B.Com. (Hons) DEGREE EXAMINATION,NOVEMBER 2018
I Year I Semester
Core Major- Paper III
BUSINESS STATISTICS

Time : 3 Hours **Max.marks :75**

Section A $(10 \times 2 = 20)$ Marks

Answer **ALL** the questions

1. Define statistics?
2. Calculate arithmetic mean from the following

Roll.no	1	2	3	4	5	6
Marks	50	40	80	60	10	90

3. Define sampling.
4. Define probability.
5. List out the advantages of diagrams.
6. Find out the median from the following data: 8,8,12,16,20,25,46,71,82
7. One card is drawn froma pack of 52. What is the chance that it is either a king or a queen.
8. Find out the value of Y, when X=12

Particulars	X	Y
Mean	7.6	14.8
SD	3.6	2.5
R=0.99		

9. List out the uses of Time series.
10. Fit a straight line trend from the following.

Year	1990	1991	1992	1993	1994
Sales	20	25	28	30	27

Section B $(5 \times 5 = 25)$ Marks

Answer any **FIVE** questions

11. What are the features of statistics?
12. There are three events A,B and C. One of which is must and only only one can happen. The odds are 7 to 3 against A, 6to 4 against B, Find out the odds against C.

13. Calculate standard deviation from the following

X	6	7	8	9	10	11	12
F	3	6	9	13	8	5	4

14. Find out the quartile deviation from the following

Roll.No	1	2	3	4	5	6	7
Marks	20	28	40	12	30	15	50

15. Calculate rank correlation from the following

Profits	1	2	3	4	5	6	7	8
Working capital	4	5	7	8	1	2	3	6

16. Obtain two regression equations for the following

X	6	2	10	4	8
Y	9	11	5	8	7

17. Write a note on least squares method.

18. Compute the average seasonal movement for the following series

Year	Q1	Q2	Q3	Q4
1984	3.5	3.9	3.4	3.6
1985	3.5	4.1	3.7	4.0
1986	3.5	3.9	3.7	4.2
1987	4.0	4.6	3.8	4.5
1988	4.1	4.4	4.2	4.5

Section C $(2 \times 15 = 30)$ Marks

PART - A - Case Study - Compulsory Question

19. In 120 throws of a single die, the following distribution of faces were observed.can you say the die is biased?

Face	1	2	3	4	5	6
Frequency	30	25	18	10	22	15

By applying χ^2 test, can you say that the die is biassed.

PART - B

Answer any **ONE** questions

20. Calculate mean , median and mode from the following

Class	0-4	5-9	10-14	15-19	20-24	25-29	30-34
Frequency	4	7	15	18	12	10	3

21. The yield of three varieties of wheat per hectare is given below. Test weather there is a significant diffeence among the average yields of the three varieties.

Plots of land	Varieties of wheat		
1	A1	A2	A3
2	6	5	5
3	7	5	4
4	3	3	3
	8	7	4