



# **MAASAI MARA UNIVERSITY**

**REGULAR UNIVERSITY EXAMINATIONS**

**2018/2019 ACADEMIC YEAR**

**FOURTH YEAR FIRST SEMESTER**

**SCHOOL OF BUSINESS AND ECONOMICS  
BACHELOR OF ARTS (ECONOMICS)**

**COURSE CODE: ECO 412**

**COURSE TITLE: ECONOMETRICS I**

**DATE: 3<sup>RD</sup> DECEMBER, 2018**

**TIME: 1100 - 1300HRS**

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**INSTRUCTIONS TO CANDIDATES**

Answer Question **ONE** and any other **THREE** questions

*This paper consists of 2 printed pages. Please turn over.*

**QUESTION ONE - COMPULSORY (25 MARKS)**

- a) Justify the use of OLS method among linear and unbiased estimators (9 Mrks)
- b) Explain the assumptions of OLS method (7 Mrks)
- c) Distinguish between the following
  - i)  $r^2$  and  $r$  (2 Marks)
  - ii) correlation vs. autocorrelation (2Mrks)
  - iii) multicollinearity vs. misspecification (2 Mrks)
- d) Explain under what circumstances you can use dummy variables in your research (3Marks)

**QUESTION TWO - (15 marks)**

The following time series data was partially analyzed and that  $d = 0.2$

Y	20	21	23	27	32	38	39	44
X	2	4	8	9	12	15	19	26

- i) Explain the possible econometric problem
- ii) Using an appropriate method, find the appropriate estimates

**QUESTION THREE - (15 marks)**

It is hypothesized that earnings (Y) is influenced by experience (X) and gender. Using the data presented, estimate and interpret the coefficients

Y	15	20	26	5	7	18	9	24
X	6	4	2	8	7	3	10	2
G	F	M	M	F	F	M	F	M

**QUESTION FOUR - (15 MARKS)**

Given  $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \mu$

Y	10	15	11	14	16	4
X <sub>1</sub>	6	7	5	8	10	5
X <sub>2</sub>	8	6	10	5	2	15

Use the above data to show whether  $X_1$  and  $X_2$  are important determinants of Y

**QUESTION FIVE - (15 MARKS)**

Explain all the stages of econometric research giving an hypothetical outcome of each.

//END