Sub Code: 08USTA05

VIVEKANANDHA COLLEGE FOR WOMEN, UNJANAI

DEPARTMENT OF MATHEMATICS

[Third Semester] - II B.COM (CA)

BUSINESS STATISTICAL METHODS

TIME : 03 Hours **Max : 75 Marks**

Section –A Answer ALL the Questions. **(10*2=20)**

1. Define Arithmetic Mean
2. Define Median
3. Define Mode
4. Define Geometric Mean
5. Define Harmonic Mean
6. What is Rank correlation?
7. What is Positive correlation?
8. What are the types of correlation?
9. What is regression?
10. Frame the two regression equation?

Section –B Answer ALL the Questions. **(5*5=25)**

11.(a) The expenditure of 10 families are given below:

Family : A B C D E F G H I J

Expencies(Rs):30 70 10 75 500 8 42 250 40 36 .

Calculate arithmetic mean. (OR)

(b) Calculate the arithmetic mean for the following.

Marks : 20-30 30-40 40-50 50-60 60-70 70-80

No. of students: 5 8 12 15 6 4

12.(a) Find the Median.

No. of cars sold: 10 15 17 18 21 Total

In a day : 4 16 12 5 2 40 (OR)

(b) calculate mean ,median

Marks	below 10	below 20	below 30	below 40	below 50
No of students	3	8	17	20	22

13.(a) calculate mode for the following data (OR)

C.I	0-10	10-20	20-30	30-40	40-50	50-60
f	7	6	5	8	3	2

(b) Calculate Karl Pearson's coefficient of rank correlation of the following data.

X : 10 12 18 08 13 20 22 15 05 17

Y : 88 90 94 86 87 92 96 94 88 85

14. (a) calculate spearman's rank correlation coefficient for the following data. (OR)

X : 21 36 42 37 25

Y : 47 40 37 42 43

(b) You are given the following data:

X Y

	X	Y
Arithmetic mean	36	85
Standard deviation	11	08

Correlation coefficient between X And Y 0.66

i) Find the two regression equations

ii) Estimate the value of X when Y=75.

15.(a) Distinguish between correlation and regression **(OR)**

(b) find the rank correlation coefficient for the percentage of marks secured by a group of 8 students in economics and statistics.

Marks in economics	50	60	65	70	75	40	70	80
Marks in statistics	80	71	60	75	90	82	70	50

Section – C Answer ALL the Questions. (3*10=30)

16. calculate the mean ,median and mode from the following mode.

Values	40-50	50-60	60-70	70-80	80-90	90-100	100-110
Frequency	32	65	128	167	136	79	43

17.calculate the median for the following

Values	0-9	10-19	20-29	30-39	40-49	50-59	60-69
Frequency	328	720	664	598	524	378	244

18.calculate the correlation coefficient between the height of father and son from the given data.

Height of father(in inches)	64	65	66	67	68	69	70
Height of son(in inches)	66	67	65	68	70	68	72

(b) Calculate Karl Pearson's coefficient of rank correlation of the following data.

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19. Calculate product method moment correlation coefficient from the following by variate frequency table.

x\y	1	3	5
-1	1	1	4
0	3	7	1
2	6	2	0

20. Compute the two regression equations from the following data:

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