B.Com(A&F) DEGREE EXAMINATION,NOVEMBER 2019
I Year I Semester
Business Statistics

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

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

Answer any **TEN** questions

1. Define statistics.
2. Find mean for the following data, 30,41,47,54,23,34,37,51,53 and 47.
3. Find the median from the following data:

X:	10	20	30	40	50	60	70
F :	1	7	15	28	18	10	4

4. Write the formula for Mean deviation about mean for continuous data.
5. Calculate Quartile Deviation for the following data. $Q_1 = 35$,$Q_2 = 50$ and $Q_3 = 75$.
6. Find coefficient of variation if mean=78 and variance=1812.58.
7. Write the components of time series.
8. Write any two merits of free hand curve fitting method.
9. Write the formula for addition theorem on probability.
10. In two tosses of a coin, what is the probability of heads in both?
11. Define simple random sampling.
12. Define hypothesis testing.

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

Answer any **FIVE** questions

13. Construct Histogram, Frequency Polygon and Frequency curve for the following data:

C.I.	0-20	20-40	40-60	60-80	80-100
Freq.	20	50	90	38	15

14. Calculate Harmonic mean from the following data:

Mark(X)	0-10	10-20	20-30	30-40	40-50
No. of stud.	2	7	13	5	3

15. Eight students have obtained the following marks in Accountancy and Economics. Calculate the Rank co-efficient of correlation.

Accountancy(X)	25	30	38	22	50	70	30	90
Economics(Y)	50	40	60	40	30	20	40	70

16. Fit a straight line trend by the method of least squares to the following data. Assuming that the same rate of change continues, what would be the predicted earnings for the year 1971?

Year	1993	1994	1995	1996	1997	1998	1999	2000
Earnings(Rs. in lakhs)	38	40	65	72	69	60	87	95

17. From a standard pack of 52 cards one card is drawn at random. Find the probability that it is either a red or a king.

18. Explain two types of errors in testing of hypothesis.

19. Table given below shows the data obtained during outbreak of small pox: Apply Chi-Square test.

	Attacked	Non Attacked	Total
Vaccinated	31	469	500
Not vaccinated	185	1315	1500
Total	216	1784	2000

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

Answer any **TWO** questions

20. a)Calculate mean, median and mode for the following data:

C.I.	0-10	10-20	20-30	30-40	40-50	50-60	60-70
Freq.	4	17	21	44	37	18	3

21. Given the bivariate data:

X	2	6	4	3	2	2	8	4
Y	7	2	1	1	2	3	2	6

(a) Fit the regression line of Y on X and hence predict Y, if X=20.

(b) Fit the regression line of X on Y and hence predict X, if Y=5.

22. Following is record of percentage of marks secured by two groups of boys and girls admission with following results.

	Mean	S.D.	N
Girls	75	15	150
Boys	70	20	250

Find the significance of the marks secured by the students and gender.

23. Perform a Two-way ANOVA on the data given below .

		Treatment I				
		I	II	III	IV	V
Treatment II	I	10	4	13	16	7
	II	6	9	4	11	15
	III	18	8	15	10	13