



The Co-operative University of Kenya
END OF SEMESTER EXAMINATION DECEMBER-2019
EXAMINATION FOR THE DEGREE OF BACHELOR OF

UNIT CODE:

UNIT TITLE: INTRODUCTION TO FINANCIAL ECONOMETRICS 1

DATE: NOVEMBER, 2019

TIME:

INSTRUCTIONS:

- Answer question **ONE (compulsory)** and any other **TWO** questions

QUESTION ONE

- a) Discuss the role of the following disciplines in econometric analysis.
- | | |
|----------------------------|-----------|
| i) Economic theory | (2 marks) |
| ii) Mathematical economics | (2 marks) |
| iii) Statistics | (2 marks) |
- b) Distinguish between regression analysis and correlation analysis. (8 marks)
- c) State and explain the six main assumptions of Ordinary Least Squares (OLS) (8 marks)
- d) Briefly describe panel data. (8 marks)

QUESTION TWO

- (a) The following data relates to the sales and profit of ABC Company limited over 10 years. Calculate the sample correlation coefficient between sales and profit using Pearson correlation coefficient formula and interpret your results. (12 marks)

Time in years	1	2	3	4	5	6	7	8	9	10
Sales in Ksh.000's	10	20	30	40	50	60	70	80	90	100
Profit in ksh.000's	2	3	5	7	8	9	11	12	14	19

- (b) Explain the four main reasons why we include an error term in a regression model (8 marks)

QUESTION THREE

a) Explain the main limitations of the coefficient of determination or goodness of fit (R^2). (6 marks)

b) Given the following data, regress Y on X1 and X2. (14 marks)

Y	6	10	9	14	7	5
X1	1	3	2	-2	3	5
X2	3	-1	4	6	2	4

QUESTION FOUR

(a) Explain the causes and consequences for heteroscedasticity. (12 marks)

(b) What are the consequences of multicollinearity? (8 marks)

QUESTION FIVE

(a) Briefly explain eight ways through which an econometrician conducts economic analysis. (10 marks)

(b) Clearly distinguish between a sample and a population regressions. (10marks)