



(Knowledge for Development)

**UNIVERSITY EXAMINATIONS
2017/2018 ACADEMIC YEAR
SECOND YEAR 1ST SEMESTER
SPECIAL/SUPPLEMENTARY EXAMINATION**

**FOR THE DEGREE OF BACHELOR OF SCIENCE IN AGRICULTURAL
ECONOMICS & RESOURCE MANAGEMENT**

COURSE CODE: IAE 288

COURSE TITLE: AGRICULTURAL FINANCE AND ECONOMETRICS

DATE: 15TH OCTOBER 2018

TIME: 8 – 10 AM

INSTRUCTIONS TO CANDIDATES

Answer **Question 1** and any other two (2) Questions.

QUESTION ONE

- Assume you have been appointed as financial manager of ARC limited. Describe roles you are expected to play in that company. (10mks)
- Outline uses of econometrics in economic analysis (5mks)
- Consider the following simple linear regression model $Y_i = \alpha_0 + \alpha_1 X_i + \varepsilon_i$ Derive the ordinary least squares estimators means of α_0 and α_1 (10mks)
- Highlight how financial statements are useful to various users (5mks)

QUESTION TWO

The government of Kenya has put in place policies to promote the provision of credit to farmers. Explain the factors that cause poor repayment of credit by farmers and possible measures to strengthen repayment capacity of farmers (20mks)

QUESTION THREE

The following are the summarized accounts of Pole Pole Ltd. For the years ended 31st December 2002 and 2003:

Balance sheet as at	2002			2003		
	Cost 000	Depreciation 000	Net 000	Cost 000	Depreciation 000	Net 000
Land	1,000	200	800	1,800	220	1,580
Plant and machinery	200	80	<u>120</u>	220	100	<u>120</u>
			920			1,700
Investments			1,000			1,600
Motor vehicles			860			1,260
Stock			1,100			1,300
Debtors			800			1,000
Bank			<u>60</u>			=
			<u>4,740</u>			<u>6,860</u>
Ordinary shares Sh. 20			800			1,000
Share premium			240			280
Revaluation reserve			-			400
Profit and loss account			500			500
10% debentures			2,000			3,000
Creditors			800			1,200
Proposed dividends			400			400
Bank overdraft			-			80
			<u>4,740</u>			<u>6,860</u>

Profit and Loss Account	2002	2003
	Sh.000	Sh.000
Sales	4,000	4,000
Cost of sales	<u>2,000</u>	<u>2,400</u>
Gross profit	2,000	1,600
Expenses	1,200	1,200
Net profit	<u>800</u>	<u>400</u>
Dividends	400	400
Balance brought forward	<u>100</u>	<u>400</u>
Balance carried forward	<u>500</u>	<u>500</u>

Required

Calculate for the years 2002 and 2003 the following ratios:

- (i) Return on capital employed (ROCE) (3mks)
- (ii) Debtors turnover in days (3mks)
- (iii) Creditors turnover in days (3mks)
- (iv) Current ratio; (3mks)
- (v) Quick assets (acid test) ratio; (3mks)
- (vi) Gross profit margin; (3mks)
- (vii) Net profit margin. (2mks)

QUESTION FOUR

- a. Explain the steps that constitute an econometric research methodology (10mks)
- b. The following data relates to quantity demanded(Q) and the price (P) of beans market

Q	47	30	22	44	64
P	8	10	13	9	6

- i. Specify and estimate the demand for beans (6mks)
- ii. Interpret your results (4mks)