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F - 2107

Reg. No. :

Name :

First Semester B.B.A. Degree Examination, November 2018
(Career Related First Degree Programme Under CBCSS)
BM 1131 : STATISTICS FOR BUSINESS DECISIONS
(2017 Admission Onwards)

Time : 3 Hours

Max. Marks : 80

SECTION - A

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

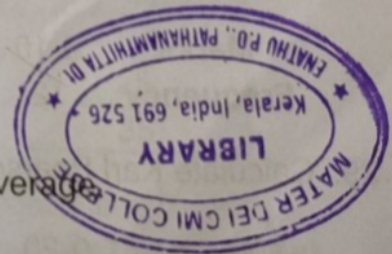
1. Name of the average that can be computed using 'Ogive curves'
2. Amount of deviation present in the data 10, 10, 10, 10, 10 is
3. The square of Standard Deviation is called
4. Who has suggested the computation of skewness using the values of quartiles ?
5. If the curve of a distribution is peaked than normal curve, it is called
6. The value of correlation coefficient between two independent variables is
7. Geometric mean of two regression coefficients gives
8. If one of the regression coefficients is greater than one, other should be
9. The erratic or residual fluctuations in a time series is called
10. The sum of squares of deviation of variables from its arithmetic average should be

(10×1=10 Marks)

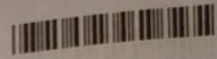
SECTION - B

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

11. Distinguish between computed average and positional average
12. Write any two uses of Geometric mean.
13. Find mode when mean is 30 and median is 32.



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14. What is meant by relative measure of dispersion ?
15. Define coefficient of variation. Write its use.
16. Calculate SD and coefficient of variation : 41, 43, 44, 45, 47, 49, 50, 56, 60.
17. How do you distinguish a symmetrical distribution from a skewed distribution ?
18. Define 'Spurious correlation'.
19. Distinguish between 'Linear and non linear' correlation.
20. Mention any two properties of 'regression coefficient'.
21. What is coefficient of alienation ?
22. What is meant by deflating of indices ?

(8×2=16 Marks)

SECTION - C

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

23. Examine various uses and applications of statistics in business.
24. Give the mathematical expression of four central moments. Which descriptive statistics is described by μ_2 ?
25. Briefly describe the usefulness of scatter diagram in analysis of relationship.
26. Write a brief note on the importance of 'Time reversal' and 'Factor reversal' tests in assessing the appropriateness of index numbers.
27. Find out the rank correlation coefficient based on the following data :

A	90	81	80	93	95	72	91
B	75	85	78	77	85	80	83

28. Using Ogive curves find out the median of the following data :

Marks	0-10	10-20	20-30	30-40	40-50
Frequency	12	10	8	15	5

29. Calculate Karl Pearson's coefficient of skewness of the following data :

Marks	0-20	20-40	40-60	60-80	80-100
Frequency	10	10	15	10	5





30. Obtain the values of two regression coefficients from the following data :

$$N = 25 \quad \sum X = 125 \quad \sum Y = 100 \quad \sum XY = 550 \quad \sum x^2 = 650 \quad \sum y^2 = 575$$

31. The score of 2 batsmen A, B are as follows. With the help of an appropriate statistical tool, examine which of the two batsmen is more consistent ?

Batsman A	10	12	80	70	46	50	0	4
Batsman B	8	90	7	100	25	42	10	48

(6×4=24 Marks)

SECTION - D

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

32. Based on the following data find : (a) the two regression equations (b) the coefficient of correlation between marks in English and Maths (c) the most likely marks in English when the marks in Maths are 50 :

Marks in English:	35	38	25	42	31	46	29	38	24	46
Marks in Maths:	48	46	40	42	32	42	38	40	28	36

33. Fit a straight line trend by the method of least squares and estimate the value of sales in 2009.

Year:	2000	2001	2002	2003	2004	2005	2006	2007
Sales (lakhs):	380	400	650	720	690	600	870	930

34. Construct index numbers using Laspeyre's Paasche's and Fisher's formula :

Commodity	2010		2011	
	Price	Quantity	Price	Quantity
A	10	50	18	56
B	6	100	10	120
C	8	60	14	60
D	14	30	20	25
E	12	40	18	35

35. What is time series analysis ? How it is useful in business forecasting ? Also discuss various methods used for analysing 'Secular Trend'. (2×15=30 Marks)

