

B. B. A. DEGREE END SEMESTER EXAMINATION MARCH 2017**SEMESTER – 2: CORE COURSE FOR B.B.A.****COURSE: 16U2CRBBA7 – BUSINESS STATISTICS***(For Regular - 2016 Admission)*

Time: Three Hours

Max. Marks: 75

*Use of Scientific calculators and statistical tables permitted.***SECTION A**

Answer all questions. Each carries 1 mark

1. Define Statistics.
2. What do you mean by dispersion?
3. What is meant by perfect correlation?
4. What is line of best fit?
5. What is a measure of central tendency?
6. What is frequency distribution?

(1 x 6 = 6)

SECTION B

Answer any seven questions. Each carries 2 marks

7. Why standard deviation considered to be the best measure of dispersion?
8. List the various methods of obtaining secular trend in a time series?
9. Calculate the value of mean from the following data:
Value (in Rs) : 5 15 25 35 45 55 65 75
Frequency : 15 20 25 24 12 31 71 52
10. What are the limitations of regression?
11. Find quartile deviation from the following data:
Size : 10 20 30 40 50 60 70 80
Frequency : 15 30 53 75 100 110 115 125
12. What do you mean by classification of data? Explain various types of classification?
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 Rs 200. Calculate the correct average wage.
14. What do you mean by cross tabulation?
15. Find the standard deviation for the following values:
Values : 5, 8, 7, 11, 9, 10, 8, 2, 4, 6
16. Write a note on probable error.

(2 x 7 = 14)

SECTION C

Answer any five questions. Each carries 5 marks

17. Calculate the value of mode from the following data using the formula,

$$\text{Mode} = 3 \text{ Median} - 2 \text{ Mean}$$

Marks (Below):	10	20	30	40	50	60
No of students:	5	15	98	242	367	400

18. Explain the various components of Time Series
19. Calculate Pearson's coefficient of correlation from the following data:
 Advertising expenses (*in '000*): 39, 65, 62, 90, 62, 75, 25, 98, 36, 78
 Sales (*in lakh*) : 47, 53, 58, 86, 62, 68, 60, 91, 51, 84

20. Calculate the trend assuming a five year cycle for the data

Year:	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Values:	90	116	134	100	140	144	136	140	156	150

21. The following are the scores of two batsmen A and B in a series of innings:

Batsmen A	12	115	56	73	7	19	119	36	84	29
Batsmen B	47	12	76	42	4	51	51	48	13	0

Find which of the two batsmen is more consistent. Who is more run getter?

22. Distinguish between simple and weighted averages.
23. What are the merits and demerits of arithmetic mean?
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. Explain the functions and limitation of Statistics.

26. You are given the following data:

	X	Y
Arithmetic mean	36	85
Standard deviation	11	8
Coefficient of correlation = 0.66		

Find the two regression equations and estimate the value of x when y = 75

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 2017

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

28. Calculate mode from the following data

Size of items	:	10-19	20-29	30-39	40-49	50-59	60-69	70-79
No of students:		10	12	18	30	16	6	8

(15 x 2 = 30)