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End Semester Examination, December 2024
BBA LLB (H.) – 3rd Semester
COURSE TITLE: Quantitative Analysis
COURSE CODE: SLMA127A

Time: 2.5 hrs.

Max Marks: **50**

Note: **All Questions are compulsory. Marks are indicated against each question.**

PART-A

Q.1 Attempt any Five Questions.

2x5

- (a) Define ogive. [CO-1] [L-1] **2**
- (b) Find the mean of 9, 10, 11, 12, and 13. [CO-2] [L-1] **2**
- (c) Write the formula for coefficient of variation. [CO-2] [L-1] **2**
- (d) If $Q_1 = 3$ and $Q_2 = 5$, find interquartile range. [CO-2] [L-1] **2**
- (e) Define class magnitude and give one example. [CO-2] [L-1] **2**
- (f) If the standard deviation of a chi-square distribution is 10, find its degrees of freedom. [CO-1] [L-1] **2**
- (g) If covariance of two variables X and Y is 0, find its correlation coefficient. [CO-3] [L-1] **2**

PART-B

Q. 2 Draw the frequency polygon for the following data: [CO-2] [L-2] **10**

Class	0-5	5-10	10-15	15-20	20-25
Frequency	5	10	15	20	25

OR

Draw the histogram for the following data: [CO-2] [L-2] **10**

Class	10-15	15-20	20-25	25-30	30-35
Frequency	5	10	15	20	25

Q.3 Find the median salary for the following data: [CO-1] [L-2] **10**

Salary in \$	20-30	30-40	40-50	50-60	60-70
No. of workers	3	5	20	10	5

OR

Find the mean and standard deviation for the following data: [CO-1] [L-2] **10**

Size of item	6	7	8	9	10	11	12
Frequency	3	6	9	13	8	5	4

Q.4 Calculate the correlation coefficient for the following heights in inches of the fathers(X) and sons(Y). Comment on the relationship of X and Y. [CO- 3] [L-4] **10**

X	65	66	67	67	68	69	70	72
Y	67	68	65	68	72	72	69	71

OR

Various doses of poisonous substances were given to groups of 25 mice and the following results were observed. [CO- 3] [L-4] **10**

Dose in mg (x)	4	6	8	10	12	14	16
No. of deaths (y)	1	3	6	8	14	16	20

Find the equation of regression line of y on x.

Q.5 A dice is thrown 9000 time and a throw of 3 or 4 is observed 3240. Find the value of z. [CO-4] [L-1] **10**

OR

A random sample of size 25 is drawn from a normal population with mean 10 and variance 36. Find its mean and variance. [CO- 4] [L-1] **10**