

Candidate Name

MATHS GUARDIOLA

Centre Number

+447852954215

Candidate Number



ZIMBABWE SCHOOL EXAMINATIONS COUNCIL

General Certificate of Education Ordinary Level

AGRICULTURE
PAPER 2

4001/2

NOVEMBER 2020 SESSION

2 hours

Additional materials:

Answer sheet,
Scientific calculator.

TIME 2 hours

INSTRUCTIONS TO CANDIDATES

Write your name, centre number and candidate number in the spaces 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, one from each of Options 1 and 2. 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.

FOR EXAMINER'S USE

| | |
|-----------|--|
| Section A | |
| Section B | |
| | |
| | |
| TOTAL | |

INFORMATION FOR CANDIDATES

The marks are 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.

This question paper consists of 12 printed pages.

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SECTION A [60 marks]

Answer **all** questions in this section.

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

- 1 (a) Explain any **four** socio-economic importance of wildlife.

[4]

- (b) Describe ways of dealing with problem animals in Zimbabwe.

[3]

(c) Define the following terms as they are used in Agriculture:

(i) biodiversity,

[1]

(ii) poaching,

[1]

(iii) ecology.

[1]

2 (a) Describe the application of lime during seedbed preparation.

[4]

- (b) An experiment was carried out to determine the amount of air in a given soil sample. Fifty millimetres of water was added to 50 ml of a sample of oven dry soil. After 30 minutes the reading in the cylinder with a mixture of water and soil was 80 ml.

Calculate the percentage of air in the soil sample.

[4]

- (c) Explain two causes of soil erosion in arable land.

[2]

- 3 (a) Explain the importance of crop breeding.

[4]

(b) Differentiate between open and controlled pollination.

[2]

(c) Describe the term heterosis.

[2]

(d) Define the following terms:

(i) emergency,

[1]

(ii) germination.

[1]

- 4 (a) Identify any five uses of livestock.

[5]

- (b) Discuss any three reasons for castrating livestock.

[3]

- (c) Give the functions of the following female reproductive parts:

- (i) vagina,

[1]

(ii) uterus.

_____ [1]

5 (a) Explain the functions of the listed maize sheller parts:

(i) roller,

_____ [1]

(ii) base plate,

_____ [1]

(iii) pressing fan,

_____ [1]

(iv) threshing cylinder,

_____ [1]

(v) feed tray.

_____ [1]

(b) Explain the operational principle of a maize sheller.

_____ [2]

- (c) Calculate the rolls of barbed wire required for a **four strand fence** on a plot measuring **100 m × 80 m**. Standard roll of barbed wire is **700 m**.

[3]

- 6 (a) List any **three** importance of financial records to a farmer.

[3]

- (b) A farmer harvested **6 tonnes** of maize and sold it at **\$300** per tonne. He then made the following payments.

| | |
|-----------------------|------------|
| Compound D | - \$200,00 |
| Chemicals | - \$ 50,00 |
| Farm manager's salary | - \$400,00 |
| Urea | - \$150,00 |
| Farm licence | - \$100,00 |

Calculate the gross margin for the enterprise. (Show all working)

[3]

- (c) Identify any **two** possible causes of changes in prices of agricultural products.

[2]

(d) Give a solution to each of the following risks:

(i) theft,

[1]

(ii) fire.

[1]

SECTION B [40 marks]

Answer **two** questions only, **one** question from each of **option 1** and **option 2**

OPTION 1: CROP HUSBANDRY

- 7 (a) Outline the socio-ecological importance of forestry. [8]
 (b) Discuss the process of pricking out in gumtree establishment. [4]
 (c) Describe and explain the management practices carried out in a gumtree plantation. [8]
- 8 (a) Describe toxicity levels of agro-chemicals. [8]
 (b) Explain advantages of conservation tillage. [7]
 (c) Design, in sequence, a **four** year rotation for a field crop. [5]
- 9 (a) Outline the advantages and disadvantages of organic fertiliser in crop production. [9]
 (b) Evaluate the use of silos in grain storage. [5]
 (c) Describe ways of reducing the effects of environmental factors on crop production. [6]

OPTION 2: ANIMAL HUSBANDRY

- 10 (a) Discuss characteristics of an acceptable fowl run. [5]
 (b) Outline functions of any **four** parts of the digestive system of a **named** four legged non ruminant animal. [8]
 (c) Describe desirable characteristics of a **named** breeding female of a non-ruminant animal. [7]

- 11 (a) State and explain **two** types of livestock immunity. [4]
- (b) Discuss the Animal Health Act of Zimbabwe. [7]
- (c) Outline management operations carried out on a **calf** from birth to weaning. [9]
- 12 (a) Describe the management of broiler chicks from **day old** to **two weeks** of age. [8]
- (b) Describe the life cycle of a **named** internal parasite of a farm animal. [7]
- (c) Evaluate the importance of roughage in the diet of ruminant farm animals. [5]