

MAASAI MARA UNIVERSITY

**REGULAR UNIVERSITY EXAMINATIONS**

**2016/2017 ACADEMIC YEAR**

**FIRST YEAR SECOND SEMESTER**

**SCHOOL OF BUSINESS & ECONOMICS**

**BACHELOR OF SCIENCE IN AGRICULTURAL ECONOMICS & RESOURCE ECONOMICS**

**COURSE CODE: ARE 1205**

**COURSE TITLE:** **INTRODUTION TO                                  AGRICULTURAL ECONOMICS**

**DATE: 15TH MAY 2017 TIME: 0830-1030HRS**

**INSTRUCTIONS TO CANDIDATES**

Answer Question **ONE** and any other **THREE** questions

*This paper consists of* ***3*** *printed pages. Please turn over.*

**QUESTION 1**

a) Define agricultural economics and elaborate four main areas that constitute the scope of agricultural economics **(4 marks)**

b) Discuss five unique characteristics of agricultural products. **(3 marks)**

1. Given hypothetical data set as follows

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Inputs (X) | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Output (Q) | 0 | 50 | 110 | 160 | 200 | 230 | 250 | 260 | 260 | 250 |

Compute

i) Average physical product (APP) **(2 marks**)

ii) Marginal physical product (MPP) **(2 marks)**

iii) Plot on a paper APP and MPP against input (X) and explain the resultant trends **(3 marks)**

1. The general form of Cobb-Douglas production function is given as

**Q = ALa1Ka2Ma3**

1. Explain the variables and parameters in the model **(2 marks)**
2. Using the parameters in the model explain constant returns, increasing returns and decreasing returns to scale **(3 marks)**
3. Outline four characteristics of the Cobb- Douglas production function **(2 marks)**
4. The equilibrium market basket (budget constraints) and optimal combination of inputs are frequently encountered concepts in agricultural economics. Discuss the difference and similarities in the two concepts. **(4 marks)**

**QUESTION 2**

Assume that a perfectly competitive firm has fixed costs of kshs 400 and variable costs as shown

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Total product | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| TVC | 0 | 550 | 750 | 900 | 1100 | 1350 | 1700 | 2200 | 2900 |

Compute

1. Total costs **(2 marks)**
2. Average fixed costs **(2 marks)**
3. Average variable costs **(2 marks)**
4. Average total costs **(2 marks)**
5. Marginal costs **( 2 marks)**
6. Plot the results on a paper and explain the observed relationships **(5 marks)**

**QUESTION 3**

a) Define the following terms

i) Demand for an agricultural product **(1 mark)**

ii) Supply of an agricultural product **(1 mark)**

b) Given the following data set

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Price (kshs) | 1000 | 800 | 600 | 200 | 0 |
| Quantity demanded (Qd) | 500 | 1000 | 1500 | 2000 | 2500 |
| Quantity supplied (Qs) | 2500 | 2000 | 1500 | 1000 | 500 |

1. Plot the data on a paper **(3 marks)**
2. indicate the equilibrium price and quantity **(2 marks)**
3. What would be the effect if the minimum price is fixed at kshs 200     **(3 marks)**
4. What would be the effect if the minimum price is fixed at kshs 800    **(3 marks)**
5. What would happen if tastes for the product changed (**2 marks** )

**QUESTION 4**

1. A demand function is given as **Q =30 =2P,**

Where: Q is total sales of wheat in kgs

P is price in kshs/kg

1. Write the expression for total revenue (**TR**) **(2 marks)**
2. Determine the marginal revenue (**MR**) **(2 marks)**
3. Determine the profit maximizing quantity (**Q**) **(2 marks)**
4. Compute the maximum Total revenue (**TR) (2 marks)**
5. Explain five factors which affect the demand for and five factors which affect the supply of agricultural products in the market place **(5 marks)**
6. What is price elasticity of demand? **(2 marks)**

**QUESTION 5**

1. Discuss the role of agriculture in rural development. **(7 Marks)**
2. Explain the prospects for agriculture in national development. **(8marks)**

**//END**