Chapter 13 – Statistical Description of Data

Basics, Collection and Presentation of Data

Past Year Questions

PYQ May 18

(1) Divided bar chart is considered for
- a. Comparing different components of a variable
- b. The relation of different components to the table
- c. (a) or (b)
- d. (a) and (b)

PYQ Nov. 18

(2) 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 data
- d. None of these

PYQ Nov. 18

(3) A suitable graph for representing the portioning of total into sub parts in statistics is:
- a. A Pie chart
- b. A pictograph
- c. An ogive
- d. Histogram

PYQ Nov. 20

(4) ☆ The average of salaries in a factory is ₹ 47,000. The statement that the average salary ₹ 47,000 is
- a. Descriptive Statistics
- b. Inferential
- c. Detailed
- d. Undetailed

PYQ Nov. 20

(5) Statistics cannot deal with _____ data.
- a. Quantitative
- b. Qualitative
- c. Textual
- d. Undetailed

PYQ Nov. 20

(6) Sweetness of a sweet dish is:
- a. Attribute
- b. Discrete variable
- c. Continuous variable
- d. Variable

PYQ Nov. 20

(7) Census reports are used as a source of _____ date.
- a. Secondary
- b. Primary
- c. Organize
- d. Confidential

PYQ Nov. 20

(8) ☆ You are an auditor of a firm and the firm earns a profit of ₹ 67,000 you stated to them that the annual profit is ₹67,000. This is_ type of statistics.
- a. Descriptive
- b. Detailed
- c. Non detailed
- d. Inferential

PYQ Nov. 20

(9) ☆ The _____ are used usually when we wants to examine the relationship between two variables.
- a. Bar Graph
- b. Pie Chart
- c. Line Chart
- d. Scatter Plot

PYQ Nov. 20

(10) When data are classified according to one criterion, then it is called _____ classification.
- a. Quantitative
- b. Qualitative
- c. Simple
- d. Factored

PYQ Jan. 21

(11) A bar chart is drawn for
- a. Continuous data
- b. Nominal data
- c. Time series data
- d. Comparing different components

PYQ Jan. 21

(12) A tabular presentation can be used for
- a. Continuous series data
- b. Nominal data
- c. Time series data for longer period
- d. Comparison of Data

PYQ Jan. 21

(13) A variable with qualitative characteristic is
- a. Quality variable
- b. An attribute
- c. A discrete variable
- d. A continuous variable

PYQ Jan. 21

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

PYQ Jan. 21

(15) The left part of a table providing the description of rows is called.
a. Caption
b. Box – head
c. Stub
d. Body

PYQ Jan. 21

(16) Sweetness of sweet dish is.
a. An attribute
b. A discrete variable
c. A continuous variable
d. A variable

PYQ July 21

(17) ☆ ___ means separating items according to similar characteristics grouping them into various classes:
a. Classification
b. Editing
c. Separation
d. Tabulation

PYQ July 21

(18) ☆ In graphical representation of data, ideographs are also called as:
a. Picto-graphs
b. Asymmetry graphs
c. Symmetry graphs
d. Pictograms

PYQ July 21

(19) A graph that uses vertical bars to represent data is called a:
a. Line graph
b. Scatter plot
c. Vertical graphs
d. Bar graph

PYQ July 21

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

PYQ July 21

(21) Data collected on religion from the census reports are:
a. Primary data
b. Unclassified data
c. Sample data
d. Secondary data

PYQ July 21

(22) Data collected on religion from the census reports are:
a. Primary data
b. Unclassified data
c. Sample data
d. Secondary data

PYQ July 21

(23) Which of the following diagram is the most appropriate to represents various heads in total cost?
a. Pie chart
b. Bar graph
c. Multiple Line chart
d. None

PYQ Dec. 21

(24) A national institute arranged its student's data in accordance with different states. This arrangement of data is known as
a. Temporal Data
b. Geographical Data
c. Ordinal Data
d. Cardinal Data

PYQ Dec. 21

(25) 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.

PYQ June 22

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

PYQ June 22

(27) Sweetness is an
a. Attribute
b. Quantity
c. Quality
d. a or c

PYQ June 22

(28) Which of the following is not a way of Presenting data?

a. Tabular form
b. Textual form
c. Graphical form
d. Regression analysis

PYQ June 22

(29) ☆ Which of the 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 than 5, less than 10
d. File less than, moderate than, higher than

PYQ June 22

(30) ☆ Which one is research data?

a. Discrete and Continuous
b. Qualitative and Quantitative
c. Processed and Unprocessed
d. Organise and unorganised data

PYQ Dec 22

(31) Which one of the following is a source of primary data?

a. Government Records
b. Research Articles
c. Journals
d. Questionnaire filled by Enumerators

PYQ Dec 22

(32) Which is the left part of table providing description of the rows?

a. Caption
b. Box Head
c. Stub
d. Body

PYQ Jun 23

(33) The share holding pattern of ABC Ltd. is as follows:

Share holders	No. of shares in Millions
Promoter	120
FII	25
DII	20
Govt	20
Public	15

What is the difference between central angles (in degree) for shares held by Promoters and Public, in pie chart?

a. 216
b. 189
c. 180
d. 99

PYQ Jun 23

(34) What does an Ogive curve represent?

a. The cumulative frequency and class boundary
b. The frequency and class boundary
c. The frequency and cumulative frequency
d. The frequency and class interval

PYQ Jun 23

(35) The following is the data related to the daily income of 86 persons:

Income in ₹	No. of persons:
500-999	15
1000-1499	28
1500-1999	36
2000-2499	7

What is the percentage of persons earning at least ₹ 1,500 per day?

a. 50% b. 45%
c. 40% d. 60%

PYQ Jun 23

(36) For tabulation, 'caption' is

a. The upper part of the table
b. The lower part of the table
c. The main part of the table
d. The upper part of a table that describes the rows and sub-rows

PYQ Sep 24

(37) The secondary data is collected by:

a. Observation method
b. International source like World Bank
c. Interview method
d. Mailed questionnaire method

PYQ Sep 24

(38) Exit polls are an example of which method of collecting data?

a. Investigation
b. Random sampling
c. Census
d. Quota sampling

PYQ Sep 24

(39) Numerical data presented in descriptive form are called:
- a. Tabular presentation
- b. Classified presentation
- c. Textual presentation
- d. Graphical presentation

PYQ Sep 24

(40) What type of data is most appropriate for representing using a Pie-chart?
- a. Categorical data
- b. Continuous data
- c. Ordinal data
- d. Interval data

Answer Key

1	d	2	a	3	a
4	a	5	b	6	a
7	a	8	a	9	c
10	c	11	d	12	d
13	b	14	a	15	c
16	a	17	a	18	d
19	d	20	b	21	d
22	c	23	a	24	b
25	d	26	c	27	d
28	d	29	d	30	b
31	d	32	c	33	b
34	a	35	a	36	a
37	b	38	b	39	c
40	a				

Basics, Collection and Presentation of Data

Mock Test Paper Questions

MTP May 18

(1) Statistics is concerned with
- a. Qualitative information
- b. Quantitative information
- c. a or b
- d. Both a & b

MTP May 18

(2) 'Stub' of a table is the _____ part of the table describing the _____.
- a. Left, Columns
- b. Right, Columns
- c. Right, Rows
- d. Left, Rows

MTP Nov 18

(3) ☆ The technique of graphic presentation is extremely helpful in which of the following
- a. Analysing the changes at different points of Time
- b. Analysing cause and effect relationship
- c. Analysing proportional relationship
- d. Analysing the degree of relationship

MTP Nov 18

(4) Statistics Analyses:
- a. Qualitative
- b. Quantitative
- c. Either Qualitative or Quantitative
- d. Quantitative and Qualitative

MTP May 19

(5) Statistics is applied in
- a. Economics
- b. Business Management
- c. Commerce and Industry
- d. All of these

MTP May 19

(6) The primary data are collected by
- a. Interview Method
- b. Observation Method
- c. Questionnaire Method
- d. All of these

MTP May 19

(7) The best method to collect data, in case of a natural calamity, is
- a. Personal Interview
- b. Indirect Interview
- c. Questionnaire Method
- d. Direct Observation Method

MTP May 19

(8) 'Stub' of a table is the
- a. Left part of the table describing the columns
- b. Right part of the table describing the columns
- c. Right part of the table describing the rows
- d. Left part of the table describing the rows

MTP May 19 Series II

(9) The best method to collect data, in case of a natural calamity, is
- a. Personal Interview
- b. Indirect Interview
- c. Questionnaire Method
- d. Direct observation Method

MTP May 19 Series II

(10) The entire upper part of a table is known as
a. Caption b. Stub
c. Box head d. Body

MTP Nov 19

(11) The number of times a particular item occurs in a given data is called its
a. Variation
b. Frequency
c. Cumulative Frequency
d. None of these

MTP Nov 20

(12) The most appropriate diagram to represent the data relating to the monthly expenditure on different items by a family is ?
a. Histogram
b. Pie-diagram
c. Frequency polygon
d. Line graph

MTP Apr 21

(13) The best method to collect data in case of natural calamity is
a. Personal interview.
b. Telephone interview.
c. Mailed questionnaire method.
d. indirect interview.

MTP Nov 21

(14) Which of the following is not an example of continuous variable?
a. Temperature in India
b. Profit of Company X
c. Number of road accidents
d. A person's height

MTP Oct 21

(15) Statistics is concerned with
a. Qualitative information
b. Quantitative information
c. (a) or (b)
d. Both (a) and (b).

MTP Oct 21

(16) The primary data are collected by
a. Interview method
b. Observation method
c. Questionnaire method
d. All these

MTP June 22/ MTP Sep 24 Series II

(17) Data are said to be _____ if the investigator himself is responsible for the collection of data.
a. Primary Data
b. Secondary Data
c. Mixed of Primary and Secondary Data
d. None of these

MTP Dec 22 – Series I

(18) The cost of sugar in a month under the heads of raw Materials, labor, direct production, and others were 12, 20, 35, and 23 units respectively. What is the difference between the central angles for the largest and smallest components of the cost of sugar?
a. 72^0 b. 48^0
c. 56^0 d. 92^0

MTP Dec 22 Series II

(19) Data are said to be _____ if the investigator himself is responsible for the collection of data.
a. Primary Data
b. Secondary Data
c. Primary and Secondary
d. None of these

MTP Dec 22 Series II

(20) A suitable graph for representing the portioning of total into sub parts in statistics is:
a. A Pictograph b. A Pie Chart
c. An Ogive d. A Histogram

MTP June 2023 Series I

(21) The most accurate mode of data presentation is:
a. Diagrammatic b. Tabulation
c. Textual presentation d. None of these

MTP June 2023 Series I/ Sep 24 Series II

(22) Which is the left part of the table providing the description of the rows?
a. Captain b. Box head
c. Stub d. Body

MTP Dec 2023 Series I

(23) A tabular presentation can be used for
a. Continuous data
b. Nominal data
c. Time Series data
d. Comparing different components

MTP Dec 2023 Series I

(24) ☆ When data are classified according one criterion, then it is called ——— classification
a. Quantitative b. Qualitative
c. Simple d. Factored

MTP Dec 2023 Series I

(25) Census report are used as source of secondary data.
a. Secondary b. Primary
c. Organize d. Confidential

MTP Dec 2023 Series I

(26) A student marks in five subjects S1, S2, S3, , S4 and S5 are 86, 79, 90, 88 and 89 . If we need to draw a pie chart to represent these marks, what will be central angle for S3.
a. 103.2^0 b. 75^0
c. 105.6^0 d. 94.8^0

MTP Dec 2023 Series II

(27) 100 students are classified into male/female and graduate/non-graduate classes. This data classification is
a. Cardinal data
b. Ordinal data
c. Spatial Series data
d. Temporal data

MTP June 24 Series I

(28) Which of the following statement is true?
a. Statistics is derived from the French word 'Statistik'
b. Statistics is derived from the Italian word 'Statista'
c. Statistics is derived from the Latin word 'Statistique'.
d. None of these

MTP June 24 Series I

(29) In tabulation, source of data, if any is shown in the
a. Stub b. Body
c. Caption d. Footnote

MTP June 24 Series I

(30) Data collected on religion from the census reports
a. Primary data b. Secondary data
c. Sample data d. (a) or (b)

MTP June 24 Series II

(31) Data are said to be _____ if the investigator himself is responsible for the collection of data.
a. Primary Data
b. Secondary Data
c. Mixed of Primary and Secondary Data
d. None

MTP June 24 Series II

(32) A suitable graph for representing the portioning of total into sub parts in statistics is:
a. A Pictograph b. A Pie Chart
c. An Ogive d. A Histogram

MTP June 24 Series II

(33) _____ is the entire upper part of the table which includes columns and sub–column numbers, unit(s) measurement.
a. Sub b. Box-head
c. Body d. Caption

MTP June 24 Series III

(34) 'Stub' of a table is the _____ part of the table describing the _____.
a. Left, Columns
b. Right, Columns
c. Right, Rows
d. Left, Rows

MTP June 24 Series III

(35) The pair of averages whose value can be determined graphically.
a. Mean and Median
b. Mode and Mean
c. Mode and Median
d. None of these

MTP June 24 Series III

(36) Statistics is concerned with
a. Qualitative information
b. Quantitative information
c. (a) or (b)
d. Both (a) and (b).

MTP Sep 24 Series I

(37) The following set of data cannot be presented in a table
a. The heights of students described in centimeters
b. The weights of candidates expressed in kilograms
c. The amount of rainfall opined as "medium", "average", "heavy", etc.
d. The number of bills per day cleared by an auditor in a month

Answer Key

1 d	2 d	3 a
4 b	5 d	6 d
7 a	8 d	9 a
10 c	11 b	12 b
13 a	14 c	15 d
16 d	17 a	18 d

19	a	20	b	21	b
22	c	23	d	24	c
25	a	26	b	27	b
28	b	29	d	30	b
31	a	32	b	33	b
34	d	35	c	36	d
37	c				

Frequency Distribution

Past Year Questions

PYQ May 18

(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.

PYQ Nov. 18

(2) Following frequency distribution is classified as

X	12	17	24	36	45
F	2	5	3	8	9

- a. Continuous distribution
- b. Simple Frequency Distribution
- c. Cumulative frequency distribution
- d. None of these

PYQ Nov. 18

(3) Histogram is useful to determine graphically the value of
- a. Arithmetic mean
- b. Median
- c. Mode
- d. None of these

PYQ Nov. 18

(4) The number of times a particular items occurs in a class interval is called its:
- a. Mean
- b. Frequency
- c. Cumulative frequency
- d. None of these

PYQ Nov. 18

(5) An ogive is a graphical representation of
- a. Cumulative frequency distribution
- b. A frequency distribution
- c. Ungrouped data
- d. None of these

PYQ Nov. 18

(6)

Class	0-10	10-20	20-30	30-40	40-50
Freq.	4	6	20	8	3

For the class 20-30. Cumulative frequency is:
- a. 10
- b. 26
- c. 30
- d. 41

PYQ June 19

(7) Which of the following graph is suitable for cumulative frequency distribution?
- a. 'O'give
- b. Histogram
- c. G.M
- d. A.M

PYQ June 19

(8) Histogram can be shown as
- a. Ellipse
- b. Rectangle
- c. Hyperbola
- d. Circle

PYQ June 19

(9) _____Series is continuous.
- a. Open ended
- b. Exclusive
- c. Close ended
- d. Unequal call intervals

PYQ June 19

(10) Ogive graph is used for finding
- a. Mean
- b. Mode
- c. Median
- d. None of these

PYQ June 19

(11) Histogram is used for finding
- a. Mode
- b. Mean
- c. First quartile
- d. None of these

PYQ Nov. 19

(12) The graphical representation of cumulative frequency distribution is called.
- a. Histogram
- b. Historigram
- c. Ogive
- d. None of these

PYQ Nov. 20

(13) Types of cumulative frequencies are:
- a. 1
- b. 2
- c. 3
- d. 4

PYQ Jan. 21

(14) From a histogram one cannot compute the approximate value of
- a. Mode
- b. Standard deviation
- c. Median
- d. Mean

PYQ Jan. 21

(15) Mode can be obtained from_____
a. Frequency polygon
b. Histogram
c. Ogive
d. All of the above

PYQ Jan. 21

(16) Most of the Commonly used distributions provide
a. Bell – shaped
b. U Shaped
c. J – Shaped Curve
d. Mixed Curve

PYQ Jan. 21

(17) Which of the following is suitable for the graphical representation of a Cumulative frequency distribution?
a. Frequency polygon
b. Histogram
c. O give
d. Pie chart

PYQ July 21

(18) 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 frequency
d. Frequency of that class interval to the corresponding class length.

PYQ Dec. 21

(19) Ogive curves are used to determine
a. Mean b. Median
c. Mode d. Range

PYQ June 22

(20) Less than 'o' give curve give-
a. Mean b. Median
c. Mode d. M D

PYQ June 22

(21) Histogram can be drawn when
a. Class interval are equal
b. Class interval are unequal
c. Frequency of class interval are equal
d. None of these

PYQ June 22

(22) 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

PYQ Dec 22

(23) The suitable formula for computing the number of class intervals is (N is total frequency)
☆
a. $3.322 \log N$ b. $0.322 \log N$
c. $1 + 3.322 \log N$ d. $1 - 3.322 \log N$

Note: Out of Syllabus

PYQ Dec 22

(24) Ogive for more than type and less than type distributions intersect at
a. Mean b. Median
c. Mode d. Origin

PYQ July 21

(25) The modes of presentation of data are:
a. Textual, Diagrammatic and Internal presentation
b. Tabular, Textual and Internal presentation
c. Textual, Tabular and Diagrammtic presentation
d. Tabular, Diagrammatic and Internal Presentation

PYQ Dec 23

(26) The frequency of visitor in an office is given below:

Time	Frequency
9 AM-11 AM	5
11 AM-1 PM	18
1 PM-3 PM	7
3 PM-5 PM	12

Find the cumulative frequency of visitors for the time 11AM – 1PM?
a. 5 b. 23
c. 18 d. 30

PYQ Dec 23

(27) By plotting cumulative frequency against the respective class boundary, we get
a. Frequency curve
b. Ogives
c. Frequency polygon
d. Histogram

PYQ Dec 23

(28) In a cumulative frequency curve, what is represented on the Y-axis?
a. Class interval
b. Cumulative frequency
c. Frequency density
d. Relative frequency

PYQ Dec 23

(29) In a frequency distribution, the relative frequency of the class is:
- a. The ratio of the class frequency to the total number of classes
- b. The ratio of the class frequency to the total frequency
- c. The ratio of the class frequency to the total number of data points
- d. The ratio of the class mid point to the class frequency

PYQ Dec 23

(30) Frequency density corresponding to a class interval is ratio of:
- a. Class frequency to class length
- b. Class frequency to total frequency
- c. Class frequency to cumulative frequency
- d. Class length to class frequency

PYQ Dec 23

(31) A perpendicular drawn from the point of intersection of two Ogive on the horizontal axis given the value of
- a. 2nd Quartile
- b. 3rd Quartile
- c. Mode
- d. 1st Quartile

PYQ June 24

(32) A less than ogive curve is drawn by plotting
- a. Less than Cumulative frequencies on the vertical axis
- b. More than Cumulative frequencies on the vertical axis
- c. Highest frequencies on vertical axis
- d. Lowest frequencies on vertical axis

PYQ June 24

(33) Two frequency distributions are given to you. To compare them visually, the best diagram to be drawn on the same sheet is
- a. Pie chart
- b. Histogram
- c. Frequency polygon
- d. Bar chart

PYQ June 24

(34) A histogram and a pie chart represents the same data on monthly expenses of a household. Which statement is most likely true?
- a. The histogram only shows the frequency of each expense category, while the pie chart shows the proportion of each category
- b. Both the histogram and pie chart show the frequency of each expenses category
- c. Both the histogram and pie chart show the proportion of each expenses category
- d. Pie charts are always better than histograms for representing expenses

PYQ June 24

(35) The following set of data cannot be presented in a table
- a. The heights of students described in centimeters
- b. The weights of candidates expressed in kilograms
- c. The amount of rainfall opined as "medium", "average", "heavy", etc.
- d. The number of bills per day cleared by an auditor in a month

PYQ June 24

(36) An ogive is used to represent:
- a. The frequency of each data point
- b. The number of data points falling below a specific value
- c. The proportion of data points falling below a specific value
- d. The relationship between two variables

PYQ Sep 24

(37) The Ogive can be used for making
- a. Medium term projection
- b. Short term projection
- c. Long term projection
- d. Group frequency distribution

PYQ Sep 24

(38) The distribution of commuters coming to a Metro station from early morning hours to peak morning hours follows which type of frequency curve?
- a. J-shaped curve
- b. Bell shaped curve
- c. U-shaped curve
- d. Mixed Curve

PYQ Sep 24

(39) Series in which frequencies are continuously added corresponding to each class interval in the series:
- a. Cumulative frequency series
- b. Frequency
- c. Deviation
- d. Mid value

PYQ Sep 24

(40) If the class intervals of certain data are 10-14, 15-19, 20-24, then the first class boundaries is

a. 10-14 b. 9.5-14.5
c. 10-15 d. 10. 5-15.5

Answer Key

1	a	2	b	3	c
4	b	5	a	6	c
7	a	8	b	9	b
10	c	11	a	12	c
13	b	14	b	15	b
16	a	17	c	18	d
19	b	20	b	21	d
22	a	23	c	24	b
25	c	26	b	27	b
28	b	29	b	30	a
31	a	32	a	33	b
34	d	35	c	36	b
37	d	38	a	39	a
40	b				

Frequency Distribution

Mock Test Paper Questions

MTP May 18

(1) The pair of averages whose value can be determined graphically?

a. Mean and median
b. Mode and mean
c. Mode and median
d. None of these

MTP May 18

(2) The difference between the upper and lower limit of a class is called

a. Class interval b. Mid value
c. Class boundary d. frequency

MTP May 18

(3) What is exclusive Series

a. In which both upper and lower limit are not included in class frequency
b. In which lower limit is not included class frequency
c. In which upper limit is not included in class frequency
d. None of the above

MTP Nov 18

(4) ☆ For frequency distribution and time series which form of presentation is rarely used.

a. Diagrammatic presentation
b. Graphic
c. both Diagrammatic and Graphic
d. More information required

MTP Nov 18

(5) Frequency Polygon is meant for --------frequency distribution

a. Single
b. Double
c. Multi
d. None of the above

MTP Nov 18

(6) Ogive is also called as

a. frequency graph
b. cumulative frequency graph
c. Histogram
d. None of these

MTP Nov 18

(7) There are _____ types of frequency curves

a. 1 b. 2
c. 3 d. 4

MTP Nov 18

(8) The J shaped curve starts with a _____frequency

a. Minimum b. Maximum
c. Either a & b d. none

MTP Nov 18

(9) Mid values are also called

a. Lower limit
b. Upper limit
c. Class mark
d. None

MTP May 19

(10) Pie-diagram is used for

a. Comparing different components and their relation to the total
b. representing qualitative data in a circle
c. Representing quantitative data in circle
d. (b) or (c).

MTP May 19 Series II

(11) A frequency distribution

a. Arranges observations in an increasing order
b. Arranges observation in terms of a number of groups
c. Relates to a measurable characteristic
d. All of these

MTP May 19 Series II

(12) Mode of a distribution can be obtained from
a. Histogram
b. Less than type ogives
c. More than type ogives
d. Frequency polygon

MTP Nov 19

(13) Frequency density is used in the construction of.
a. Histogram
b. Ogive
c. Frequency Polygon
d. None of these

MTP May 20

(14) The difference between upper limit and lower limit of a class is called
a. Class Interval
b. Class boundaries
c. Mid-Value
d. Frequency

MTP May 20

(15) Median of a distribution can be obtained from
a. Frequency polygon
b. Histogram
c. Less than type ogives
d. None of these.

MTP Nov 20

(16) The distribution of income is an example of frequency distribution of
a. Continuous variable
b. A discrete variable
c. An attribute
d. (b) or (c)

MTP March 21

(17) ☆ Histogram is used for presentation of the following type of series
a. Time Service
b. Continuous Series
c. Discrete Series
d. Individual Series

MTP March 21

(18) The graphical representation of cumulative frequency distribution is called–
a. Histogram
b. Pie Chart
c. Frequency Polygon
d. Ogive

MTP March 21

(19) The difference between upper limit and lower limit of a class is called:
a. Class Interval b. Class boundary
c. Mid-value d. Frequency

MTP Apr 21

(20) The following frequency distribution

x	12	17	24	36	45
f	2	5	3	9	8

is classified as-
a. Continuous b. Discrete
c. Cumulative d. None of these

MTP Oct 21

(21) The curve obtained by joining the points, whose x-coordinates are the upper limits of the class-intervals and y coordinates are corresponding cumulative frequencies is called
a. Ogive
b. Histogram
c. Frequency Polygon
d. Frequency Curve

MTP March 22

(22) Median of a distribution can be obtained from
a. Frequency polygon
b. Histogram
c. ogives
d. None of these.

MTP March 22

(23) For the non-overlapping classes 0—19 , 20—39 , 40—59 the class mark of the class 0—19 is
a. 0 b. 19
c. 9.5 d. none of these

MTP March 22

(24) For open-end classification, which of the following is the best measure of central tendency?
a. AM b. GM
c. Median d. Mode

MTP June 22/ MTP Sep 24 Series I

(25) Histogram is used for finding:
a. Mode b. Mean
c. First Quartile d. None

MTP June 22

(26) Relative frequency for a particular class lies between:
a. 0 and 1
b. 0 and 1, both inclusive
c. -1 and 0
d. -1 and 1

MTP June 22

(27) Less than type and more than type Ogives meet at a point known as:
a. Mean b. Median
c. Mode d. None of these

MTP Dec 22 – Series I

(28) The distribution of profits of a company follows:
a. J-shaped frequency curve
b. U-shaped frequency curve
c. Bell-shaped frequency curve
d. Any of these

MTP Dec 22 – Series I

(29) Median of a distribution can be obtained from:
a. Histogram
b. Frequency Polygon
c. Less than type ogives
d. none of these

MTP Dec 22 – Series I

(30) Frequency density corresponding to a class interval is the ratio of
a. Class Frequency to the Total Frequency
b. Class Frequency to the class Length
c. Class frequency to the class Frequency
d. Class Frequency to the Cumulative Frequency.

MTP Dec 22 – Series II

(31) The number of times a particular items occurs in a class interval is called its:
a. Mean
b. Cumulative Frequency
c. Frequency
d. None of the above

MTP Dec 22 – Series II

(32) An Ogive is a graphical representation of:
a. Cumulative Frequency distribution
b. Ungrouped Data
c. A frequency distribution
d. None of the above

MTP Dec 22 Series II

(33) Histogram can be shown as:
a. Ellipse b. Rectangle
c. Hyperbola d. Circle

MTP Dec 22 Series II

(34) _____ Series is continuous.
a. Open ended
b. Exclusive
c. Close ended
d. Unequal class intervals

MTP Dec 22 Series II

(35) Ogive graph is used for finding:
a. Quartiles b. Deciles
c. Median d. All of these

MTP Dec 22 Series II

(36) Histogram is useful to determine graphically the value of:
a. AM b. Mode
c. Median d. None of these

MTP June 2023 Series I

(37) Ogive for more than type and less than distributions intersect at
a. Means b. Median
c. Mode d. Origin

MTP June 2023 Series II

(38) ☆ Perpendicular is drawn from the point of intersection of 2 Ogives on the horizontal axis. The value of x denotes:
a. First Quartile
b. Second Quartile
c. Third Quartile
d. Any of the above

MTP June 2023 Series II

(39) ☆ In study of impact of novel Coronavirus in the world, a frequency graph is plotted for age on the x axis and fatalities on the y axis. Which frequency curve is most expected as the output?
a. J shaped curve
b. U shaped curve
c. Bell shaped curve
d. Mixed shaped curve

MTP Dec 2023 Series I

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

MTP Dec 2023 Series II

(41) The graphical representation of Median is calculated:
a. Ogive Curve b. Frequency Curve
c. Line Diagram d. Histogram

MTP Dec 2023 Series II

(42) ☆ From the following data 73, 72, 65, 41, 54, 80, 50, 46, 49, 53, find the number of class intervals if class length is given as 5
a. 6 b. 5
c. 7 d. 8

MTP Dec 2023 Series II

(43) The number of observations between 150 and 200 based on the following data is:

Value	No of observations
More than 100	70
More than 150	63
More than 200	28
More than 250	05

a. 46 b. 35
c. 28 d. 23

MTP June 24 Series II

(44) The number of times a particular item occurs in a given data is called its
a. Variation
b. Frequency
c. Cumulative frequency
d. None of these

MTP June 24 Series II

(45) ☆ If the width of each of ten classes in a frequency distribution is 2.5 and the lower class boundary is 5.1, then the upper class boundary of the highest class is
a. 30.1 b. 31.1
c. 30 d. 27.6

MTP June 24 Series II

(46) Let L be the lower class boundary of a class in a frequency distribution and m be the mid point of the class. Which one of the following is the higher class boundary of the class?
a. $m+\frac{m+2}{2}$ b. $L+\frac{m+L}{2}$
c. $2m-L$ d. $m-2L$

MTP June 24 Series II

(47) An Ogive can be prepared in _____ different ways.
a. 2 b. 3
c. 4 d. 5

MTP June 24 Series III

(48) The difference between the upper and lower limit of a class is called
a. Class Interval b. Mid Value
c. Class Boundary d. Frequency

MTP June 24 Series III

(49) What is exclusive Series
a. In which both upper and lower limit are not included in class frequency
b. In which lower limit is not included class frequency
c. In which upper limit is not included in class frequency
d. None of these

MTP Sep 24 Series I

(50) According to the empirical rule, if the data form a "bell-shaped "distribution, then the maximum and minimum frequencies occur at _____ and _____ respectively.
a. Middle, left end
b. Middle, right end
c. End, middle
d. Middle, ends

MTP Sep 24 Series I

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

MTP Sep 24 Series II

(52) A Which of the following is suitable for cumulative frequency distribution?
a. Ogive b. Histogram
c. GM d. AM

MTP Sep 24 Series II

(53) C The following data relate to the marks of group of students:

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

How many students got marks more than 30 ?
a. 65 b. 50
c. 35 d. 43

MTP Sep 24 Series II

(54) The profitability of a blue-chip company is showed by __
a. Bell Shape Curve
b. U shape Curve
c. J shape Curve
d. Mixed curve

RTP Sep 24

(55) Median of a distribution can be obtained from -
a. Frequency polygon
b. Histogram
c. Ogives
d. None of these

Answer Key

1	c	2	a	3	c			
4	a	5	a	6	b			
7	d	8	a	9	c			
10	a	11	d	12	a			
13	a	14	a	15	c			
16	a	17	b	18	d			
19	a	20	b	21	a			
22	c	23	c	24	c			
25	a	26	a	27	b			
28	c	29	c	30	b			
31	c	32	a	33	b			
34	b	35	d	36	b			
37	b	38	b	39	a			
40	b	41	a	42	d			
43	b	44	b	45	a			
46	c	47	a	48	a			
49	c	50	d	51	b			
52	a	53	c	54	a			
55	c							

Numerical Problems

Past Year Questions

PYQ July 21

(1) There are 200 employees in an office in which 150 were 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

PYQ Dec. 21

(2) 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% of 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 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. $x \geq y$

PYQ Dec. 21

(3) A student makes 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 markers, then what will be the Central angle for S3.
a. 103.2^0 b. 75^0
c. 105.6^0 d. 94.8^0

PYQ Dec. 21

(4) The following data relate to the marks of a group of students:

Marks	<10	<20	<30	<40	<50
F	15	38	65	84	100

How many students got marks more than 30?
a. 65 b. 50
c. 35 d. 43

PYQ Dec. 21

(5) The following data relate to the marks of 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. 0.70, 0.90, 1.10
c. 0.1875, 0.1667, 0.2083
d. 0.9, 1.10, 0.7

PYQ June 22

(6) The profitability of a blue chip company is shown by
a. Bell Shape curve
b. U shake curve
c. J Shape curve
d. Mixed curve

PYQ Dec. 23

(7) Consider the following data where class length is given as 5. Calculate the number of class intervals
59, 68, 78, 57, 44, 73, 40, 60, 70, 47

a. 5 b. 6
c. 7 d. 8

Answer Key

1 d 2 c 3 b
4 c 5 d 6 a
7 d

Numerical Problems

Mock Test Paper Questions

MTP Nov 19

(1) The width of each of ten classes in a frequency distribution is 2.5 and the lower class boundary of the lowest class is 10.6. Which one of the following is the upper class boundary of the highest class?

a. 35.6 b. 33.1
c. 30.6 d. None of these

MTP Nov 19

(2) ☆ Let L be the lower class boundary of a class in a frequency distribution and m be the midpoint of the class. Which one of the following is the higher class boundary of the class?

a. $m+\frac{m+2}{2}$ b. $L+\frac{m+L}{2}$
c. 2m-L d. m-2L

MTP May 20

(3) Find the number of observations between 250 and 300 from the following data

Value	More than 200	More than 250	More than 300	More than 350
No of observation	56	38	15	0

a. 56 b. 23
c. 15 d. 8

MTP May 20

(4) 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

MTP Nov 20

(5) The following data relates to the incomes of 90 persons:

Income in ₹	1500-1999	2000-2499	2500-2999	3000-3499
No. of persons	13	32	20	25

Which is the percentage of persons earning more than ₹2000?

a. 45 b. 85.56
c. 52 d. 55

MTP Nov 20

(6) The number of accidents for seven days in a locality are given below :
No. of accidents : 0 1 2 3 4 5 6
Frequency : 12 15 23 30 9 3 2
What is the number of cases when 3 or less accidents occurred?

a. 56 b. 6
c. 80 d. 87

MTP March 21

(7)

No. of accidents	Frequency
0	36
1	27
2	33
3	29
4	24
5	27
6	18
7	9

In how many cases 5 or more accidents occur?

a. 96 b. 133
c. 78 d. 54

MTP Nov 21

(8) Salaries of employees working in ABC is as follows:

Salary	Below 10	Below 20	Below 50	Below 100	Below 1000
No. of employees	28	34	65	84	123

Find the no. of employees with salaries more than 50k?

a. 65 b. 84
c. 39 d. 58

MTP Oct 21

(9) The following data relate to the incomes of 86 persons:

Income	500-999	1000-1499	1500-1999	2000-2499
Freq.	15	28	36	7

What is the percentage of persons earning more than ₹ 1500?

a. 50 b. 45
c. 40 d. 60

MTP Oct 21

(10) The following data relate to the marks of a group of students:

Marks	<10	<20	<30	<40	<50
Freq	15	38	65	84	100

How many students got marks more than 30?

a. 65 b. 50
c. 35 d. 43

MTP March 22

(11) Cost of sugar in a month under the heads raw Materials, labour, direct production and others were 12, 20, 35 and 23 units respectively. What is the dif. between the central angles for the largest and smallest components of the cost of sugar?

a. 72^0 b. 48^0
c. 56^0 d. 92^0

MTP March 22

(12) ☆ In a study relating to the laborer's of a jute mill in West Bengal, the following information was collected. 'Twenty per cent of the total employees were females and forty per cent of them were married. Thirty female workers were not members of Trade Union. Compared to this, out of 600 male workers 500 were members of Trade Union and fifty per cent of the male workers were married. The unmarried non-member male employees were 60 which formed ten per cent of the total male employees. The unmarried non-members of the employees were 80'. On the basis of this information, the ratio of married male non-members to the married female non-members is

a. 1: 3 b. 3: 1
c. 4: 1 d. 5: 1

MTP June 22

(13) The frequency of the Class 20-30 is

Marks	0-10	10-20	20-30	30-40	40-50
Freq	5	13	28	34	38

a. 5 b. 28
c. 15 d. 13

PYQ Jul 21, MTP June 22

(14) There were 200 employees in an office in which 150 were married. Total male employees were 160 out of which 120 were married. What was the female unmarried employees?

a. 30 b. 10
c. 10 d. 50

MTP Dec 22 Series II

(15) From the following data, cumulative frequency for the class 20 – 30 is

Class	0-10	10-20	20-30	30-40	40-50
Freq	4	6	20	8	3

a. 26 b. 10
c. 41 d. 30

MTP Dec 23 Series II

(16) There were 200 employees in an office in which 150 were married. Total male employes were 160 out of which 120 were married. What was the number of female unmarried employees.

a. 30 b. 10
c. 40 d. 50

Answer Key

1 a	2 c	3 b
4 c	5 b	6 c
7 d	8 d	9 a
10 c	11 d	12 c
13 b	14 b	15 d
16 b		

Sampling

Past Year Questions

PYQ June 24

1) Which sampling is based on the discretion of the sampler?
   a. Systematic
   b. Multi-stage
   c. Stratified
   d. Purposive

PYQ June 24

2) Which of the following is not a type of sampling?
   a. Probability
   b. Non-probability
   c. Stand-Alone
   d. Mixed

PYQ Sep 24

3) What is the purpose of stratified random sampling?
   a. To divide the population into subgroups and then randomly sample from each subgroup
   b. To ensure that every individual in the population has an equal chance of being selected
   c. To select individuals based on their availability and convenience
   d. To select a fixed percentage of the population without any specific criteria

Answer Key

1 d 2 c 3 a

Sampling

Mock Test Paper Questions

MTP June 24 Series II

(1) If from a population with 25 members, a random sample without replacement of 2 members is taken, the number of all such samples is
   a. 300
   b. 625
   c. 50
   d. 600

MTP Sep 24 Series I

(2) Which of the following is not a type of sampling?
   a. Probability
   b. Non- Probability
   c. Stand-alone
   d. Mixed

Answer Key

1 a 2 c