

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

FOURTH YEAR EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF COMMERCE

BCOM 436; FINANCIAL ECONOMETRICS

STREAMS: SB

TIME: 2 HOURS

DAY/DATE: WEDNESDAY 4/12/2019

11.30 A.M – 1.30 P.M

INSTRUCTIONS

Answer question one and any other two questions
Show all your workings

QUESTION ONE

- (a) Explain various methods of parameter estimation. [4 marks]
- (b) Discuss the assumptions of linear regression models. [7 marks]
- (c) Compare and contrast regression and correlation analysis highlighting their application in business. [6 marks]
- (d) Below are given figure in (ksh) showing financial performance of a firm listed in the NSE.

Year	2012	2013	2014	2015	2016	2017	2018
Profit (ksh m)	77	88	94	85	91	98	90

Required :

- (i) Fit a straight line trend by use of least square method. [8 marks]
- (ii) Tabulate the trend values. [3 marks]
- (iii) Using model obtained in (i) above predict the firms performance in the year 2019. [2 marks]

QUESTION TWO

- (i) Explain three components of a time series data and show how they affect performance of a given firm. [9 marks]
- (ii) The following data relate to the performance of eight companies listed in the stock market. Its assumed that performance of these comparing depends on the board of managements experience and rating in corporate governance.

Company	1	2	3	4	5	6	7	8
Boards exp	10	12	18	4	3	10	5	12
Performance rating	87	88	89	68	78	80	75	83

Required ;

Determine the regression line of boards experience and corporate governance rating and estimate the probable performance if the board has an experience of 10 year. [14 marks]

QUESTION THREE

- (a) Explain the following terms as used in financial econometrics.
- (i) Normality [2 marks]
 - (ii) Autocorrelation [2 marks]
 - (iii) Reliability [2 marks]
 - (iv) Specification error [2 marks]
 - (v) Multicollinearity [2 marks]
- (b) For each of the above in above explain how they can tested once the financial data is analysed. [5 marks]
- (c) “Time variation in volatility is a common feature of macroeconomic and financial data”. Discuss this and explain how heteroscedasticity can be tested in financial data. [5 marks]

QUESTION FOUR

- (a) Discuss four characteristics of a good estimator. [6 marks]
- (b) In an effort to control quality of output for a manufactured part a sample of parts is chosen randomly and examined in order to estimate the population proportion of parts

that are defective . The manufacturing process operated continuously unless it must be stopped for inspection or adjustment. In the last sample of 90 points, 15 defectives are found. Determine the following estimates of II the population proportion defective.

- (i) A point estimate [3 marks]
 - (a) Internal estimate at 98% percent. [3 marks]
 - (b) Explain how CAPM and arbitrage models can be tested and interpret their empirical results. [6 marks]
 - (c) Discuss two methods of business of business forecasting. [2 marks]
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