BBA 3rd Semester (Honours) Examination, 2019

Subject: Business Statistics

Paper: BBA-3.2

Time: 2 Hours **Full Marks: 40**

The figures in the margin indicate full marks.
Candidates are required to give their answers in their own words as far as practicable.

Group - A

Answer any four questions. 5×4=20

1. What is the Harmonic Mean of 8, 1 and 6 weighted 3, 2 and 5 respectively?
2. The mean of 5 observations is 4.4 and the variance is 8.24. If three of the five observations are 1, 2 and 6, find the values of the other two.
3. When is mode considered to be the most suitable measure of central tendency? Explain with suitable example.
4. Prove that the correlation coefficient varies between +1 and –1.
5. State the properties of linear regression.
6. Explain the various uses of seasonal index in time series analysis.

Group - B

Answer any two questions. 10×2=20

7. (a) The mean and median of a moderately skewed distribution are 42.2 and 41.9 respectively. Find the mode of the distribution.

   (b) The mean and standard deviation of 200 items are found to be 60 and 20 respectively. If at the time of calculations, two items were wrongly recorded as 3 and 67 instead of 13 and 17, find the correct mean and standard deviation.

8. (a) The arithmetic mean of two observations is 127.5 and their geometric mean is 60. Find the two observations.

   (b) Calculate Karl Pearson's coefficient of skewness from the following data:

Size:	1	2	3	4	5	6	7
Frequency:	10	18	30	25	12	3	2

9. (a) Calculate mean deviation from median for the following data:

Class Intervals:	20-25	25-30	30-40	40-45	45-50	50-55	55-60	60-70	70-80
Frequency:	6	12	17	30	10	10	8	5	2

   (b) From the following table, find the missing values and calculate the coefficient of correlation by Karl Pearson's method:

X:	6	2	10	4	?
Y:	9	11	?	8	7

   Arithmetic means of X and Y series are 6 and 8 respectively.

10. (a) What is Spearman's rank correlation coefficient? Discuss its usefulness.

    (b) Explain the factor reversal test in the theory of index numbers.