B.B. A. DEGREE END SEMESTER EXAMINATION - MARCH/APRIL 2019

SEMESTER – 2: BACHELOR OF BUSINESS ADMINISTRATION (BBA) (CORE COURSE)

COURSE: **16U2CRBBA5: BUSINESS STATISTICS**

(Common for Regular 2018/Supplementary - Improvement 2017/2016 Admission)

Time: Three Hours   Max. Marks: 75

Use of scientific calculators and statistical tables are permitted

SECTION A

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

1. Define Correlation.
2. What do you mean by quartile deviation?
3. Distinguish between dependent and independent variables.
4. What is line of best fit?
5. What is a measure of central tendency?
6. What do you mean by tabulation?   (1 x 6 = 6)

SECTION B

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

7. Distinguish between mean deviation and standard deviation.
8. What is secular trend? List the various methods of obtaining secular trend in a time series?
9. Calculate the value of median from the following data:

    Wages (in Rs.)   2600   2650   2580   2690   2660   2606   2640

10. State the difference between correlation and regression analysis.
11. The mean wages of 200 labourers working in a factory running two shifts of 120 and 80 workers respectively is Rs.76. The mean wage of labourers working in the morning shift is Rs.80. Find the mean wage of labourers working in the evening shift.
12. What are the merits and demerits of arithmetic mean?
13. The average weekly wage for a group of 25 persons working in a factory was calculated to be 378.40.   It was later discovered that one figure was misread as 160 instead of the correct value 190. Calculate the correct average wage.
14. What is moving average?
15. Find the range and coefficient of range

    Marks   :   10-20   20-30   30-40   40-50   50-60

    No of students   :   5   10   12   35   18

16. What do you mean by classification of data? Explain various types of classification.

                                                                                                                            (2 x 7 = 14)

SECTION C

*Answer **any five** questions. Each carries **5** marks*

17. Given the following information, find standard deviation.

    n = 10, $\sum X = 60$, $\sum X^2 = 1000$

18. Explain the various components of Time Series

19. Find out the spearman's co- efficient of rank correlation from the following data relating to the ranks assigned by the two judges on certain competition.

Candidates	A	B	C	D	E	F	G	H	I	H
Marks by judge I	26	25	38	37	41	45	60	42	53	57
Marks by judge II	52	25	30	35	48	77	38	43	68	64

20. Find the means of the variables X and Y.

    Regression equation of Y on X: 2Y-X-50 = 0

    Regression equation of X on Y: 3Y-2X-10 = 0

21. Find the Quartile deviation and coefficient of quartile deviation for the data given below:

Age	:	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
No of persons	:	15	30	53	75	100	110	115	125

22. How mode is calculated in continuous series?

23. What are coefficient of variation? What are its uses?

24. What do you mean by measures of dispersion? Explain the different methods used for measuring dispersion. (5 x 5 = 25)

SECTION D

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

25. Define Statistics. Explain the functions and limitation of Statistics.

26. From the following demand schedule write down the regression equations. Also (a) estimate demand when price is Rs 30 and (b) estimate price when demand is 55 kg.

Price (*in Rs.*)	: 20	21	22	23	24	25	26	27
Demand (*in kg*)	: 50	48	48	45	45	44	42	40

27. Fit a straight line trend by the method of least squares in respect of the data given below. Find the trend values and predict the sales for the year 2017

Year	:	2010	2011	2012	2013	2014	2015	2016
Sales (in '000)	:	35	42	44	48	46	49	51

28. Obtain the Standard deviation for the data on scores given below. Also find coefficient of variation.

Score	:	0-10	10-20	20-30	30-40	40-50	50-60	60-70
No of students	:	10	15	25	25	10	10	5

    (15 x 2 = 30)

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