Seat	
No.	

Kamala College, Kolhapur
(Autonomous)
B.Com (Part -II) (Semester - III)
Level 5.0
Examination Nov./Dec. - 2023
AECC-4: BUSINESS STATISTICS (Paper - I)
Subject Code: AECC-4

Day and Date: Monday, 04/12/2023
Time   **: 08:00 am to 10:00 am**

Total Marks: 40

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 8 marks.*

Q1) Attempt any two of the following: **[8]**

a) Explain Discrete and Continuous random variables.

b) State empirical relation between mean, median, and mode. Use it to estimate the mode of the distribution whose mean is 46.5 and the median is 45.

c) For certain data if the difference between upper and lower quartiles is 5.5 and the sum of them is 25 then find QD and Coefficient of QD.

Q2) Define Mean, Median, and Mode. Calculate the same for the following data.   **[8]**

No. of children's	0	1	2	3	4	5	6	7
No. of families	171	74	50	25	13	7	2	8

Q3) What are the requirements of a good measure of dispersion? Calculate the Coefficient of Quartile deviation for the following data. [8]

Daily wages (Rs.)	100-200	200-300	300-400	400-500	500-600	600-700
No. of workers	4	6	20	10	5	5

Q4) State absolute and relative measures of dispersion. Calculate the Range and standard deviation and their relative measures for the following data.
Sale: 12,25,30,35,15,9,20,13 [8]

Q5) What is meant by correlation? Distinguish between Positive and Negative correlation. Find Karl-Pearson's coefficient of correlation [8]

Age of Cars	2	4	6	8	10	12
Cost (Rs.) (In'00 Rs.)	16	15	18	17	21	20

Q6) State the relation between regression coefficients and correlation coefficients. 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: [8]
a) Write a short note on Stratified random sampling.
b) Explain Scatter Diagram.
c) Merits and Demerits of mean.