



EXAMINATIONS COUNCIL OF ESWATINI  
Eswatini General Certificate of Secondary Education

CANDIDATE  
NAME

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CENTRE  
NUMBER

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CANDIDATE  
NUMBER

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**AGRICULTURE**

**6882/02**

Paper 2

**October/November 2020**

**1 hour 30 minutes**

Additional Material: Calculator

Candidates answer:

**Section A:** Structured questions on the Question Paper.

**Section B:** Two essay questions on the Question Paper.

**READ THESE INSTRUCTIONS FIRST**

Write your Centre Number, Candidate Number and Name on all the work you hand in.  
Write in **blue** or **black** pen.

You may use an **HB** pencil for any diagrams or graphs.  
Do not use staples, paper clips, glue or correction fluid.

Answer **all six** structured questions and attempt **two** essay questions out of the three provided.

At the end of the examination, fasten all your work securely together.

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

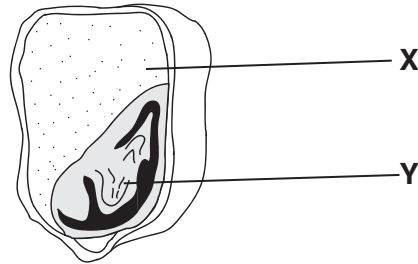
For Examiner's Use	
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<b>Total</b>	

This document consists of **18** printed pages and **2** blank pages.

**Section A: Structured Questions**

Answer **all** questions in this section (60 Marks)

1 **Fig 1.1** shows a maize seed.



**Fig 1.1**

**(a) (i)** What is the name of the part labelled Y?

..... [1]

**(ii)** What is the function of part X?

.....  
..... [1]

**(b) (i)** State any **two** conditions that seeds need for germination.

1 .....  
2 ..... [2]

**(ii)** Give any **one** condition necessary for storing seeds.

..... [1]

**(c)** Explain how high humidity affects vegetable seedlings.

.....  
.....  
..... [2]

(d) Describe respiration in plants.

.....  
.....  
.....

[2]

(e) Give **two** reasons for practising minimum tillage.

(i) .....

(ii) .....

[2]

**[11 marks]**

2 Fig 2.1 shows the average cost of cabbages produced using different farming systems. The cost is in Emalangeneni per head (E/head).

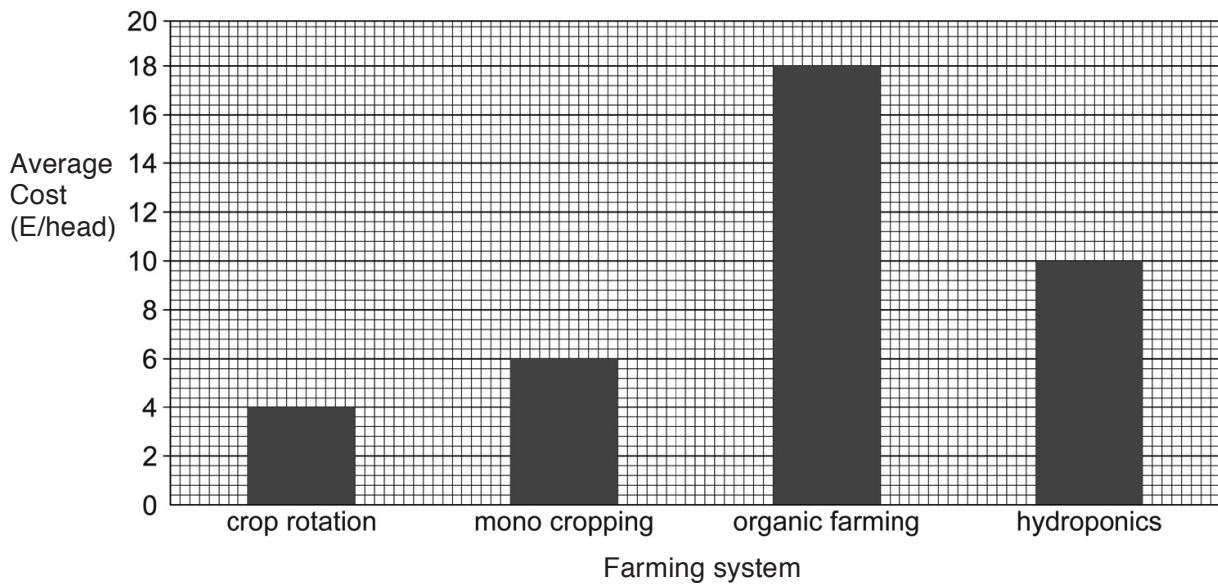


Fig 2.1

(a) (i) What is the average cost of producing a cabbage using crop rotation?

..... [1]

(ii) Which farming system has an average cost of E10 to produce a cabbage?

..... [1]

(b) Suggest why organically farmed cabbages are the most expensive to produce.

.....  
 .....  
 .....  
 .....  
 .....  
 .....

[3]

(c) Suggest **two** reasons why some farmers may prefer using hydroponics.

(i) .....  
.....

(ii) .....  
.....

[2]

(d) Suggest a farming system that would result in more acid soils.

.....  
.....  
.....  
.....

[2]

**[9 marks]**

3 (a) The application rate of a pesticide is 1.8 kg in 200 litres of water. Calculate how much (in kg) of this pesticide should be mixed with 15 litres of water.

..... kg [2]

(b) Explain the importance of diluting the correct amount of pesticide when spraying crops.

.....  
.....  
.....  
.....

[2]

(c) Explain how a farmer would use crop rotation to control pests.

.....  
.....  
.....  
.....

[2]

(d) Suggest **two** reasons why spraying on a windy day should be avoided.

(i) .....  
.....

(ii) .....  
.....

[2]

(e) Suggest **two** waste disposal practices of farm chemicals that reduce pollution.

(i) .....

.....

(ii) .....

.....

[2]

[10 Marks]

4 (a) **Table 4.1** shows animal nutrients, enzymes and end products. Complete the table below.

**Table 4.1**

Nutrient	Enzyme	End – product
Proteins	Trypsin	(i) ..... .....
Fats	(ii) .....	Fatty acids and glycerol

[2]

(b) State any **two** symptoms of iron deficiency in livestock.

(i) .....

(ii) .....

[2]

(c) Describe the functions of bile in livestock digestion.

.....  
.....  
.....  
.....

[2]

(d) Describe the role of micro-organisms in ruminant digestion.

.....  
.....  
.....  
.....

[2]



(e) Suggest any **two** cultural ways of reducing livestock parasites in pastures.

(i) .....

.....

(ii) .....

.....

[2]

**[10 Marks]**

5 (a) Describe the role of the following hormones in animal reproduction.

(i) Progesterone

.....  
.....

[1]

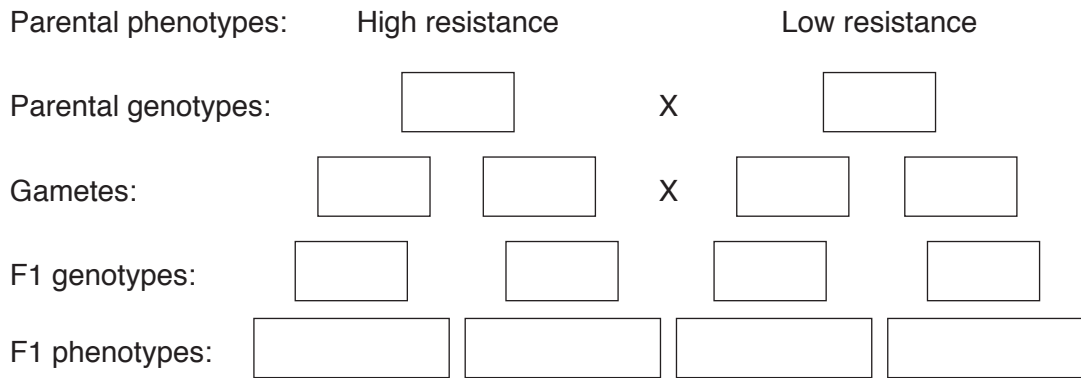
(ii) Oestrogen

.....  
.....

[1]

(b) The allele for high resistance to tick borne diseases (R) is dominant over the allele for low resistance to tick borne diseases (r). Two cattle, homozygous for this resistance allele, are crossed.

(i) Complete the genetic diagram.



[4]

(ii) Explain why the phenotype is important for selective breeding.

.....  
.....

[1]

(c) Explain how selective breeding can be used to increase the milk yield of the Nguni breed.

.....

.....

.....

.....

.....

.....

.....

[3]

**[10 Marks]**

6 Fig. 6.1 shows how water is collected from the roof of a building.

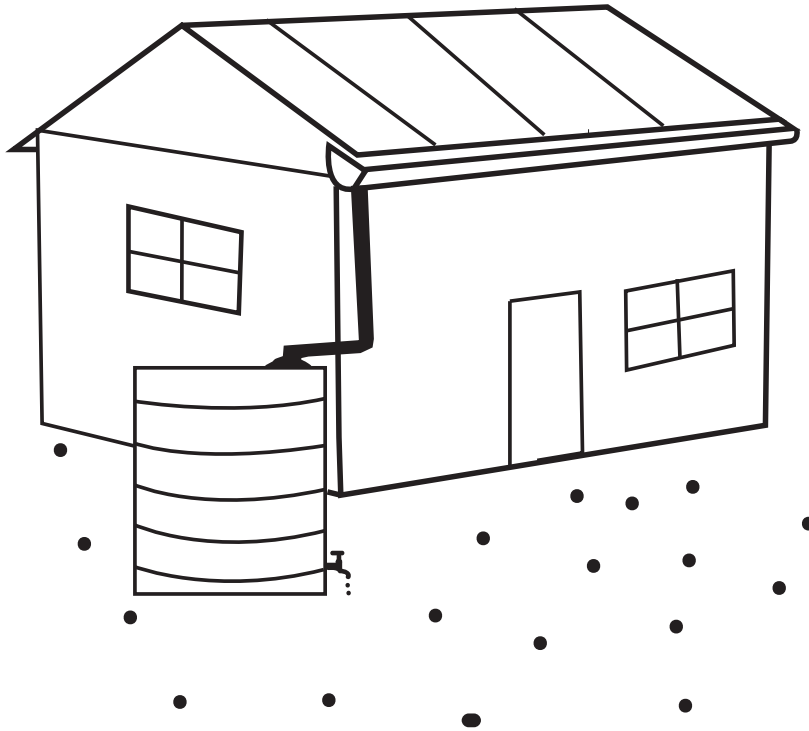


Fig. 6.1

(a) What could be the danger of using water collected using the method shown in Fig. 6.1?

.....  
.....

[1]

(b) State two disadvantages of using overhead irrigation system.

(i) .....  
.....

(ii) .....  
.....

[2]

(c) **Table 6.1** shows features of a well-built dam with their functions.

Fill in the blank spaces below;

**Table 6.1**

FEATURES	FUNCTIONS
Wall covered with large stones on the lower side of the dam.	<b>(i)</b> ..... ..... .....
<b>(ii)</b> .....	to prevent seepage
Overflow pipe.	<b>(iii)</b> ..... ..... .....

[3]

(d) (i) Give any **one** way of preserving metal posts.

.....  
.....

[1]

(ii) Suggest **three** purposes of a fence on a farm.

.....  
.....  
.....  
.....  
.....  
.....

[3]

**[10 Marks]**

**Section B: Essay questions**

Answer any **two** questions in this section (20 Marks).

- 7 (a) Outline the soil preparation procedure for a beans crop. [3]  
(b) Describe the effects of pests and diseases on crops. [2]  
(c) Suggest the impacts of climate change on crop production. [5]

**[10 Marks]**

- 8 (a) What are the factors which affect farm productivity. [4]  
(b) Explain how agriculture can alleviate poverty in Eswatini. [3]  
(c) Describe how research can improve production in agriculture. [3]

**[10 Marks]**

- 9 (a) Describe the importance of health records when starting a rabbit enterprise. [2]  
(b) Describe the appearance of droppings in sick animals. [3]  
(c) Suggest ways in which diseases can be prevented in animal houses. [5]

**[10 Marks]**

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