

CHUKA



UNIVERSITY

RESIT/ SPECIAL EXAMINATIONS

**EXAMINATION FOR THE AWARD OF
BACHELOR OF SCIENCE IN AGRICULTURAL ECONOMICS**

AGEC 313: ECONOMETRICS

STREAMS: AGECE

TIME: 2 HOURS

DAY/DATE: WEDNESDAY 12/09/2018

8.30 AM – 10.30 AM

INSTRUCTIONS:

Answer Question One and any other Two from the remaining

QUESTION ONE

As an econometrician, outline and explain the eight step procedure (methodology of econometrics), you would consider appropriate in studying an economic phenomenon such as liquidity preference, cost, demand, supply etc. Use following consumption model in your explanations. [20 Marks]

QUESTION TWO

- i. Distinguish between simple and multiple regression model [5 Marks]
- ii. What are deterministic and stochastic econometrics models. Discuss with examples [5 Marks]
- iii. Discuss five main methods used in model evaluation [10 Marks]

QUESTION THREE

Using the data given below

X	45	48	50	55	65	70	75	72	80	85
Y	25	30	35	30	40	50	45	55	60	65

- i. Estimate the regression equation of X on Y [5 Marks]
- ii. Calculate the magnitude of a change in Y arising from an X change of 10 [5 Marks]
- iii. Test statistical significance of parameter estimates at 5% level of significance [5 Marks]
- iv. Compute coefficient of determination [5 Marks]
- v. Forecast Y at x=15 and calculate the 95% confidence interval for the predicted value.

[5 marks]

QUESTION FOUR

Discuss five major assumptions of classical Linear regression model

Given the following model

$$Y_i = \alpha_0 + \alpha_1 X_i + \varepsilon_i$$

Derive the OLS estimates

[10 Marks]
