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D – 5839

Reg. No. :

Name :

First Semester B.B.A. Degree Examination, March 2018
(Career Related First Degree Programme under CBCSS)
Complementary Course
BM 1131 – STATISTICS FOR BUSINESS DECISIONS
(2017 Admn.)

Time : 3 Hours

Max. Marks : 80

SECTION – A

Answer **all** questions. **Each** question carries **1** mark.

1. The item which divides a data series into two equal parts is called :
2. Lorenz curve is useful in analysing :
3. Grouping and Analysis Table is used to compute :
4. The relative measure of Standard Deviation is :
5. Coefficient of skewness using the values of mean and mode is suggested by :
6. The value of skewness coefficient in symmetrical distribution is :
7. The relationship between two quantitative variable is called :
8. The sum of deviations of variables from its mean is equal to :
9. Overall or persistent upward or downward movement in business variables over the period is called :
10. Geometric mean of Laspeyre's and Paache indices is equal to : **(10×1=10 Marks)**



SECTION – B

Answer **any eight** questions. **Each** question carries **2** marks.

11. Define 'average'.
12. What is positional average ?
13. Find median when mean is 50 and mode is 40.
14. How does coefficient of variation differ from S.D. in assessing variability of data ?
15. In a distribution mean = 65, median = 70, and coefficient of skewness = -0.60 . What is the value of S.D. ?
16. Write any two properties of 'correlation coefficient'.
17. Distinguish between positive and negative correlation.
18. What is meant by coefficient of determination ?
19. Mention any two problems in construction of index numbers.
20. Cite any two specific causes for the 'seasonal variations' of time series data.
21. Define 'Splicing'.
22. List out the tests that determine the idealness of 'Index Numbers'.

(8×2=16 Marks)

SECTION – C

Answer **any six** questions. **Each** question carries **4** marks.

23. Briefly describe the role and importance of 'averages' in statistical analysis.
24. Write a brief note on the main properties of an 'ideal measure of dispersion'.
25. Discuss the importance of scatter diagram in analysis of relationship.



26. Describe the components of 'time series'.
27. What is meant by Cost of Living Index Number ? How does it find useful in business ?
28. Find standard deviation and variance of the following values.
- | | | | | | |
|----------------|--------|---------|---------|---------|---------|
| Class : | 0 – 10 | 10 – 20 | 20 – 30 | 30 – 40 | 40 – 50 |
| F : | 5 | 10 | 15 | 10 | 5 |
29. For a moderately skewed data, the arithmetic mean is 200, the coefficient of variation is 40 percent and Karl Pearson's coefficient of skewness is 0.3. Find the mode and the median.
30. Find out coefficient of correlation based on the following data :
- | | | | | | | | |
|------------------------|-----|-----|----|-----|-----|----|----|
| Sales : | 120 | 100 | 90 | 120 | 110 | 70 | 90 |
| Advertisement : | 60 | 45 | 40 | 65 | 55 | 45 | 40 |
31. Fit a straight line trend to the following data on the demand for motor fuel.
- | | | | | | |
|---|------|------|------|------|------|
| Year : | 2006 | 2007 | 2008 | 2009 | 2010 |
| Monthly average Demand (in Million tons) : | 90 | 96 | 100 | 104 | 110 |

(6×4=24 Marks)

SECTION – D

Answer **any two** questions. **Each** question carries **15** marks.

32. The following data relates to the performance of two sales executives in terms of sales (in 000's) they have made during the last 6 months.

Executive A :	25	24	30	32	26	23
Executive B :	20	22	21	25	30	22

Comment on :

- a) Who is the better performer ?
- b) Who is more consistent ?



33. The following results relates to price and demand conditions of a product during the last 10 years.

	Mean	S.D.	Coefficient of correlation
Price	Rs. 25	Rs. 5	
Demand (in thousands)	100 units	15 units	+0.96

- Obtain the two regression equations
 - Estimate the demand if price is Rs. 30
 - What is the value coefficient of correlation ?
34. The following data relates to marks obtained by 10 students in tests conducted in two subjects, English and Hindi. Compute rank correlation coefficient of the marks and find out whether the performance of the students in two subjects are related :

Marks in English :	45	32	35	44	35	45	35	38	24	46
Marks in Hindi :	48	48	40	39	32	42	38	41	28	36

35. Explain in detail the meaning, characteristics and uses of index numbers. Discuss various methods of constructing price index numbers.

(2×15=30 Marks)