Candidate Name	Centre Number	Candidate Number
MATHS GUARDIOLA	+447852954215	

ZIMBABWE SCHOOL EXAMINATIONS COUNCIL

General Certificate of Education Ordinary Level

AGRICULTURE

4001/2

PAPER 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.

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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]

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(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]

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(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]

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(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]

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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]

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(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]

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(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]

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(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]

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

(i) theft,

_____ [1]

(ii) fire.

_____ [1]

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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 fuctions 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]

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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]

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