UNIVERSITY OF THE PUNJAB

B.S. 4 Years Program / Third Semester – Spring 2022

Roll No. .....

Paper: Statistics **Course Code: GC-121** **Time: 3 Hrs. Marks: 60**

THE ANSWERS MUST BE ATTEMPTED ON THE ANSWER SHEET PROVIDED

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

I. Differentiate between Quantitative and Quantitative Variable.
II. Distinguish between Descriptive and Inferential Statistics.
III. Discuss the main sources of Secondary Data.
IV. Define Geometric Mean and also discuss the merits of Geometric Mean.
V. Define Weighted Mean?
VI. Write the Different types of Relative Measures of Dispersion.
VII. Given $\sum fx^2 = 150$, $\sum fx = 56$, $\sum f = 50$, then find Coefficient of Variation.
VIII. If $\mu_3 = 20.67$, $\mu_2 = 25.78$, $\mu_4 = 1189.78$, then find the β_1 and β_2?
IX. Differentiate between Negatively and Positively Skewed Distributions.
X. Write down the advantages of Chain Index Method.
XI. Write down the main steps involved in the compilation of the CPI.
XII. Discuss the advantages and disadvantages of Moving Average Method.
XIII. Differentiate between Negative and Positive Correlation between variables.
XIV. Write down the properties of Least Square Line.
XV. Compute the Coefficient of Correlation for a sample of 20 pairs of observations, given that $\bar{x} = 2$, $\bar{y} = 8$, $\sum X^2 = 180$, $\sum Y^2 = 1424$, $\sum XY = 404$

Q.2. Answer the following questions: (3x10=30)

i. For the following data, prove that A.M.≥G.M.≥H.M.

weights	2	4	6	8	10
Frequency	8	14	22	16	6

ii. For the following data find the equation of Semi Average Linear Trend and Trend Values.

Years	1982	1983	1984	1985	1986	1987
Values	186	210	223	245	260	285

iii. Calculate the Product Moment Correlation Coefficient for the data given below and interpret the result.

X	20	35	40	37	22	31	45	25	16	27
Y	4	12	5	3	10	6	6	8	5	7