Subject Title: Econometrics   Sub. Code   LPSTCT43

Max. Marks: 75

K-Level	Q. No	SECTION – A (5 x 1=5)
K2	1	Econometrics is the branch of economics that _____ a. Studies the behaviour of individual economic agents in making economic decisions. b. develops and uses statistical methods for estimating economic relationships. c. deals with the performance, structure, behaviour and decision–making of an economy as a whole. d. applies mathematical methods to represent economic theories and solve economic problems.
K2	2	The term "u" in the economic model $Y = a + bx + u$ is usually referred to as the a. error term b. parameter c. hypothesis d. dependent variable
K2	3	Autocorrelation refers to a. correlation between two variables b. correlation between two different time series c. correlation between a variable and its lagged variables d. correlation between two different population
K2	4	Which one of the following is NOT a plausible remedy for near multicollinearity? a. Use principal components analysis b. Drop one of the collinear variables c. Use a longer run of data d.take logarithms of each of the variable
K2	5	Covariance between exogenous variable (X) and disturbance term (U) is not equal to zero, If OLS is applied then a. the estimated coefficient will be biased and consistent. b. the estimated coefficient will be biased and inconsistent. c. the estimated coefficient will be unbiased and consistent. d. the estimated coefficient will be unbiased and inconsistent.
		II. Fill in the blanks (5 x 1=5)

K1	6	_____ is the first stage in an econometric study.
K1	7	Given regression co-efficient b = 2 and standard error of 0.5, the value of t ratio is _____
K1	8	The range of autocorrelation is _____
K1	9	The variance of errors is not constant then the regression model has _____
K1	10	The Two stage least square method was developed by _____ and _____

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SECTION – B   (5 x 2=10)

Answer all questions.
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K2	11	Define Econometrics.
K2	12	State the properties of the ordinary least square estimates of simple linear regression.
K3	13	Define Autocorrelation.
K4	14	State any two reasons for the problem of heteroscedasticity in least square model.
K5	15	What is a simultaneous equation model?

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SECTION – C   (5 x 5=25)

Answer all questions by choosing either (a) or (b)
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K1	16	a. State any two limitations of econometrics. Or b. Discuss the types of data.
K2	17	a. What is the simple linear regression? Illustrate with an example. Or b. Derive the coefficient when the intercept is zero.
K3	18	a. Distinguish between Autocorrelation and correlation. Or b. What are the effects of autocorrelation on OLS estimates?
K2	19	a. Show that OLS estimators do not have minimum variance if heteroscedastic is presents. Or b. What is perfect multicollinearity, state the effect of it.
K4	20	a. Define endogenous, exogenous and pre-determined variables. Or b. State the advantages of 2 SLS over the ILS.

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SECTION – D   (3 x 10 = 30)

Answer any three questions.
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K1	21	Describe the methodology of Econometric research.
K2	22	What is a disturbance term? And why it should be included in the

		regression model.
K3	23	Explain Durbin Watson's "d" statistics method.
K4	24	Discuss the causes and consequences of multicollinearity.
K5	25	Consider the following simple Keynesian model $$C_t = \alpha + \beta Y_t + u_i \quad and \quad Y_t = C_t + I_t$$ Where, $C_t, Y_t \; and \; I_t$ are consumption, income and investment respectively. Obtain the $\widehat{\beta}$ using Indirect Least Square method.