28.5\%$

Question 22

What was the total number of illiterate people in A.P. and M.P. in 1998?

(a) 876040   (b) 932170

(c) 981550   (d) 1161160

Answer: D

Explanation:

No. of illiterate people in A.P. = $\left[\frac{7}{9} \text{ of } (25\% \text{ of } 3276000)\right] = 637000.$

No. of illiterate people in M.P. = $\left[\frac{4}{5} \text{ of } (20\% \text{ of } 3276000)\right] = 524160.$

∴ Total number = (637000 + 524160) = 1161160.

Question 23

What was the number of males in U.P. in the year 1998?

(a) 254650   (b) 294840

(c) 321470   (d) 341200

Answer: B

Explanation:

Number of males in U.P. = $\left[\frac{3}{5} \text{ of } (15\% \text{ of } 3276000)\right]$

$$= \frac{3}{5} \times \frac{15}{100} \times 3726000$$

= 294840

Question 24

If in the year 1998, there was an increase of 10% in the population of U.P. and 12% in the population of M.P. compared to the previous year, then what was the ratio of populations of U.P. and M.P. in 1997?

(a) 42:55   (b) 48: 55
(c) 7:11   (d) 4: 5

Answer: A

Explanation:

Let x be the population of U.P. in 1997. Then,

Population of U.P. in 1998 = 110% of x = $\frac{110}{100} \times x$.

Also, Let y be the population of M.P. in 1997. Then,

Population of M.P. in 1998 = 112% of y = $\frac{112}{100} \times y$.

Ratio of population of U.P. and M.P. IN 1998 = $\left(\frac{\frac{110}{100} \times x}{\frac{112}{100} \times y}\right) = \frac{110x}{112y}$

From the pie-chart, this ratio is $\frac{15}{20}$

$\frac{110x}{112y} = \frac{15}{20} \rightarrow \frac{x}{y} = \frac{15}{20} \times \frac{112}{110} = \frac{42}{55}$

Thus, ratio of populations of U.P. and M.P. in 1997 = x : y = 42 : 55

Direction (for Q. Nos. 25 – 29):

**A cosmetic company provides five different products. The sale of these five products (in lakh number of packs) during 1995 and 2000 are shown in the following bar graph
Sales (in lakh number of packs) of five different products of cosmetic company during 1995 and 2000**
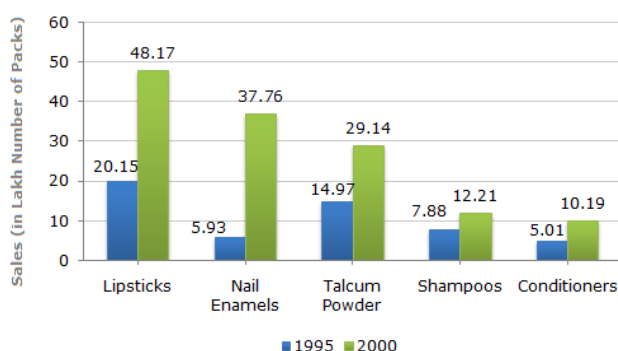
Question 25
enamels in 2000? (Rounded off to nearest integer)
(a) 33%   (b) 31%
(c) 28%   (d) 22%

Answer: C

Explanation:

Required percentage = $\left[\frac{(48.17-37.76)}{37.76} \times 100 \%\right]$
$= 27.57\%$
$= 28\%$

Question 26
During the period 1995-2000, the minimum rate of increase in sales is in the case of?
(a) Shampoos   (b) Nail enamels
(c) Talcum powders   (d) Lipstick
Answer: A
Explanation:
The percentage increase from 1995 to 2000 for various products is
Lipsticks = $\left[\frac{(48.17-20.15)}{20.15} \times 100\right]\% = 139.06\%$

Nail enamels = $\left[\frac{(37.76-5.93)}{5.93} \times 100\right]\% = 536.76\%$

Talcum powder = $\left[\frac{(29.14-14.97)}{14.97} \times 100\right]\% = 94.66\%$

Shampoos = $\left[\frac{(12.21-7.88)}{7.88} \times 100\right]\% = 54.95\% = 55\%$

Conditions = $\left[\frac{(10.19-5.01)}{5.01} \times 100\right]\% = 103.39\%$.
∴ The minimum rate of increase in sales from 1995 to 2000 is in the case of shampoos.

Question 27
What is the approximate ratio of the sales of nail enamels in 2000 to the sales of Talcum powder in 1995?
(a) 7:2   (b) 5:2
(c) 4:3   (d) 2:1
Answer: B
Explanation:
Required ratio = $\frac{37.76}{14.97} = 2.5 = \frac{5}{2}$

Question 28
The sales have increased by nearly 55% from 1995 to 2000 in the case of?
(a) Lipstick   (b) Nail enamels
(c) Talcum powders   (d) Shampoos
Answer: D

Explanation:

The percentage increase from 1995 to 2000 for various products is:

Lipstick = $\left[\frac{(48.17-20.15)}{20.15} \times 100\right]$% = 139.06%

Nail enamels = $\left[\frac{(37.76-5.93)}{5.93} \times 100\right]$% = 536.76%

Talcum powders = $\left[\frac{(29.14-14.97)}{14.97} \times 100\right]$% = 94.66%

Shampoos = $\left[\frac{(12.21-7.88)}{7.88} \times 100\right]$% = 54.95% = 55%

Conditioners = $\left[\frac{(10.19-5.01)}{5.01} \times 100\right]$% = 103.39%

Question 29

The sales of conditioners is 1995 was by what percent less than the sales of shampoos in 1995? (Rounded off to nearest integer)

(a) 57%   (b) 36%

(c) 29%   (d) 25%

Answer: B

Explanation:

Required percentage = $\left[\frac{(7.88-5.01)}{7.88} \times 100\right]$%

= 36.42%

= 36%.

Question 30

Following are the weights in kgs. Of 36BBA students of khalsa college.

70	73	49	61	47	57	50	59
59	68	45	55	68	56	68	55
70	70	57	44	73	64	49	63
65	70	65	62	73	67	60	50

Find range from this series

(a) 6   (b) 5

(c) 7   (d) 9

Answer: A

Explanation:

We have, range = Maximum weight = Minimum weight

= 73 kgs, - 44kgs.

= 29 kgs.

No. of class interval × class lengths = Range

No. of class interval × 5 = 29

No. of class interval = $\frac{29}{5}$ = 6.

(We always take the next integer as the number of class intervals so as to include both the minimum and maximum values).

Question 31
Which of the following statements is false?

(a) Statistics is derived from the Latin word 'status'

(b) Statistics is derived from the Italian word 'Statista'

(c) Statistics is derived from the French word 'Statistic'

(d) None of these

Answer: C

Explanation:

The term statistics is ultimately derived from the new Latin statisticum collegiums ('' council of state'') and the Italian word Statista (''statesman'' or ''politician'') …. Thus, the original principal purpose of statistic was data to be used by governmental and (often centralized) administrative bodies

Question 32
The given histogram shows a frequency distribution of marks obtained by 56 students in a subject.Number of students securing marks between 70 and 100 is

(a) 2

(b) 4

(c) 6

(d) 8

Answer: C

Explanation:

We know, Frequency

Density = Class size of the interval Frequency of the class.

From the histogram, the frequency density of the interval 70-100 is 0.2.

∴ 0.2 = 100 – 70 Frequency in the class

⇒ 0.2 = 30 Frequency in the class

⇒ Frequency in the class = 0.2 × 30 =6

Question 33
The numbers of times a particular observation occurs in a given data is called its _____. Fill in the blanks to make statements true.
(a) Range   (b) Interval
(c) Raw data   (d) Frequency
Answer: D
Explanation:
Frequency of a value (observations) is defined by the number of time s the value occurs is a given data set.
For example: 3, 3, 5, 5, 6, 7, 7, 7, 7, 7
In the above data set –
3 occur 2 times, then 2 is the frequency of 3
5 occurs 3 times, then 3 is the frequency of 5
6 occurs 1 time, then 1 is the frequency of 6
7 occurs 4 times, then 4 is the frequency of 7
Therefore, the number of times a particular observation occurs is a given data set is called its frequency.

Question 34
Which of the following is calculated using mid-values of classes?
(a) Mean   (b) Median
(c) Mode   (d) Range
Answer: A
Explanation:
Mean is calculated using the mid-values of classes.

Question 35
The mean of 10 numbers is 7. If each number is multiplied by 12, find the mean of new set of numbers.
(a) 82   (b) 48
(c) 78   (d) 84
Answer: D
Explanation:
Total of 10 numbers = 10×7 = 70
If each number is multiplied by 12
New total = 70×12
∴ New mean = $\frac{70 \times 12}{10}$ = 84

Question 36
The mean of 9, 11, 13, p, 18 and 19 is p. Find the value of 'p'.

(a) 12   (b) 13
(c) 14   (d) 15

Answer: C

Explanation:

The given numbers are 9, 11, 13, p, 18, 19

⇒ Number of observations = 6

⇒ Mean = p

∴ p = $\frac{9+11+13+p+18+19}{6}$

∴ p = $\frac{70+p}{6}$

∴ 6p = 70 +p

∴ 5p = 70

∴ p = 14

Question 37

What is the value of 'n' If the mean of first 9 natural numbers is $\frac{5n}{9}$?

(a) 7   (b) 8
(c) 9   (d) 11

Answer: C

Explanation:

Mean of first 9 natural numbers = $\frac{1+2+\cdots+9}{9}$

$\frac{45}{9}$ = 5

Given mean of first 9 natural numbers is $\frac{5n}{9}$

$\frac{5n}{9}$ = 5

n = $\frac{9\times5}{5}$ = 9

Question 38

In the set above, which is larger: the median the mean, or the mode?

(a) Mean   (b) Median
(c) All are equal   (d) Mode

Answer: A

Explanation:

Begin by ordering the set from smallest to largest:

6, 7, 8, 8, 9, 10, 11, 12

Already, we see that the mode is 8. Find the median by taking the average of the two middle numbers.

8 + 92 = 8.5

Find the mean by adding all numbers and dividing by the total numbers of terms;

6 + 7 + 8 + 8 + 9 + 10 +11 + 128 = 8.875

of the three, the mean of the set is the largest.

Question 39
Column A.
The mean of the sample of numbers 2, 5, and 10.
Column B
The mean of the sample of numbers 1, 5, and 15.

(a) The quantity in column B is greater
(b) The quantity in Column A is greater.
(c) The two quantities are equal.
(d) The relationship cannot be determined from the information given.

Answer: A
Explanation:
The arithmetic mean is the average of the sum of a set of numbers divided by the total number of numbers in the set. This is not to be confused with median or mode.
In Column A, the mean of 5.66 is obtained when the sum (17) is divided by the number of values in the set (3).
In column B, the mean of 7 is obtained when 21 is divided by 3. Because 7 is greater than 5.66, column B is greater. The answer is column B.

Question 40
The median of a given frequency distribution is found graphically with the help of _.
(a) Histogram
(b) Frequency curve
(c) Frequency polygon
(d) Ogive

Answer: D
Explanation:
Ogive or cumulative frequency curve is used to find the median.

Question 41
'More than' ogive is __.
(a) an ascending curve
(b) a descending curve
(c) first ascending curve and then descending curve
(d) First descending curve and them I ascending curve

Answer: B
Explanation:
'More than' ogive is a descending curve.

Question 42

IN A VILLAGE OF 200 FARMS, A STUDY CONDUCTED FIND THE CROPPING PATTERN. Out of the 50 farms surveyed 50% grew only wheat. Identify the population and the sample here.

(a) The sample population is 200 farms

(b) The sample population is 5 farms

(c) The sample population is 10 farms.

(d) The sample population is 50 farms

Answer: D

Explanation:

Population or the universe is statistics means totality of the items under study. So, the population here is 200 farms. Sample refers to a group or selection of the population from which information is to be obtained. Out of 200 farms, only 50 farms are selected from survey. Therefore, the sample population is 50 farms.

PAST EXAMINATION QUESTIONS:

MAY 2018

Question 1

Frequency density is used in the construction of

(a) Histogram

(b) Ogive

(c) Frequency polygon

(d) None when the classes are of unequal width

Answer: A

Explanation:

Frequency density is used in the construction of histogram

Question 2

Divided bar chart is considered for

(a) Comparing different components of a variable

(b) The relation of different components to the table

(c) None

(d) (a) and (b)

Answer: D

Explanation:

Divided bar chart is considered for comparing different components of a variable and the relation of different components to the table

NOV 2018

Question 1

The following frequency distribution

X	12	17	24	36	45

13. 22

| F | 2 | 5 | 3 | 8 | 9 |

Is classified as:
 (a) Continuous distribution   (b) Discrete distribution
 (c) Cumulative frequency distribution   (d) None of the above
Answer: c
Explanation:

X	12	17	24	36	15
F	2	5	3	8	9

Is classified as discrete distribution.

Question 2
Histogram is useful to determine graphically the value of
 (a) Arithmetic mean   (b) Median
 (c) Mode   (d) None of the above
Answer: C
Explanation:
Histogram is useful to determine graphically the value of ''mode''

Question 3
Data are said to be ___if the investigator himself is responsible for the collection of the data.
 (a) Primary data   (b) Secondary data
 (c) Mixed of primary and Secondary   (d) None of the above
 data
Answer: A
Data are said to be primary data if the investigator him responsible for the collection of the data.

Question 4
A suitable graph for representing the portioning of total info sub in statistics is statics is:
 (a) A pie chart   (b) A pictograph
 (c) An ogive   (d) Histogram
Answer: A
Explanation:
A suitable graph for representing the portioning of total into parts in statistics is A pie chart.

Question 5
The number of times a particular item occurs in a class its
 (a) Mean   (b) Frequency
 (c) Cumulative frequency   (d) None

Answer: B
Explanation:
The number of times particular items occur in a class interval is called its frequency.

Question 6
An ogive is a graphical representation of
  (a) Cumulative frequency distribution   (b) A frequency distribution
  (c) Ungrouped data   (d) None of the above
Answer: A
Explanation:
An 'O' give is a graphical representation of cumulative frequency distribution.

Question7

class	0-10	10-20	20-30	30-40	40-50
Frequency	4	6	20	8	3

For the class 20-30. Cumulative frequency is:
 (a) 10   (b) 26
 (C) 30   (d) 41
Answer: C
Explanation:

C.I	F	C.F
0-10	4	4
10-20	6	10
20-30	20	30
30-40	8	38
40-50	3	

Cumulative frequency of class Interval '20-30' is 30

MAY 2019

Question 1
_____ Series is continuous.
 (a) Open ended   (b) Exclusive
 (c) Close ended   (d) Unequal call intervals
Answer: B
Explanation:
Continuous series means where frequencies are given along with value of the variable in the form of class intervals. For example, here: …20 is the lower and 30 the upper limit 20-30 class interval.

Question 2
Which of the following graph is suitable for cumulative frequency distribution?

 (a) Ogives   (b) Histogram
 (c) G.M   (d) A.M
Answer: A
Explanation:
An ogive is type of frequency polygon that shows cumulative frequencies. In other words, the cumulative percent are added on the graph from the left to right.

Question 3
Histogram is used for finding
 (a) Mode   (b) Mean
 (c) Median   (d) None
Answer: A
Explanation:
A histogram is used for continuous data, where the bins represent ranges of data, while a bar chart is plot of categorical variables.

Question 4
Ogive graph is used for finding
 (a) Mean   (b) Mode
 (c) Median   (d) None
Answer: C
Explanation:
Determined the median graphically from the data given below. Cumulative frequency curve is also known as OGIVE. The point on the x – axis, at which the perpendicular drawn from the intersection of two ogives meet. Determines are median.

Question 5
Histogram can be shown as
 (a) Ellipse   (b) Rectangle
 (c) Hyperbola   (d) Circle
Answer: B
Explanation:
A histogram is a diagram consisting of rectangles whose area is proportional to the frequency of a variable and whose width is equal to the class interval... these graphs shown on a histogram.

NOV 2019

Question 1
The graphical representation of cumulative frequency distribution is called.
 (a) Histogram   (b) Hysterogram

  (c) Ogive   (d) None
Answer: C
Explanation:
A curve that represents the cumulative frequency distribution of a grouped data on a graph is called ogive.
Cumulative frequency on y-axis
Class interval on x-axis.

DEC 2020

Question 1
The average of salaries in a factory is Rs.47, 000. The statement that the average salary Rs.47, 000 is ___
  (a) Descriptive statics   (b) Inferential
  (c) Detailed   (d) Undetailed
Answer: A
Explanation:
Descriptive statistics are brief descriptive coefficients that summarize a given data set, which can be either a representation of the entire or a sample of a population. Descriptive statistics are broken down into measures of central tendency and measures of variability (spread).

Question 2
Statistics cannot deal with _____ data.
  (a) Quantitative   (b) Qualitative
  (c) Textual   (d) Attribute
Answer: C
Explanation:
Textual data refer to systematically collected material consisting of written, printed, or electronically published words, typically either purposefully written or transcribed from speech. Text collected for use as data typically reflects a conscious research purpose, motivated by a ... Entry. Data, Spatial.

Question 3
Sweetness of a sweet dish is _____
  (a) Attribute   (b) Discrete Variable
  (c) Continuous Variable   (d) Variable
Answer: A
Explanation:
An attribute refers to the quality of a characteristic. The theory of attributes deals with qualitative types of characteristics that are calculated by using quantitative measurements. Therefore, the attribute needs slightly different kinds of statistical

treatments, which the variables do not get. Attributes refer to the characteristics of the item under study, like the habit of smoking, or drinking. So 'smoking' and 'drinking' both refer to the example of an attribute.

Question 4
Census reports are used as a source of _____ data.
 (a) Secondary   (b) Primary
 (c) Organize   (d) Confidential
Answer: A
Explanation:
Secondary data is the data that has already been collected through primary sources and made readily available for researchers to use for their own research. It is a type of data that has already been collected in the past.

Question 5
Types of cumulative frequencies are _____
 (a) 1   (b) 2
 (c) 3   (d) 4
Answer: B
Explanation:
There are two types of Cumulative Frequency Curves (or Ogives) :
   - More than type Cumulative Frequency Curve.
   - Less than type Cumulative Frequency Curve

Question 6
You are an Auditor of a firm and the firm earns a profit Rs.67, 000/- you stated to them that the annual profit is Rs. 67,000. This is ____ type of statistics.
 (a) Descriptive   (b) Detailed
 (c) Non detailed   (d) Inferential
Answer: A
Explanation:
Descriptive - What are the 3 main types of descriptive statistics? The 3 main types of descriptive statistics concern the frequency distribution, central tendency, and variability of a dataset. Distribution refers to the frequencies of different responses. Measures of central tendency give you the average for each response.

Question 7
They _____ are used usually when we want to examine the relationship between two variables.
 (a) Bar Graph   (b) Pie Chart
 (c) Line Chart   (d) Scatter Plot
Answer: D

Explanation:
Scatter Plot a graph in which the values of two variables are plotted along two axes, the pattern of the resulting points revealing any correlation present.

JAN 2021

Question 1
A bar chart is drawn for
  (a) Continuous data   (b) Nominal data
  (c) Time series data   (d) Comparing different components
Answer: D
Explanation:
A bar diagram makes it easy to compare sets of data between different groups at a glance. The graph represents categories on one axis and a discrete value in the other. The goal is to show the relationship between the two axes. Bar charts can also show big changes in data over time.

Question 2
A tabular presentation can be used for
  (a) Continuous data   (b) Nominal data
  (c) Time Series data   (d) Comparing different components
Answer: B
Explanation:
Data Tables or Tabular Presentation. A table facilitates representation of even large amounts of data in an attractive, easy to read and organized manner. The data is organized in rows and columns. This is one of the most widely used forms of presentation of data since data tables are easy to construct and read.

Question 3
A variable with qualitative characteristics is known as
  (a) Quality variable   (b) an attribute
  (c) A discrete variable   (d) A continuous variable
Answer: B
Explanation:
A qualitative variable, also called a categorical variable, is a variable that isn't numerical. It describes data that fits into categories. For example: Eye colors (variables include: blue, green, brown, hazel).

Question 4
The accuracy and consistency of data can be verified by
  (a) Scrutiny   (b) Internal checking
  (c) External Checking   (d) Double Checking

Answer: A
Explanation:
The accuracy and consistency of data can be verified by. Internal checking. External checking. **Scrutiny**.

Question 5
From a histogram one cannot compute the approximate value of
  (a) Mode   (b) Standard deviation
  (c) Median   (d) Mean
Answer: B
Explanation:
A standard deviation is a statistic that measures the dispersion of a dataset relative to its mean and is calculated as the square root of the variance. ... If the data points are further from the mean, there is a higher deviation within the data set; thus, the more spread out the data, the higher the standard deviation. Hence From a histogram one cannot compute the approximate value of Standard deviation

Question 6
The left part of a table providing the description of rows is called
  (a) Caption   (b) Box – head
  (c) Stub   (d) Body
Answer: C
Explanation:
Stub is the left part of the table providing the description of the rows. Body: The body is the main part of the table that contains the numerical figures.

Question 7
Mode can be obtained from _____
  (a) Frequency polygon   (b) Histogram
  (c) Ogive   (d) All of the above
Answer: B
Explanation:
The mode of a frequency distribution can be determined graphically from HISTOGRAM . HISTOGRAM: Histogram is the graphical representation of a grouped frequency distribution in exclusive form with continuous classes in the form of rectangles with class intervals as bases and the corresponding frequencies as heights

Question 8
Most of the commonly used distributions provide a
  (a) Bell-shaped   (b) U – shaped
  (c) J – shaped curve   (d) Mixed curve
Answer: A

Explanation:
Normal distribution, also called Gaussian distribution, the most common distribution function for independent, randomly generated variables. Its familiar bell-shaped curve is ubiquitous in statistical reports, from survey analysis and quality control to resource allocation.

Question 9
Which of the following is suitable for the graphical representation of a cumulative frequency distribution?
  (a) Frequency polygon   (b) Histogram
  (c) Ogive   (d) Pie chart
Answer: C
Explanation:
A curve that represents the cumulative frequency distribution of grouped data is called an ogive or cumulative frequency curve.

Question 10
Sweetness of sweet dish is
  (a) An Attribute   (b) A discrete variable
  (c) A continuous variable   (d) A variable
Answer: A
Explanation:
An attribute is defined as a quality or characteristic of a person, place, or thing. Real life individuals and fictional characters possess various attributes. For example, someone might be labeled beautiful, charming, funny, or intelligent, Sweetness of sweet dish

JULY 2021

Question 1
There were 200 employees is an office in which 150were married. Total male employees were 160 out of which 120 were married. What was the number of female unmarried employees?
  (a) 30   (b) 40
  (c) 50   (d) 10
Answer: Options (d)
Explanation
Total Female Employee = 200-160 = 40
Total Female Married   = 150-120 = 30
Total Female Unmarried = 40-30 = 10
Ans: Female Unmarried Employees = 10

Question2

Data collected on religion from the census reports are
 (a) Primary data   (b) Unclassified data
 (c) Sample data   (d) Secondary data
Answer: Options (d)
Explanation
Data collected on religion from census reports are secondary data. Secondary data is the second-hand information as it is not collected by the user. Thus, secondary data refers to the data which is already collected and published by other authorities. For example, government census report is a secondary data.

Question 3
Which of the following diagram the most appropriate is to represents various heads in total cost?
 (a) Pie chart   (b) Bar graph
 (c) Multiple line chart   (d) Scatter plot
Answer: Options (a)
Explanation
Different diagram patterns represent different kinds of data.
However, here we are concerned about the monthly expenditure of different items bought by a family and a pie diagram would do proper justice to it.
A pie diagram is circular as its name suggests and it is divided into various sections which differ on the data which is being dealt with.
The length of the arc in each section usually refers to the quantity.
It is usually used to show data that can be represented in a percentage format.

Question 4
In a graphical representation of data, the largest numerical value is for is the smallest numerical value is 25. If classes desired are 4 then which interval is
 (a) 45   (b) 5
 (c) 20   (d) 7.5
Answer: Options (b)
Explanation:
In a graphical representation of data, the largest numerical value is for is the smallest numerical value is 25. If classes desired are 4 then which interval is 5

Question 5
In a graphical representation of data, ideographs are also called as
 (a) Picto-graphs   (b) Asymmetry graphs
 (c) Symmetry graphs   (d) Pictograms
Answer: Options (d)
Explanation:
A pictogram, also called a pictograms, pictograph, or simply picto, and in computer

usage an icon, is a graphic symbol that conveys its meaning through its pictorial resemblance to a physical object.

Question 6
_____ Means separating items according to similar characteristics groping then into various classes
  (a) Classification   (b) Editing
  (c) Separation   (d) Tabulation
Answer: Options (a)
Explanation:
Classification means separating items according to similar characteristics and grouping them into various classes.

Question 7
Frequency density of a class interval is the ratio of_
  (a) Class frequency to the total frequency   (b) Class length to class frequency
  (c) Class frequency to the cumulative   (d) Frequency of that class interval to the
      frequency   corresponding class length
Answer: Options (d)
Explanation:
Frequency density of a class interval may be defined as the ratio of the frequency of that class interval to the corresponding class length. To have better understanding on frequency density of a class interval, let us consider the frequency distribution given below. That is, 0.60 and 0.80 respectively

Question 8
A graph that uses vertical bars to represent data is called a
  (a) Line graph   (b) Scatter plot
  (c) Vertical graphs   (d) Bar graphs
Answer: Options (d)
Explanation:
A bar chart or bar graph is a chart or graph that presents categorical data with rectangular bars with heights or lengths proportional to the values that they represent. The bars can be plotted vertically or horizontally. A vertical bar chart is sometimes called a column chart.
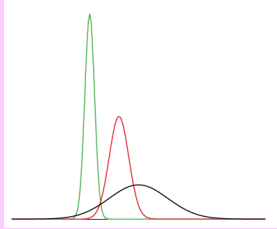
Question 9
In normal distribution, Mean, Median and Mode are
  (a) Zero   (b) Not equal
  (c) Equal   (d) Null

Answer: Options (c)
Explanation:

The mean, median, and mode of a normal distribution are equal. The area under the normal curve is equal to 1.0. Normal distributions are denser in the centre and less dense in the tails.

DEC 2021

Question 1

In a study about the male and female students of commerce and science departments of a college in 5 years, the following data's were obtained:

1995	2000
70% female students	75% female Students
65% read commerce	40% read Science
20% male students read science	50% of female Students read commerce
3000 total No. of students	3600 total No. of students

After combining 1995 and 2000 if x denotes the ratio of the female commerce students to female science student and y denotes the ratio of male commerce student to male science student, then

(a) x=y   (b) x > y
(c) x < y   (d) x≥y

Answer: c
Explanation:
The entire data can be summarized as follows:

Particulars	1995		2000	
No. of Students		3,000		3,600
No. of Female Students	(70%×3,000)	2,100	(75%×3,600)	2,700
No. of Male Students	(30%×3,000)	900	(25%×3,600)	900
No. of Commerce Students	(65%×3,000)	1950	(60%×3,600)	2160
No. of Science Students	(35%×3,000)	1050	(40%×3,600)	1440
No. of Male Science Students	(20%×3,000)	180	(900-810)	90
No. of Male Commerce Students	(80%×3,000)	720	(2160 – 1350)	810
No. of Female Science Students	(1,050-180)	870	(50% × 2,700)	1350
No. of Female Commerce Students	(1950 - 720)	1230		1350

Total female commerce students = 1230 + 1350 = 2580
Total Female science students = 870 + 1350 = 2220

Therefore, x = $\frac{2,580}{2,220} = 1.1622$

Total male commerce students = 720 +810 = 1530

Total male science students = 180 + 90 = 270

Therefore, y=$\frac{1,530}{270} = 5.6667$

Clearly, x<y.

Question 2
A National Institute arranged its students data in accordance with different states. This arrangement of data is known as
 (a) Temporal Data   (b) Ordinal Data
 (c) Geographical Data   (d) Cardinal Data

Answer: b

Explanation:
Data arranged in accordance with states is Geographical data.

Question 3
A student marks in five subject S1, S2, S3, S4 and S5 are 86, 79, 90, 88 and 89. If we need to draw a Pie chart to represent these markes, then what will be the Central angle for S3?
 (a) 103.2°   (b) 75°
 (c) 105.6°   (d) 94.8°

Answer: b

Explanation:
Total Marks = 86 + 79 + 90 + 88 + 89 = 432

Marks in S3 = 90

Central Angle =$\frac{90}{432} \times 360 = 75°$

Question 4
Ogive curves cannot be used to determine
 (a) Mean   (b) Mode
 (c) Median   (d) Range

Answer: b

Explanation:
This question seems to be wrong. The correct question should be "Ogive curves can be used to determine:"
The answer would then be (b) Median.

Question 5
The following data relate to the marks of a group of students:

Marks	Below 10	Below 20	Below 30	Below 40	Below 50
No. of students	15	38	65	84	100

How many students got marks more than 30?

  (a) 65   (b) 50

  (c) 35   (d) 43

Answer:

Explanation:

From the table it iS clear that total number of students = 100, and the number of students who got marks below 30 = 65.

Therefore, number of students who got marks more than 30 =100 - 65 = 35.

Question 6

The following data relate to the marks 48 students in statistics:

56	10	54	38	21	43	12	22
48	51	39	26	12	17	36	19
48	36	15	33	30	62	57	17
5	17	45	46	43	55	57	38
43	28	32	35	54	27	17	16
11	43	45	2	16	46	28	45

What are the frequency densities for the class intervals 30-39, 40-49, 50-59?

  (a) 0.20, 0.50, 0.90   (b) 0.1875, 0.1667, 0.2083

  (c) 0.70, 0.90, 1.10   (d) 0.90, 1.00, 0.80

Answer: d

Explanation:

Frequency Density = $\frac{Class\ Frequency}{Class\ Length}$

Class Interval	Observations	Frequency
30 – 39	38, 39, 36, 33, 30, 38, 32, 35	9
40 – 49	43, 48, 48, 45, 46, 43, 43, 43, 45, 46, 45	11
50 - 59	56, 54, 51, 57, 55, 57 54	7

Therefore, Frequency Density for the Class interval 30- 39 = 9 / 10 = 0.90

Frequency Density for the class interval 40 49 = 11/ 10 = 1.10

Frequency density for the class interval 50 59 = 7 / 10 = 0.70.

Question 7

Multiple axis line chart is considered when

  (a) There is more than one time series   (b) The Units of the variables are different.

  (c) In any case.   (d) If there are more than one time series and unit of variables are different.

Answer: d

Explanation:
If there are more than one time series and unit of variables are different then multiple Axis line chart is considered.

JUNE 2022

Question 1
Less than 'o' give curve give -
  (a) Mean   (b) Median
  (c) Mode   (d) MD

Answer: b
Explanation:
Less than 'o' give curve gives Median.

Question 2
If a data collected from a census Report. What type of data it is :-
  (a) Time series data   (b) Primary data
  (c) Secondary data   (d) Geographical data

Answer:
Explanation:
If a data collected from a census report is known as secondary data.

Question 3
Sweetness is an
  (a) Attribute   (b) Quality
  (c) Quantity   (d) None of these

Answer: d
Explanation:
Sweetness is an Attribute (quality)

Question 4
Which of the following is not a way of Presenting data?
  (a) Tabular form   (b) Textual form
  (c) Graphical form   (d) None of these

Answer: d
Explanation:
Regression Analysis is not a way of Presenting data.

Question 5
Histogram can be drawn from
  (a) Class interval are equal   (b) Class interval are unequal

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(c) Frequency of class interval are equal   (d) None

Answer: a
Explanation:
Histogram can be drawn from class Interval are equal.

Question 6
Which of following does not form characteristics in dividing the data?
(a) No. of auditors auditing Accounts   (b) No. of files audited by auditor
(c) No of files audited less than 6, less   (d) Files less than, moderate than, higher
than , less than 10   than

Answer: d
Explanation:
Files less than, moderate than, higher than does not form characteristics in dividing the data.

Question 7
If the cumulative frequency are plotted on axis then which type of curve is formed
(a) Ogive   (b) Frequency curve
(c) Histogram   (d) Frequency Polygon

Answer: a
Explanation:
'O' Give [$\therefore$ C.F is used for constructed 'O' Give]

Question 8
Which one is research data?
(a) Discrete and Continuous   (b) Qualitative and Quantitative
(c) Processed and Unprocessed   (d) Organise and unorganised data

Answer: c
Explanation:
Processed and unprocessed data is a research data.

Question 9
The profitability of a blue chip company is shown by -
(a) bell shape curve   (b) U shape curve
(c) J shape curve   (d) Mixed curve

Answer:
Explanation:
The profitability of a blue chip company is shown by bell shape Curve