UNIVERSITY OF THE PUNJAB

B.S. 4 Years Program : Third Semester – Fall 2021

Roll No. .....

Paper: Elementary Statistics **Course Code: STAT-211** **Time: 3 Hrs. Marks: 60**

Q.1. Answer the following short questions: (15x2=30)

i) Define Statistics.

ii) Define population and sample.

iii) Define attribute and give an example.

iv) Define Classification.

v) What is Measure of Central Tendency?

vi) Define the following (a) Median (b) Mode

vii) What is Dispersion?

viii) Define Variance.

ix) Write advantages of sampling.

x) Define Probability Sampling.

xi) Define Type I Error and Type II Error.

xii) Define Critical region.

xiii) Define Simple Regression.

xiv) Define independent and dependent variable in a Simple Regression.

xv) Write down two properties of Correlation Coefficient.

Answer the following questions. (3x10=30)

Q2. The weights of the 40 male students at a university are given in the following frequency table:

Weight	118-126	127-135	136-144	145-153	154-162	163-171	172-180
Frequency	3	5	9	12	5	4	2

Compute Mean, Median, Mode and Coefficient of Variation.

Q3. A population consists of values 0,3,6,9. Take all possible samples of size 2 without replacement from this population. Find the mean for each sample. Make a sampling distribution of sample mean and verify that:

(a) $\mu_{\bar{x}} = \mu$ (b) $\sigma_{\bar{x}}^2 = \frac{\sigma^2}{n}\frac{N-n}{N-1}$

Q4. Calculate the coefficient of correlation and obtain the regression line Y on X for the following data:

Price (X)	3	4	5	6	7	8	9	10	11	12
Demand (Y)	67	57	68	64	68	72	67	73	69	72