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Seat No	

B.Com. (Part III) (Semester III)
Examination, December - 2024
Business Statistics (Paper I)
Sub. Code : 91686

Day and Date : Monday, 09/12/2024 **Total Marks :40**

Time : 10.30 a.m. to 12.00 p.m.

Instructions :
1) **All question are compulsory.**
2) **Figures to the right indicate full marks.**
3) **Use of non - programmable calculator is allowed.**

Q.1) Choose the correct alternative and write in the answer sheet. (8)

A) Which of the following is best absolute measure of dispersion?

a) Mean b) S.D. c) Q.D. d) C.V.

B) The coefficient of correlation always lies in between.....

a) 0 to 2 b) 1 to 2 c) 0 to 1 d) -1 to 1

C) The variable which can be measured in well defined units of measurement is known as.....

a) Quantitative variable b) Qualitative variable

c) Discrete variable d) None of these

D) We must arrange the data in ascending or descending order before calculating..

a) Mean b) Median c) Mode d) S.D.

E) Half of the difference between upper quartile and lower quartile is known as..

a) Mean b) Median c) Q.D. d) Upper quartile

F) The mean of 4,5,7,4,6 and X is 5. What will be the value of X ?

a) 5 b) 4 c) 0 d) -2

G) The mean of certain values is 4 . If we add the constant value 3 to each and every value of the distribution, then new mean will be ....

a) 6 b) 4 c) 0 d) 2

H) The distribution where mean, median and mode are equal is known as .....

a) Discrete distribution b) Symmetric distribution

c) Asymmetric distribution d) Continuous distribution

Q.2) Define mean and median. Calculate mean, median and mode for the following data. (8)

Weight	10	20	30	40	50	60
No. of students	4	7	12	15	8	3

OR

Q.2) Define standard deviation and CV. Following data gives number of runs scored by 2 batsmen A and B. Find out who is more consistent in runs.

Runs by Batsman A	5	7	6	7	5
Runs by Batsman B	10	2	8	3	9

Q.3) Define Histogram. For the following data construct histogram and hence locate Mode from it. (8)

Class	$10-20$	$20-30$	$30-40$	$40-50$	$50-60$	$60-70$
Frequency	9	13	18	22	16	10

OR

Q.3) What are the lines of regression? For the following data obtain regression equation of X on Y and estimate X if $Y = 4$.

Given, $\mathrm{N} = 10, \sum X = 50, \sum Y = 20,\ \sum XY = 170,\ \sum Y2 = 512$

Q.4) Attempt any 2 out of 3 **(8)**

a) What are the advantages of sampling method over census method?

b) Charles Spearman's rank correlation coefficient between two series is 0.8 . The sum of squares of differences between the ranks is 33. Find number of pairs of observations.

c) What is the relation between mean, median and Mode? Use it to find the value of median if mean is 24.2 and Mode is 24.8.

Q.5) Attempt any 2 out of 3 **(8)**

a) Calculate Karl Pearson's coefficient of correlation between X & Y.

X	2	3	5	4	3
Y	7	6	3	8	2

b) For the variables X and Y, two lines of regression are $X + 2Y = 5$ and $2X + 3Y = 8$, then find Mean value of X and Y

c) What are the requirements of good average?

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