

# MAASAI MARA UNIVERSITY 

# REGULAR UNIVERSITY EXAMINATIONS 2017/2018 ACADEMIC YEAR THIRD YEAR SECOND SEMESTER 

# SCHOOL OF BUSINESS AND ECONOMICS BACHELOR OF SCIENCE IN AGRICULTURAL ECONOMICS AND RESOURCE MANAGEMENT 

COURSE CODE: ARE 361 COURSE TITLE: AGRICULTURAL PRICE ANALYSIS

INSTRUCTIONS TO CANDIDATES

- Question ONE is compulsory.
- Answer any other THREE questions.

1. a) Explain the role of prices in organizing agricultural production.
b) Differentiate between cyclical and seasonal price movements.
c) Explain why the cobweb model is relevant for agricultural price forecasting.
(6 Marks)
d) Discuss the likely end results of the polyopoly market structure.
(5 Marks)
e) Suppose the market for milk is purely competitive with an industry demand curve expression $Q=500-3 p$ and the short run supply schedule is, $Q=-3+8 p$.
What are the equilibrium price and quantity in this market?
(4 Marks)
2. Discuss the economic functions of agricultural prices.
3. Discuss demand oriented price setting strategies.
4. The data below refers to real coffee prices (in KShs/Kg) between 2002 and 2017.

| Year | Real prices | Year | Real prices |
| :---: | :---: | :---: | :---: |
| $\mathbf{2 0 0 2}$ | 117 | $\mathbf{2 0 1 0}$ | 132 |
| $\mathbf{2 0 0 3}$ | 116 | $\mathbf{2 0 1 1}$ | 94 |
| $\mathbf{2 0 0 4}$ | 100 | $\mathbf{2 0 1 2}$ | 99 |
| $\mathbf{2 0 0 5}$ | 93 | $\mathbf{2 0 1 3}$ | 85 |
| $\mathbf{2 0 0 6}$ | 98 | $\mathbf{2 0 1 4}$ | 89 |
| $\mathbf{2 0 0 7}$ | 105 | $\mathbf{2 0 1 5}$ | 102 |
| $\mathbf{2 0 0 8}$ | 92 | $\mathbf{2 0 1 6}$ | 63 |
| $\mathbf{2 0 0 9}$ | 87 | $\mathbf{2 0 1 7}$ | 77 |

a) Compute the regression line defining the trend in real prices of coffee.
(11Marks)
b) Estimate the forecasted price for coffee in the years 2018 and 2019.
5. Using the data provided in question 4 above;
a) Calculate cyclical deviation from the trend line using a 3 year moving average approach.
(12 Marks)
b) Suppose the average trend is maintained, calculate the expected prices for the 3 year cycle beginning 2018.
(3 Marks)

