

## Solution of Question Bank

# BACHELOR OF COMMERCE (COMPUTER APPLICATION ) (BCCA)

Course : BCCA-II (Semester – IV)

Paper : 4T1 – Mathematics

---

### Part-A

(Each question carries Two marks)

### UNIT - IV

1. What is Skewness ?

Ans: Skewness means lack of symmetry or asymmetry of distribution of a random variable. Skewness gives an idea about the shape of curve which we can draw with the help of the given data.

2. What is Bivariate data?

Ans: The word 'bivariate' is used to describe situations in which two characters are measured on each individual or item, the characters being represented by two variables. Statistical data relating to the simultaneous measurement of two variables are called bivariate data.

3. What is Kurtosis?

Ans: Measurement of the "peakedness" of the probability distribution of a real-valued random variable is known as kurtosis. Kurtosis is a measure which tells how much 'peaked' or 'flat' the data is in relation to a normal distribution.

4. What is correlation?

Ans: Correlation is a statistical tool used to measure the relationship between two sets of variables and express each in a precise manner.

5. What is Regression?

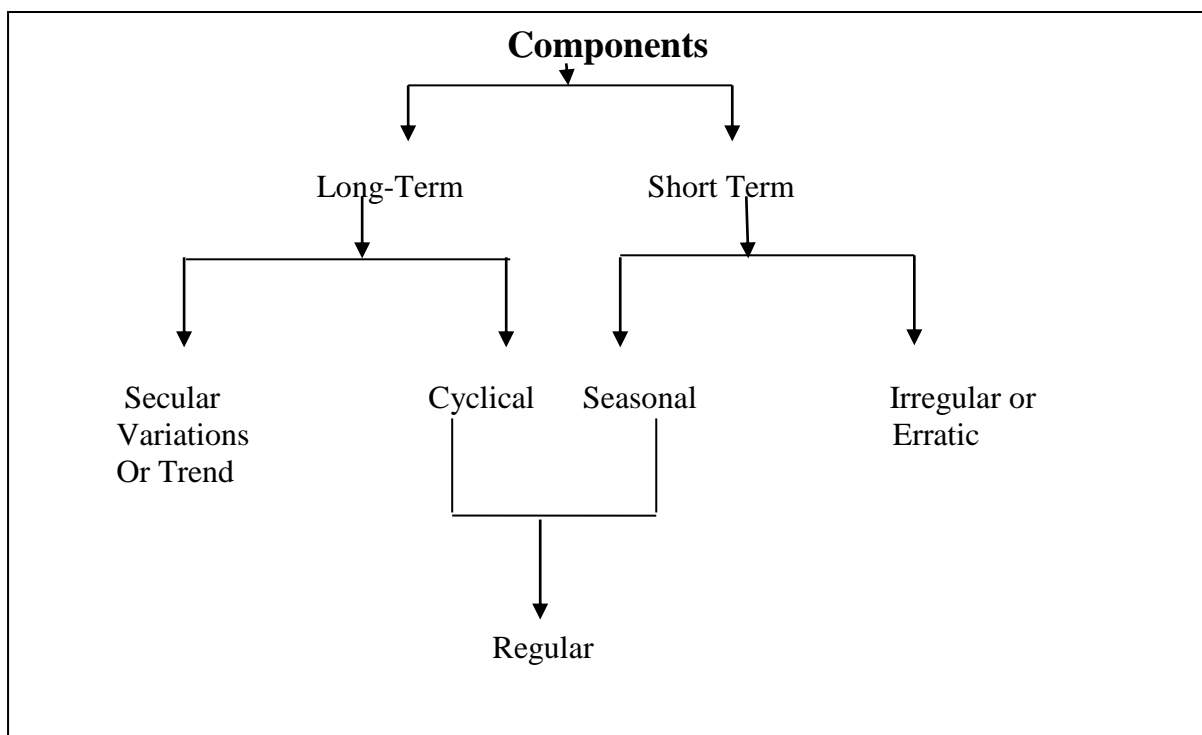
Ans: Regression analysis is a statistical tool used to calculate a continuous dependent variable from various independent variables and is commonly used for prediction and forecasting.

6. What is Covariance?

Ans: Covariance is used in statistics to describe the linear relationship between two variables. Covariance provides a measure of the strength of the correlation between two or more sets of random variables.

7. What are the components of time series analysis?

Ans: The factors which affect the statistical data recording over a long time are classified on the basis of nature of the factors. The factors are classified as follows:



8. Define Probability.

Ans: Probability is the mode of expression of knowledge or belief whether the event has occurred or will occur. The conclusions are drawn regarding the probability of potential events and the mechanics of complex systems are hidden.

9. What is time series?

Ans: When statistical data is arranged according to the time of occurrence or in a chronological order, then it is known as time series. For eg. The annual production of steel in India from last 10 years.

10. What is Moments?

Ans: Moment is a familiar mechanical term for the measure of a force with reference to its tendency to produce rotation. The strength of this tendency depends on the amount of the force and the distance from the origin of the point at which the force is exerted.

11. What is Conditional Probability?

Ans: Conditional Probability analysis involves estimating the probability of occurrence of a particular event (A) as conditional upon the occurrence of a particular event (B). This probability is usually written as  $P(A/B)$  and is read “the probability of A given B”.

12. What is Rank Correlation?

Ans: Rank Correlation also called as Spearman’s Rank Correlation named after Charles Edward Spearman and denoted by  $R$ , is a technique to find the correlation between the ranks of two series. This technique is used when value of variable cannot be calculated quantitatively.

$$R = 1 - \frac{6\sum D^2}{N(N^2 - 1)}$$

13. What is Independent event?

Ans: Events are said to be independent, if the occurrence of one of them does not affect the occurrence of any of the other. For eg. In tossing two coins, the occurrence of head on first coin does not affect the occurrence or occurrence of head on the second coin.

14. What is Curve Fitting?

Ans: Field data is often accompanied by noise. Even though all control parameters (independent variables) remain constant, the resultant outcomes (dependent variables) vary. A process of quantitatively estimating the trend of the outcomes is known as curve fitting.

15. What is Parabola?

Ans: Parabola is the geometrical representation of an equation of the form  $y = a + bx + cx^2$

Where a, b, c are constants ( the term in  $x^2$  must be present, i.e.,  $c \neq 0$ ). The parabola is a special type of curve. The curved path followed by a flying projectile is a parabola. E.g. a cricket ball thrown from a distance.

16. What is Locus?

Ans: When a point moves in such a way that it satisfies geometrical conditions, the path traced out by a point is called locus of a point.

17. What is Scatter Diagram?

Ans: Graphical presentation of the relationship between two variables calculated on the same set of individual is known as scatter diagram. It is a dot chart specially used to show the correlation.