Vivekananda College of Arts and Science for Women, Sirkali.

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Subject Title : Business Tools for Decision Making **Semester : IV**

Subject Code : 16CCCCM8

PART – A (2 marks Question and Answers)

UNIT I

1. Define Statistics.

Statistics may be defined as the science of collection, presentation, analysis and interpretation of numerical data.

2. What is Classification ?

Classification is the process of arranging data into groups or classes according to the common characteristics possessed by the individual items.

3. What is Tabulation ?

Tabulation is the process of arranging data systematically in rows and columns of a table.

4. What is a Diagram ?

Diagrams are various geometrical shapes such as bars, circles, etc. They are more attractive and easier to understand.

5. What is Measures of Central Tendency ?

The tendency to concentrate certain values, usually somewhere in the centre of the distribution is called as Measures of central tendency.

6. Define Arithmetic Mean.

Arithmetic Mean is the total of the values of the items divided by their number.

7. Define Median.

Median is the value of the middle most item when all the items are in the order of magnitude.

8. Define Mode.

Mode is the value which has the greatest frequency density.

9. Define Geometric Mean

Geometric mean of N values is the N^{th} root of the product of the N values.

10. Define Harmonic Mean

Harmonic Mean is the reciprocal of the mean of the reciprocals of the values.

UNIT II

1.What is Dispersion ?

Dispersion is the measure of the variation of the items.

2.What are the measures of Dispersion ?

The various measures of Dispersion are Range, Quartile Deviation, Mean Deviation, Standard Deviation and Variance.

3. Write the importance of measures of Dispersion.

1. Measures of Dispersion provide a basis for the control of variability.

2. They help to compare two or more sets of data with regard to their variability.

4. What is Range ?

Range is the difference between the greatest and the smallest of the values.

5. Define Quartile Deviation ?

Quartile Deviation is the half of the difference between the first and the third quartiles.

6. Define Mean Deviation ?

Mean Deviation is the arithmetic mean of the absolute deviations of the values about their arithmetic mean or median or mode.

7. Define Standard Deviation ?

Standard Deviation is the root mean square deviation of the values from their arithmetic mean.

8. What is Variance ?

Variance is the mean square deviation of the values from their arithmetic mean.

9. Define Skewness.

Skewness is the degree of asymmetry, or departure from symmetry of a distribution.

10. What is coefficient of variation ?

The relative measure of dispersion is coefficient of variation. The variations in two or more series are compared on the basis of a relative measure of dispersion.

UNIT III

1. What is correlation ?

Correlation refers to the relationship between the variables.

2. What is positive Correlation ?

When the values of two variables change in the same direction there is positive correlation between the two variables.

3. What is negative correlation ?

When the values of two variables change in the opposite direction there is negative correlation between the two variables.

4. What is partial correlation ?

When more than two variables are considered, the correlation between two of them when all other variables are held constant is called partial correlation.

5. What is multiple correlation ?

When more than two variables are considered, the correlation between one of them and its estimate based on the group consisting of the other variables is called multiple correlation.

6. What is linear correlation ?

When all the points plotted on a graph lie exactly on a line or scattered around a line, there is linear correlation between the two variables.

7. What is non-linear correlation ?

When all the points plotted on a graph lie exactly on a curve or scattered around a curve, there is non-linear correlation between the two variables.

8. What is regression ?

Regression means returning or going back.

9. Write any two uses of regression analysis.

1. Regression analysis is used in Statistics and other disciplines which helps in finding the relation between variables.

2. The value of the dependent variable is estimated corresponding to any value of the independent variable.

10. What is regression line ?

The line which gives the average relationship between two variables is known as the regression line.

UNIT IV

1.What is time series ?

A time series is a collection of observations made sequentially in time.

2. Write any two uses of time series.

1. The analysis of time series helps to know the past conditions.

2. It helps to predict reliably.

3. What is method of moving average ?

The method of moving averages is one of the most useful methods of estimating trend. The moving totals are found and they are divided by appropriate number to get the moving average.

4. What is Interpolation ?

Interpolation consists in reading a value which lies between two extreme points.

5. What is Extrapolation ?

Extrapolation means reading a value that lies outside the two extreme points.

6. Write the uses of Interpolation.

1. Interpolation is of great help in estimating a missing or lost data of the past.

2. Interpolation ensures continuity of information pertaining to the past.

7. What are the assumptions of Interpolation ?

1. There are no sudden jumps or fall in the series from period to period.

2. A reasonably good number of observations should be available.

8. What do you mean by method of least squares ?

Method of least squares is a mathematical method and with the help of which a trend line is fitted to the data. The line obtained by this method is known as the line of 'best fit'

9. Explain Newton's Advancing Difference method.

Newton's Advancing Difference method is applicable in those cases where the independent variable increases by equal intervals.

10. Explain Newton's Divided Difference method.

Newton's Divided Difference method is applicable in those cases where the independent variable advances by unequal intervals.

UNIT V

1.What is an index number ?

An index number is a statistical measure designed to show changes in a variable or a group of related variables with respect to time, geographic location or other characteristics such as income, profession, etc.

2. Explain price index number.

A price index number is the percentage of change in the price of one commodity or one group of commodities in the current year compared with the base year.

3. Explain Quantity index number.

A quantity index number is the percentage of change in the quantity of one commodity or one group of commodities in the current year compared with the base year.

4. What are the uses of index numbers ?

1. Index numbers provide scope for comparisons.

2. Index numbers are Economic Barometers.

5. What are the characteristics of Index numbers ?

1. Index numbers are a special type of averages.

2. Index numbers indicate the percentage of change.

6. What is cost of living index number ?

Cost of living index number shows the impact of changes in the prices of a number of commodities and services on a particular class of people in the current year in comparison with the base year.

7. Write the uses of Cost of living index number.

1. Cost of living index numbers are the indicators of changes in real wages

2. Decisions on dearness allowance are based on the cost of living indices.

8. Explain Time reversal test.

The formula for calculating the index number should be such that it will give the same ratio between one point of comparison and the other no matter which of the two is taken as base. $P_{01} \times P_{10} = 1$.

9. What is Aggregate Expenditure method ?

On the basis of base year quantities, total expenditures in current year and base year are calculated and the percentage of change is worked out.

10. What is Family Budget Method ?

Weights are determined on the basis of the family budget enquiry wherein the relative importance of the items within a group and the relative importance of a group to the total are known.