

***Uganda Advanced Certificate of Education* PRINCIPLES  
AND PRACTICES OF AGRICULTURE THEORY**

**Paper 2**

**LOCK DOWN REVISION QUESTIONS 2020**

**SECTION A: (20 MARKS)**

**Question 1 is compulsory.**

1.a) What is meant by **production function**? (2 marks)

b) The table below shows production of millet at various levels of NPK fertilizer applied.

Fixed factor of land (1 ha)	Variable input (NPK in kgs)	Total yield (Millet in 90 Kg bags)	Marginal product(millet in 90 bags)	Average product ( Millet in 90 bags)
1	30	10	10	10
1	60	27		
1	90	42		
1	120	56		
1	150	63		
1	180	65		
1	210	65		
1	240	60		
1	270	52		

i). Copy and complete the table above by calculating the marginal product and average product. (8 marks)

ii) Use a graph paper and draw the total physical production, average physical production and marginal physical production curves and on the graph indicate:

i. the levels of production (7½ marks)

c) State the law being illustrated by the curves drawn on the graph. (1 mark)

d) Mention three types of production function common in farming business.

(1 ½ mark)

### **SECTION B: (20 MARKS)**

#### **CROP PRODUCTION**

**Answer one question from this section**

2. a) Explain how organic matter affects soil fertility. (6 marks)

b) What practices can be done to increase soil aggregation? (4 marks)

c) Explain the factors that influence symbiotic nitrogen fixation? (10 marks)

3. a) Distinguish between **Cleft grafting** and **bud grafting**. (2 marks)

b) Outline the procedure of carrying out bud grafting in tree crops. (8 marks)

c) Suggest reasons why grafting is taken as a method of crop improvement. (4 marks)

d) What factors affect the success of grafting? (6 marks)

### **SECTION C: (20 MARKS)**

#### **ANIMAL PRODUCTION**

**Answer one question from this section**

4. a) Describe how you would prepare a brooder house to receive one day old chicks. (12 marks)

b) Explain the factors considered when planning vaccination of birds. (8 marks)

5. a) Explain the factors that reduce the quality of meat. (10 marks)

b) Describe the factors that cause loss of quality of hides and skins.

i). When the animal is still alive. (5 marks)

ii).During slaughter

(5 marks)

**SECTION D: (20 MARKS)**

**AGRICULTURAL ENGINEERING**

**Answer one question from this section**

6. a) What are the characteristics of an ideal livestock house. (6marks)
- b) Explain the causes why farm buildings fail to serve for the expected time. (10 marks)
- 7.a) Distinguish between **concrete** and **mortar** as construction material? (2 marks)
- b) Explain the factors that determine the strength of concrete. (10 marks)
- c) Outline the procedure followed when mixing concrete on the farm. (8 marks)

**SECTION E: (20 MARKS)**

**AGRICULTURAL ECONOMICS**

**Answer one question from this section**

- 8.a) What is the role of price in agricultural production? (6 marks)
- b) Explain the causes of price fluctuations for agricultural products. (8 marks)
- c) What factors determine the price of a product on the farm? (6 marks)
- 9.a) Discuss the pillars of the plan for modernization of Agriculture (PMA) in Uganda? (10 marks)

- b) Giving examples, explain ways in which different agricultural policies have led to agricultural development in Uganda today. (10 marks)