

SSR DEGREE AND PG COLLEGE(Autonomous)
Department of Economics
B.A. II YEAR – Statistics for Economics Sem-III (INTERNAL–I)

Part A: Multiple Choice Questions (20)

1. Statistics is mainly concerned with the collection, classification, presentation, analysis and _____ of data.

- a) Destruction
- b) Interpretation
- c) Rejection
- d) Calculation

Answer: b) Interpretation

2. The word Statistics is derived from the Latin word _____.

- a) Status
- b) Statista
- c) State
- d) Statistic

Answer: a) Status

3. Data collected for the first time by an investigator is called _____ data.

- a) Secondary
- b) Primary
- c) Classified
- d) Grouped

Answer: b) Primary

4. Data collected from books, reports and government publications is called _____ data.

- a) Primary
- b) Secondary

- c) Raw
- d) Personal

Answer: b) Secondary

5. The arithmetic average of a set of observations is called _____.

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

Answer: c) Mean

6. The middle value of an arranged series is called _____.

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

Answer: b) Median

7. The value that occurs most frequently in a series is called _____.

- a) Mean
- b) Median
- c) Mode
- d) Quartile

Answer: c) Mode

8. Which measure of central tendency is most affected by extreme values?

- a) Mean
- b) Median
- c) Mode
- d) Quartile

Answer: a) Mean

9. Which measure of central tendency is suitable for qualitative data?

- a) Mean
- b) Median
- c) Mode
- d) Standard deviation

Answer: c) Mode

10. The simplest measure of dispersion is _____.

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

Answer: b) Range

11. The difference between the largest and smallest values is called _____.

- a) Variance
- b) Range
- c) Mean deviation
- d) Standard deviation

Answer: b) Range

12. Standard deviation is denoted by the symbol _____.

- a) μ
- b) σ
- c) M
- d) R

Answer: b) σ

13. Variance is the square of _____.

- a) Mean

- b) Median
- c) Standard deviation
- d) Range

Answer: c) Standard deviation

14. A measure that shows the spread or variability of data is called _____.

- a) Central tendency
- b) Dispersion
- c) Classification
- d) Tabulation

Answer: b) Dispersion

15. The value which divides an ordered data set into two equal parts is _____.

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

Answer: b) Median

16. Which measure of central tendency is known as a positional average?

- a) Mean
- b) Median
- c) Mode
- d) Variance

Answer: b) Median

17. The sum of deviations from the arithmetic mean is always _____.

- a) One
- b) Zero
- c) Negative
- d) Positive

Answer: b) Zero

18. Which of the following is a measure of dispersion?

- a) Mean**
- b) Median**
- c) Standard deviation**
- d) Mode**

Answer: c) Standard deviation

19. The coefficient of variation is used to measure _____ variability.

- a) Absolute**
- b) Relative**
- c) Average**
- d) Central**

Answer: b) Relative

20. Statistics is useful in economics for _____.

- a) Economic analysis**
- b) Decision-making**
- c) Forecasting**
- d) All of the above**

Answer: d) All of the above

Part B: Fill in the Blanks (20)

1. Statistics deals with the collection, classification, presentation, analysis and _____ of data.

Answer: Interpretation

2. The Latin word from which the term Statistics is derived is _____.

Answer: Status

3. Data collected directly from the source is called _____ data.

Answer: Primary

4. Data obtained from existing sources is called _____ data.

Answer: Secondary

5. The average obtained by dividing the sum of observations by the number of observations is called _____.

Answer: Arithmetic Mean

6. The middle value of an arranged series is called _____.

Answer: Median

7. The most frequently occurring value is called _____.

Answer: Mode

8. The difference between the largest and smallest observations is called _____.

Answer: Range

9. The study of the spread of data is known as _____.

Answer: Dispersion

10. Standard deviation is a measure of _____.

Answer: Dispersion

11. The square of standard deviation is called _____.

Answer: Variance

12. The arithmetic mean is commonly represented by the symbol _____.

Answer: $\bar{X}$ (X-bar)

13. The median divides a series into _____ equal parts.

Answer: Two

14. The mode is the value that occurs most _____.

Answer: Frequently

15. The range is calculated as the largest value minus the _____ value.

Answer: Smallest

16. Mean, median and mode are measures of _____ tendency.

Answer: Central

17. Range, variance and standard deviation are measures of _____.

Answer: Dispersion

18. The coefficient of variation is a measure of _____ dispersion.

Answer: Relative

19. Statistics plays an important role in economic _____ and policy-making.

Answer: Planning

20. The first step in a statistical investigation is the _____ of data.

Answer: Collection

Part C: Descriptive Questions with Answers

1. Define Statistics. Explain its meaning, nature, scope and importance in Economics.

Answer:

Meaning of Statistics:

Statistics is the science of collecting, classifying, presenting, analyzing and interpreting numerical data.

Definition:

According to Croxton and Cowden, "Statistics may be defined as a science of collection, presentation, analysis and interpretation of numerical data."

Nature of Statistics:

- 1. It deals with numerical data.**
- 2. It studies groups of facts.**
- 3. It helps in comparison.**
- 4. It is useful for analysis and interpretation.**
- 5. It helps in decision-making.**

Scope of Statistics:

Collection of data

Classification of data

Tabulation

Presentation through tables and diagrams

Analysis of data

Interpretation of results

Importance in Economics:

- 1. It helps to study economic problems.**
- 2. It helps in economic planning.**
- 3. It helps in forecasting future trends.**
- 4. It helps the government in policy-making.**
- 5. It helps in studying national income, unemployment, inflation and poverty.**

Conclusion:

Statistics is an important tool for economists, governments, businesses and researchers.

2. Explain the basic concepts of Statistics.

Answer:

The important basic concepts of Statistics are:

1. Data:

Data means facts and figures collected for a particular purpose.

2. Primary Data:

Data collected directly by the investigator for the first time is called primary data.

Example: Data collected through personal interviews or questionnaires.

3. Secondary Data:

Data already collected by another person or organization is called secondary data.

Example: Census reports, government publications and books.

4. Population:

The complete set of all individuals or items under study is called population.

5. Sample:

A small part selected from the population for study is called a sample.

6. Variable:

A characteristic that can take different values is called a variable.

Example: Age, income, height and weight.

7. Frequency:

The number of times a particular value occurs is called frequency.

Conclusion:

These basic concepts help in understanding and conducting statistical investigations.

3. What are Measures of Central Tendency? Explain Mean, Median and Mode.

Answer:

Measures of Central Tendency are statistical measures that represent the central or typical value of a data set.

The three main measures are:

1. Arithmetic Mean:

Arithmetic Mean is obtained by dividing the sum of all observations by the number of observations.

Formula:

Mean = Sum of all observations ÷ Number of observations

Merits:

Easy to understand.

Easy to calculate.

Based on all observations.

Useful for further statistical analysis.

Demerits:

Affected by extreme values.

Not suitable for qualitative data.

Difficult to calculate for open-ended classes.

2. Median:

Median is the middle value of a series when the observations are arranged in ascending or descending order.

Merits:

Easy to understand.

Not affected by extreme values.

Suitable for skewed data.

Demerits:

Not based on all observations.

Not suitable for further mathematical calculations.

3. Mode:

Mode is the value that occurs most frequently in a data set.

Merits:

Easy to understand.

Easy to identify.

Not affected by extreme values.

Useful for qualitative data.

Demerits:

It may not be clearly defined.

It is not based on all observations.

It is not suitable for further mathematical calculations.

4. What is Dispersion? Explain its different measures.

Answer:

Dispersion means the extent to which the values in a data set are spread around the central value.

The important measures of dispersion are:

1. Range:

Range is the difference between the largest and smallest values.

Formula:

Range = Largest Value – Smallest Value

2. Mean Deviation:

Mean Deviation is the average of the absolute deviations of observations from a central value such as mean or median.

3. Variance:

Variance is the average of the squared deviations from the mean.

4. Standard Deviation:

Standard Deviation is the positive square root of variance. It shows how much the observations vary from the mean.

Importance of Dispersion:

It measures the variability of data.

It helps to compare two or more data sets.

It shows the reliability of an average.

It is useful in economic and business analysis.

Conclusion:

Measures of dispersion help us understand whether the data values are closely grouped or widely scattered.

5. Explain the importance of Statistics in Economics.

Answer:

Statistics plays a very important role in Economics. It helps economists and governments to understand economic conditions and make better decisions.

Importance:**1. Economic Planning:**

Statistics helps the government prepare economic plans and development programmes.

2. National Income:

Statistics is used to estimate national income and per capita income.

3. Study of Unemployment:

Statistical data helps measure the level of unemployment.

4. Study of Inflation:

Statistics helps measure changes in prices and inflation.

5. Policy Making:

Governments use statistical information to formulate economic policies.

6. Forecasting:

Statistics helps predict future economic trends.

7. Comparison:

Statistics helps compare economic conditions between different periods, regions and countries.

8. Business Decisions:

Businesses use statistics for market research, demand forecasting and decision-making.

9. Measures of Central Tendency:

Mean, median and mode help represent large amounts of data by a single value.

10. Measures of Dispersion:

Dispersion measures help understand the variation and stability of economic data.

Conclusion:

Statistics is an essential tool in Economics because it helps in analysis, planning, forecasting and decision-making.