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[Roll No.]

BBA-302

**BBA IIIrd Semester
Examination Dec., 2023**

BUSINESS STATISTICS

Time : 2 Hours]

[Max. Marks : 70

*Note :- This paper is of Seventy (70) marks divided into two (02) Sections 'A' and 'B'. Attempt the questions contained in these Sections according to the detailed instructions given there in. **Candidates should limit their answers to the questions on the given answer sheet. No additional (B) answer sheet will be issued.***

Section-A

(Long Answer Type Questions) 2×19=38

Note :- Section 'A' contains Five (05) Long-answer type questions of Nineteen (19) marks each. Learners are required to answer any two (02) questions only.

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(1)

P.T.O.

1. Calculate the Arithmetic Mean, Median, Mode, for the following data set representing the monthly sales (in units) of a product: 120, 150, 180, 210, 240. Discuss the characteristics and applications of each measure.
2. Given the following scores of two sets of students in a test, calculate the Spearman's Rank correlation coefficient and interpret its value:

Student Set B Scores	Student Set A Scores
75	80
85	90
70	5
90	95
80	85

3. Discuss the various methods used for constructing simple and weighted index numbers in Explain business the tests for an ideal index number and its limitations.
4. What are measure of control tendency ? Objectives of control tendency.
5. Critically analyze the concept of 'Coefficient of Variation' and its application in comparing variability across different datasets. Discuss situations where this measure is particularly useful and its limitations ?

Section–B

(Short Answer Type Questions) 4×8=32

Note :- Section 'B' contains Eight (08) Short-answer type questions of Eight (08) marks each. Learners are required to answer any *four* (04) questions only.

1. Explain the significance and role of diagrams and graphs in the presentation of statistical data.
2. Analyze the following time series data to estimate the Secular Trend using the method of least squares :

Year	Sales (in thousands)
2010	50
2011	55
2012	60
2013	65
2014	70

3. Define and explain the differences between Positive and Negative Correlation, as well as Simple, Partial, and Multiple Correlation.
4. Compute the Range, Quartile Deviation, Mean Deviation, and Standard Deviation for the following distribution of weekly hours spent on studying by a group of students: 10, 12, 14, 16, 18, 20.

5. Describe the role of tabulation in statistical analysis and the types of tables commonly used.
6. Calculate and interpret the Coefficient of Variation and Skewness for the following dataset :
2, 4, 6, 8, 10.
7. Explain the concept of Measures of Dispersion and its importance in statistical analysis.
8. Given the following data on two variables, calculate the Pearson correlation coefficient and discuss its significance :

Variable X	Variable Y
10	12
20	24
30	36
40	48
50	60
