

Candidate Name

Centre Number

Candidate Number

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# ZIMBABWE SCHOOL EXAMINATIONS COUNCIL

General Certificate of Education Ordinary Level

**AGRICULTURE**

**5034/2**

PAPER 2

**NOVEMBER 2015 SESSION**

2 hours

Additional materials:  
Answer paper

**TIME** 2 hours

## INSTRUCTIONS TO CANDIDATES

Write your name, Centre number and candidate number in the spaces provided at the top of this page and on all separate answer paper used.

### Section A

Answer **all** questions.

Write your answers in the spaces provided on the question paper.

### Section B

Answer **two** questions from any **one** of Options 1, 2, 3 or 4.

Write your answers on the separate answer paper provided.

At the end of the examination, fasten the separate answer paper securely to the question paper.

## INFORMATION FOR CANDIDATES

The number of marks is given in brackets [ ] at the end of each question or part question.

You are advised to spend no longer than **80 minutes** on Section A.

### FOR EXAMINER'S USE

Section A

Section B

**TOTAL**

**This question paper consists of 10 printed pages and 2 blank pages.**

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**[Turn over**

**Section A [70 marks]**

*Answer all questions in this section.*

*Candidates are advised to spend approximately 80 minutes on this section.*

For  
Examiner's  
Use

- 1 (a) State any **three** environmental factors limiting land use in Zimbabwe.

1. \_\_\_\_\_
  2. \_\_\_\_\_
  3. \_\_\_\_\_
- [3]

- (b) Describe how the following factors affect crop productivity:

- (i) high rainfall intensity,

\_\_\_\_\_  
\_\_\_\_\_

[1]

- (ii) low rainfall intensity.

\_\_\_\_\_  
\_\_\_\_\_

[1]

- (c) (i) Describe the importance of indigenous trees in Zimbabwe.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

[2]

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- (ii) State any **three** principles to be observed when designing a crop rotation programme.

1. \_\_\_\_\_  
 \_\_\_\_\_  
 2. \_\_\_\_\_  
 \_\_\_\_\_  
 3. \_\_\_\_\_  
 \_\_\_\_\_ [3]

- 2 (a) Table 2.1 shows information about soil moisture of different soil types.

Table 2.1

| soil type  | field capacity<br>% | wilting point<br>% | available soil<br>water % |
|------------|---------------------|--------------------|---------------------------|
| light sand | 3                   | 1                  | 2                         |
| sandy loam | 14                  |                    | 8                         |
| silty loam | 25                  | 10                 |                           |
| clay loam  | 29                  | 20                 |                           |

- (i) Complete Table 2.1. [3]

- (ii) If a dry spell occurs, in which soil type would the crops be least likely to show signs of moisture stress?

\_\_\_\_\_ [1]

- (b) Describe any **two** effects of adding lime to the soil.

1. \_\_\_\_\_  
 \_\_\_\_\_  
 2. \_\_\_\_\_  
 \_\_\_\_\_ [2]



- (c) Describe properties of clay and sandy soils that make them ideal for crop production.

(i) *clay* \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ [2]

(ii) *sandy* \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ [2]

- 3 (a) Distinguish between *basal dressing* and *top dressing* fertilizers.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ [2]

- (b) State the importance of incorporating organic manure on arable soils.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ [4]

- (c) Explain the terms:

(i) *imbibition* \_\_\_\_\_  
\_\_\_\_\_, [2]

- (a) (i) Describe any **two** factors to be considered when siting a farm road.

1. \_\_\_\_\_

\_\_\_\_\_

2. \_\_\_\_\_

\_\_\_\_\_ [2]

- (ii) State any **three** reasons why gravel material is used to maintain farm roads.

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_ [3]

- (b) (i) Describe any **two** desirable characteristics of materials used for making oxen yokes.

1. \_\_\_\_\_

2. \_\_\_\_\_ [2]

- (ii) Explain the importance of fences to farmers.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ [3]

7

- (a) The following list is made up of risks and uncertainties. Complete the blank spaces using an R for risk and U for uncertainty.

- (i) change in government policy \_\_\_\_\_
- (ii) damage of crops by drought \_\_\_\_\_
- (iii) theft of cattle by poachers \_\_\_\_\_
- (iv) price fluctuation of inputs \_\_\_\_\_ [4]

- (b) Distinguish between the following terms:

- (i) variable cost and fixed cost ,

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_ [2]

- (ii) gross profit margin and net farm profit .

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_ [2]

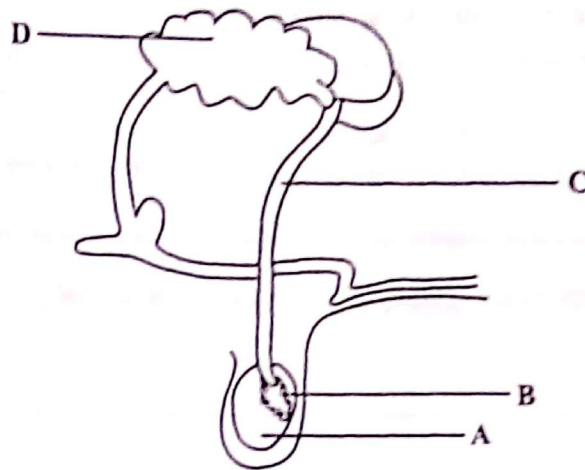
- (c) State any two benefits of farming co-operatives.

1. \_\_\_\_\_  
 \_\_\_\_\_  
 2. \_\_\_\_\_  
 \_\_\_\_\_ [2]

- (ii) *diffusion* \_\_\_\_\_ [2]

4

The diagram shows the reproductive system of a bull.



- (a) (i) Name the structures labelled.
- A, \_\_\_\_\_ [1]
- C, \_\_\_\_\_ [1]
- (ii) State the function of the part labelled
- B, \_\_\_\_\_ [1]
- D, \_\_\_\_\_ [1]

- (b) Describe the life-cycle of **one** host tick.

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[5]

- (c) For either rabbit or layers, state a stage when a maintenance ration would be used.

name of animal \_\_\_\_\_ [1]  
stage \_\_\_\_\_

5

- (a) State any three effects of ticks on farm animals.

1. \_\_\_\_\_  
2. \_\_\_\_\_  
3. \_\_\_\_\_ [3]

- (b) Explain the importance of studying the life cycle of animal parasites.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ [3]

- (c) A poultry farmer would like to formulate a ration with a total mixture of 500 kg, with a mixing ratio of 2 parts concentrate, to 3 parts maize meal.

Calculate the quantities of each ingredient (show all your working)

[4]



## Section B [30 marks]

Answer two questions only from any one of the Options 1, 2, 3 or 4.

## OPTION 1: CROP HUSBANDRY

- 8 (a) For a **named** legume crop, discuss the factors that affect the choice of a suitable variety to grow. [7]
- (b) Describe the method of harvesting a **named** legume crop. [2]
- 9 (a) Discuss the advantages and disadvantages of using herbicides in crop production. [10]
- (b) Describe other methods of weed control besides use of herbicides. [5]
- 10 For a **named** cash crop, discuss the effects of weeds on
- (a) growth, [9]
- (b) harvesting. [6]

## OPTION 2: LIVESTOCK HUSBANDRY

- 11 (a) For a **named** ruminant animal, describe the management of its young from birth up to weaning. [10]
- (b) Describe the desirable breeding characteristics of a female ruminant animal. [5]
- 12 (a) For a **named** ruminant, describe its management from weaning to marketing. [10]
- (b) Explain why it is necessary to supplement feed to ruminants in winter. [5]
- 13 (a) Discuss feed stuffs grown on the farm which meet the nutritional requirements of a **named** non-ruminant animal. [9]
- (b) Describe a **named** viral disease under the following sub-headings
- (i) symptoms, [4]
- (ii) prevention and control. [2]

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[Turn over