UNIVERSITY OF THE PUNJAB

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

Roll No. ....

Paper: Econometrics – II | Course Code: ECON-405A | Time: 3 Hrs. Marks: 60

THE ANSWERS MUST BE ATTEMPTED ON THE ANSWER SHEET PROVIDED

Q.1. Answer the following short questions: (6x5=30)

1. Discuss simultaneity bias: Inconsistency to OLS estiamtors
2. What is stochastic process? What are the methods to detect white noise process?
3. Discuss usage of Hausman Specification test.
4. Define coefficient of determination and discuss its properties.
5. Discuss usage of Logit/Probit model in empirical analysis.
6. What do you mean by BLUE?

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

1. Explain the least square estimation process in Matrix notation.

2. Consider the following Model with a dummy variable as explanatory variable

$$Y = \beta_1 + \beta_2 X_2 + \beta_3 X_3 + \mu$$

Where Y=Earnings of College Teacher,

X_2 = Teaching experience in number of years

$$X_3 = \begin{pmatrix} 1 & \textit{If Male} \\ 0 & \textit{Otherwise} \end{pmatrix}$$

Y	40	35	55	45	60	70	35	32	41	50
X_2	10	8	9	8	11	12	7	6	8	9
X_3	F	F	M	M	M	M	F	F	M	M

Estimate the Model and Test the Hypothesis that there is no difference in earning of college teachers due to gender effect.

3. Discuss Co-integration and Error Correction mechanism in detail.