Name of School:………………………………………………………………………………

Candidate’s Name:……………………………………………………………………………

Centre No./Index No: ……………………………………………. Signature:……………

**515/2**

**AGRICULTURE**

**PAPER 2**

**3 Hours**



**ELITE EXAMINATION BUREAU MOCK 2016**

**Uganda Advanced Certificate of Education**

PRINCIPLES AND PRACTICES OF AGRICULTURE

**Paper 2**

**3 Hours**

**INSTRUCTIONS TO CANDIDATES**

* Answer ***question 1*** and in ***section A*** and ***four*** other questions, selecting ***at least one*** from each of the ***section’s B, C, D and E.***

**Turn Over**

**SECTION A: (20 marks)**

**Question 1 is compulsory**

1. In a local market in Iganga district, the demand and supply of maize at various prices was investigated. The results obtained are shown in the table 1 below;

|  |  |  |
| --- | --- | --- |
| **Demand (thousand bags)** | **Price per 90 kg bag (Shs)** | **Supply (thousand bags)** |
| 0.85 | 80000 | 3.70 |
| 1.20 | 75000 | 3.60 |
| 1.70 | 70000 | 3.45 |
| 2.30 | 65000 | 3.25 |
| 3.00 | 60000 | 3.00 |
| 3.80 | 55000 | 2.70 |
| 4.70 | 50000 | 2.35 |
| 5.65 | 45000 | 1.95 |
| 6.75 | 40000 | 1.50 |
| 7.90 | 35000 | 1.00 |
|  |  |  |

1. Represent the data in Table 1 graphically. (07 marks)
2. Explain how equilibrium price is established in an agricultural market. (04 marks)
3. State six activities performed in marketing agricultural products (06 marks)
4. Outline six problems faced by farmers in marketing their products. (03 marks)

**SECTION B (20Marks)**

**CROP PRODUCTION**

1. a) A farmer wanted to prepare a field to establish a cabbage garden, he collected representative soil samples from the field which 300 g with a volume of 300cm3. When he added 300cm3 of tap water to the sample in 1000cm3 measuring cylinder, the total volume of the mixture was 550cm3, he assumed the weight of air was insignificant.
2. What was the bulky density of the soil sample? (04 marks)
3. Calculate the particle density of the soil sample. (04 marks)

 b) Explain the factors that influence the bulky density of any soil. (12 marks)

3. a) State the advantages of using herbicides in crop production. (04marks)

b) Explain the factors that are responsible for herbicide selectivity. (06 marks)

c) How can maximum effectiveness of herbicides be achieved. (06 marks)

**SECTION C (20Marks)**

**ANIMAL PRODUCTION**

4. (a) Explain the following terms as used in livestock nutrition

 (i) Digestibility (02 mark)

 (ii) Feeding standards (02 marks)

 (iii) Safety factor (02 marks)

(b) Mention six reasons why feeding allowance is required when formulating animal rations (06 marks) (c) A farmer has four ingredients 1) Fish and soya beans as sources of protein and 2) maize and maize bran as sources of energy. The farmer wishes to formulate a broiler starter of 23% Crude protein. Basing on nutritional value of the ingredients, the farmer decided to use the protein and energy ingredients according to the following ratios: a) Soya bean: Fish meal in the ration of 4: 1 and b) Maize: maize bran in the ration of 3:1. If Soya bean is 38%CP, Fish meal is 48% CP, Maize is 8.7% CP and Maize bran is 8.9% CP. Using the Pearson’s square, calculate the different amounts of ingredients needed for the 100kg diet.

5. (a) Explain the factors that influence the choice of pasture species to be planted in an area. (12 marks)

 (b) Outline the signs that indicate the need to improve pasture (08 marks)

**SECTION D (20 Marks)**

**AGRICULTURAL ECONOMICS**

6. (a) What are the benefits of preparing annual balance sheets in farm enterprises? (10marks)

(b) Using the following information prepare a balance sheet for Kamu-kamu maize traders for the year ending 31st December 2013.

 Investment 32,910,000/=

 Fixed assets 75, 000,000/=

 Liabilities 245,000/=

 Prepaid expenses 2,000,000/=

 Accounts receivable 115,000,000/=

 Inventory 62,459,000/=

 Income tax 500,000/=

 Accounts payable 16,260,000/=

 Loans 1,000,000/=

 Share capital 144,519,000/=

 Cash at hand 22,555,000/=

 Reserves 17,500,000/=

 Surplus 16,500,000/=

From the above information, prepare:

1. total current assets (03 marks)
2. total current liabilities (03 marks)
3. members equity (04 marks)

7. a) Explain the relevance of keeping farm records in animal production enterprises. (10 marks)

 b) Discuss the different types of records that may be kept by a beef farmer. (10 marks)

**SECTION D (20 Marks)**

**AGRICULTURAL ENGINEERING**

8. a). Outline the problems associated with use of human labour on the farm. (10 marks

 b) Explain the factors to consider to obtain optimum output from animals. (10 marks)

 9. a) Why do farmers fence land? (08 marks)

 b) Describe five different types of fencing materials that a farmer could use (12 marks)

**END**