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No.	

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**B.Com. (Part-II) (Semester-III) (CBCS)**  
**Examination March/April, held in May 2023**  
**AECC-C5: BUSINESS STATISTICS (Paper - I)**  
**Subject Code: 73510**



**Day and Date: Saturday , 10/06/2023**

**Total Marks:50**

**Time: 01.30 p.m. to 02.30 p.m.**

**Instructions:**

1. Attempt any FIVE questions.
2. Use of a simple calculator is allowed.
3. Figures to the right indicate full marks.
4. Each question carries 10 marks.
5. Graph papers will be supplied on request.

Q1) Attempt any two from the following: [10]

a) Explain Primary data and Secondary data. Give an example of each.

b) State empirical relation between mean, median, and mode. Use it to estimate the mode of the distribution whose mean is 26.8 and the median is 27.6.

c) Define the coefficient of variation (CV) for a distribution. The CV and mean of the data are 80% and 20 respectively, and find the variance of data.

Q2) Define Mean, Median, and Mode. Calculate the same for the following data. [10]

X:	1	2	3	4	5	6	7	8	9
Freq:	8	10	11	16	20	25	15	9	6

Q3) What are the requirements of a good measure of dispersion? Calculate the Coefficient of Quartile deviation for the following data. [10]

Daily wages (Rs.)	30-40	40-50	50-60	60-70	70-80
No. of workers	9	13	25	11	7



Q4) State absolute and relative measures of dispersion. Calculate Range and standard deviation and their relative measures for the following data.  
12,25,30,15,15,20,13 [10]

Q5) Define Spearman's rank and Karl Pearson's correlation coefficient. Calculate Spearman's rank correlation coefficient (R) between the two kinds of assessment of graduate students' performance in a college and interpret. [10]

Roll No.	1	2	3	4	5	6	7	8	9
Internal Marks (X)	51	68	73	46	50	65	47	38	60
External Marks (Y)	49	72	74	44	58	66	50	30	35

Q6) State the relation between regression coefficients and correlation coefficients. [10]

Write the equation of two lines of regression. You are given  
 $\sum X = 400, \sum Y = 500, N = 10, \sigma_x^2 = 2.5^2, \sigma_y^2 = 3.5^2$  and  $r = 0.8$ .  
 Obtain the regression equation Y on X, estimate the value of Y when X=55.

Q7) Attempt any two from the following: [10]

a) Draw a bar diagram to represent the following data.

Product ID	A	B	C	D	E
Sales	15	10	20	12	5

b) Write a short note on Simple Random Sampling.

c) Interpret,  $r=+1, r=-1, r=0$ , where r is the correlation coefficient.

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