



KENYATTA UNIVERSITY
UNIVERSITY EXAMINATIONS 2017/2018
FIRST SEMESTER EXAMINATION FOR THE DEGREE OF MASTER OF SCIENCE
IN FINANCE
BAC 818: FINANCIAL ECONOMETRICS

DATE: Monday, 5th February, 2018

TIME: 5.30 p.m. - 8.30 p.m.

INSTRUCTIONS: Answer ALL the questions

Question one

- a) Explain the difference between a statistical and deterministic relationship
(2 marks)
- b) Explain the difference between cross-sectional data and time series data and give examples of each.
(3 marks)
- c) What is a stationery time series? A non-stationary time series? Give an example of a non-stationary time series (illustrate in time series diagram).
(3 marks)
- d) What are pooled data? What is panel, longitudinal, or micropanel data? (4 marks)
- e) Explain the difference between ratio, interval and nominal scales. Give an example Of each.
(3 marks)

Question 2

- 1. What do you understand by the term multicollinearity? (2 marks)
- 2. What are its consequences? (3 marks)
- 3. How can it be detected? (2 marks)
- 4. Suggest the solution to the problem of multicollinearity (3 marks)

Question 3

- a. An institution wants its entire staff to be computer literate. Three institutions A, B and C are available. From past experience, 14 people who underwent training from the institution were evaluated as follows:-

A	3	4	2	4	2
B	4	5	4	6	
C	6	6	6	4	3

- a. Construct the relevant ANOVA table and test the null hypothesis at $\alpha = 0.1$ (9 marks)
- b. What are the major assumptions of ordinary least squares, ols (6 marks)

Question 4

- a) What are the problems associated with R^2 as a goodness of fit measure? (3 marks)
- b) Consider the following data:

	y	X2	X3
y	3450	-300	65000
X2	-300	30	-5900
X3	6500	-5900	1580000

Where the values y, x2, and x3 are deviations from the mean but not absolute values. The mean of y, x2, and x3 is 80, 6 and 800 respectively. The sample size is 10.

Required:

- i Estimate the model by using OLS (10 marks)
- ii Interpret your results (2 marks)
- iii Test the overall goodness of fit of the model (5 marks)