

Dr. Babasaheb Ambedkar Open University

Term End Examination July – 2026

Course : BSCIT
Subject Code : BSCITRMU-104
Subject Name : Introduction to Statistics

Date : 19/07/2026
Time : 11:30am to 01:45pm
Duration : 02.15 Hours
Max. Marks : 70

Section A

Answer the following (Attempt any three)

(30)

1. Determine the mean, median, and mode from the following statistical distribution.

Class interval	6.5-7.5	7.5-8.5	8.5-9.5	9.5-10.5	10.5-11.5	11.5-12.5	12.5-13.5
Frequency	5	12	25	48	32	6	1

2. Explain the correlation coefficient in detail.
3. What is a regression line? Why can we have two lines of regression? Explain the relationship between lines of regression and the correlation coefficient.
4. Discuss the Poisson distribution in detail.
5. How many types of simple Index Numbers? Explain it.

Section B

Answer the following (Attempt any four)

(20)

1. Essentials of a Good Measure of Dispersion
2. Karl Pearson's Co-efficient of Skewness
3. From a pack of 52 cards two are drawn at random; find the chance that one is a king and the other a queen.
4. Write a short note on Baye's Theorem.
5. Write a short note on Binominal Distribution.
6. Write the importance of Time series Analysis.

Section C

Part – A (Multiple Choice Questions)

(10)

1. Which of the following is a measure of central tendency?
A Range B Variance
C Arithmetic Mean D Standard Deviation
2. Which statistic measures the spread of data?
A Mean B Median
C Dispersion D Mode
3. In a positively skewed distribution:
A Mean < Median < Mode B Mean > Median > Mode
C Mean = Median = Mode D Mode > Mean > Median
4. The coefficient of correlation is denoted by:
A μ B σ
C r D β
5. The variable whose value is predicted is called the:
A Independent variable B Dependent variable
C Constant variable D Random variable
6. Which of the following is an exhaustive event when tossing a coin?
A Head only B Tail only
C Head and Tail together D Head or Tail

- 7 Which theorem relates prior and posterior probabilities?
 A Addition Theorem B Bayes' Theorem
 C Multiplication Theorem D Binomial Theorem
- 8 The two possible outcomes in a Binomial experiment are generally called:
 A High and Low B Large and Small
 C Success and Failure D Even and Odd
- 9 A good base year should be:
 A An abnormal year B A year of inflation
 C A normal year D Any random year
- 10 Which of the following is called the "Ideal Index"?
 A Laspeyres Index B Paasche Index
 C Fisher's Index D Marshall-Edgeworth Index

Part – B (Do as Directed)

(10)

True/False

- 1 Variance is related to Standard Deviation.
- 2 Coefficient of Variation is usually expressed as a percentage.
- 3 Skewness and kurtosis are measures of the shape of a distribution.
- 4 Correlation always establishes a cause-and-effect relationship.
- 5 If one regression coefficient is positive and the other is negative, it is possible.
- 6 Complementary events are mutually exclusive.
- 7 The sum of the probabilities of an event and its complement is 1.
- 8 If $p = q$, then both are equal to 0.5.
- 9 Index Numbers always provide exact future predictions.
- 10 Consumer Price Index is also called the Cost of Living Index.
