

**P515/2**  
**PRINCIPLES**  
**AND PRACTICES**  
**OF AGRICULTURE**  
**PAPER 2**  
**3 hours**

**WAKISSHA**

**Uganda Advanced Certificate of Education**

**PRINCIPLES AND PRACTICES OF AGRICULTURE**

**Paper 2**

**3 hours**

**INSTRUCTIONS TO CANDIDATES:**

- *This paper consists of sections A, B, C, D and E.*
- *Answer Question 1 in section A and four other questions selecting one question from each of the sections B, C, D and E.*
- *Any additional question(s) answered will not be marked.*

## SECTION A

### COMPULSORY QUESTION

1. (a) Table 1 shows the effect of feed amount on the average butter fat content (BFC) of milk, average milk yield per week and live body weight for three breeds of dairy cows.

FEED AMOUNT (Kg)	BUTTER FAT CONTENT (%)	TOTAL MILK YIELD (Liters/week)	LIVE BODY WEIGHT (Kg)		
			A	B	C
30	1.6	57	120	85	100
60	8.3	108	132	95	112
90	13.2	157	150	100	120

From the table, explain the effect of feed amount on the

- (i) Butter Fat content (05 marks)
  - (ii) Live body weight (05 marks)
  - (iii) Milk yield (04 marks)
- (b) From the table, suggest the effect of low feed amount on the appearance of dairy cows. Explain your answer. (03 marks)
- (c) Basing on the highest feed amount, calculate the feed conversion ratio for each of the breeds. (03marks)

## SECTION B

### CROP PRODUCTION

2. (a) Discuss the influence of the following soil properties to crop production
- (i) Soil structure. (05 marks)
  - (ii) pH. (05 marks)
- (b) What measures can farmers take to ensure sustainable use of the soil in crop production? (10 marks)

3. (a) Explain the desirable qualities to be considered while developing a successful biological pest control agent. (08 marks)
- (b) Giving specific examples, describe the damages done to crops by pests with piecing and sucking mouth parts. (12 marks)

### **SECTION C**

#### **ANIMAL PRODUCTION**

4. (a) Explain the role of records in livestock management. (12 marks)
- (b) Suggest measures livestock farmers can take to address the effects of livestock rearing to the environment. (08 marks)
5. (a) Explain the factors that affect the utilization of proteins by ruminants. (10 marks)
- (b) Describe the differences in the digestion in ruminants and non-ruminants (10 marks)

### **SECTION D**

#### **AGRICULTURAL ENGINEERING AND FARM STRUCTURES**

6. (a) Explain why the level of draughts technology usage is still low among the Uganda farmers. (12 marks)
- (b) Suggest recommendations to improve the efficiency of draught technology (08 marks)
7. (a) Giving a reason in each case, explain where you would locate the different farm structures on a newly acquired farm land. (12 marks)
- (b) Explain the structural requirements for cattle dip. (08 marks)

### **SECTION E**

#### **AGRICULTURAL ECONOMICS**

8. (a) What measures has the government taken to ensure agricultural modernization in Uganda. (10 marks)
- (b) Identify the constraints to dissemination and adoption of agricultural technologies among farmers in Uganda. (10 marks)
9. (a) Give reasons why you would support government's effort to advance agricultural credit to farmers. (12 marks)
- (b) Suggest measures money lending institutions should take to make agricultural credit more effective. (08 marks)

**END**