



EXAMINATIONS COUNCIL OF ESWATINI
Eswatini General Certificate of Secondary Education

CANDIDATE
NAME

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CENTRE
NUMBER

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CANDIDATE
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AGRICULTURE

6882/02

Paper 2

October/November 2024

2 hours

Additional Material: Calculator

Candidates answer:

Section A: Structured questions on the Question Paper.

Section B: Two Essay questions on the lined space provided.

READ THESE INSTRUCTIONS FIRST

Write your name, centre number and candidate number on all the work you hand in.
Write in **dark blue** or **black** pen.

You may use an **HB** pencil for any diagram(s) or graph(s).
Do not use staples, paper clips, glue or correction fluid.

Answer **all seven** 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	
1	
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7	
8	
9	
10	
Total	

This document consists of **20** printed pages.

Section A: Structured Questions

Answer **all** questions in this section **(70 marks)**

- 1 (a) Outline any **two** reasons why research is important in agriculture development.

1

 2
 [2]

- (b) Over many years different farming systems have evolved; intensive, monoculture and organic farming. One new trend is hydroponics.

- (i) State what is meant by a hydroponic system.

.....

- (ii) Suggest **one** advantage of using a hydroponic system.

.....
 [2]

- (c) Describe the contribution of intensive farming systems to the national economy.

.....

 [2]

- (d) Explain how monoculture could result in the use of more fertilisers.

.....

 [2]

- (e) Explain how organic farming could be expensive to practice.

.....

.....

.....

..... [2]

[10 Marks]

2 (a) What is meant by agribusiness?

.....
 [1]

(b) Give any **two** ways farm credit is used in agriculture.

1
2 [2]

(c) State any **two** requirements needed to access a loan.

1

2
 [2]

(d) Describe resources that are regarded as capital in agricultural production.

.....

 [2]

(e) Explain the purpose of a farm budget.

.....

 [2]

[9 marks]

- 3 **Fig. 3.1** shows a farming practice where maize is planted together with beans.



Fig. 3.1

- (a) (i) Name the farming practice shown in **Fig 3.1**.

..... [1]

- (ii) Describe any **two** benefits to the maize crop of the farming practice shown in **Fig 3.1**.

1

.....

2

..... [2]

- (b) Crops grown outside as in **Fig 3.1** involve the use of machinery that can cause soil compaction.

Explain how soil compaction could affect crop production.

.....

.....

.....

..... [2]

- (c) Some crops are grown inside greenhouses (glasshouses) to increase production.

State **two** environmental conditions that are controlled inside a glasshouse.

1

.....

2

..... [2]

- (d) Crops that are produced for export must comply with certain conditions.

Suggest any **two** standards required when exporting baby vegetables.

1

.....

2

..... [2]

[9 Marks]

- 4 (a) **Fig. 4.1** shows the response of two maize varieties to increasing levels of NPK fertiliser application.

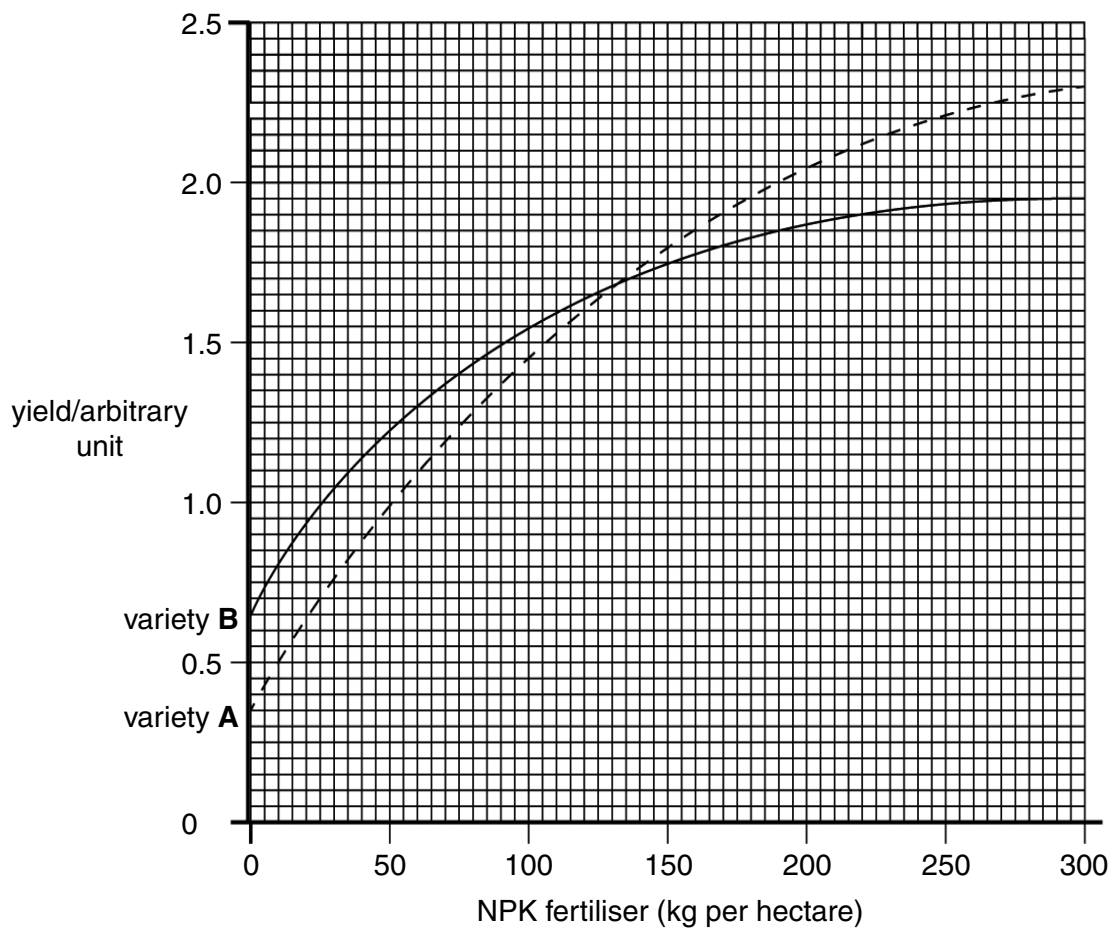


Fig 4.1

- (i) What is the amount of NPK fertiliser applied per hectare to produce a yield of 0.75 units from variety **A** in **Fig. 4.1**?

..... [1]

- (ii) State the amount of NPK fertiliser applied per hectare when the yield from variety **A** and **B** are equal.

..... [1]

- (iii) Calculate the difference in yield between variety **A** and **B** when 190 kg of NPK fertiliser is applied per hectare.

.....

.....

.....

..... [2]

- (b) Before growing a crop and adding fertiliser a soil should be tested.

Fig 4.2 shows the order in which soil samples were taken from a school garden for testing.

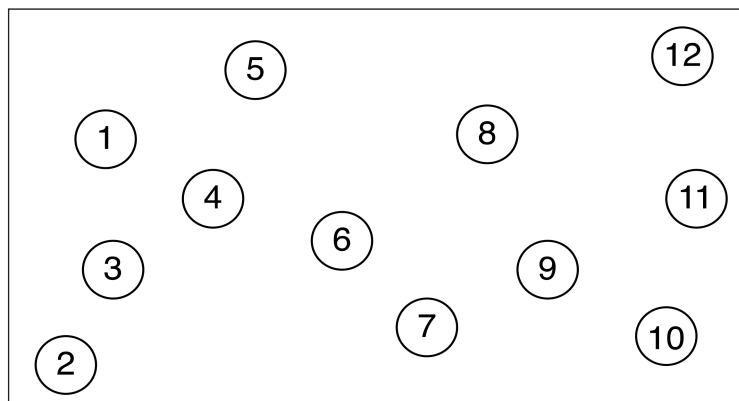


Fig. 4.2

Name the sampling method used in **Fig 4.2**.

..... [1]

- (c) Describe any **two** problems caused by the overuse of inorganic fertilisers to the environment.

1
.....

2
..... [2]

(d) Give any **two** factors that could cause soil to be more acidic.

1
.....

2
..... [2]

(e) Explain how soil pH affects plant growth.

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

[11 marks]

5 Fig. 5.1 shows the germination of a seed.

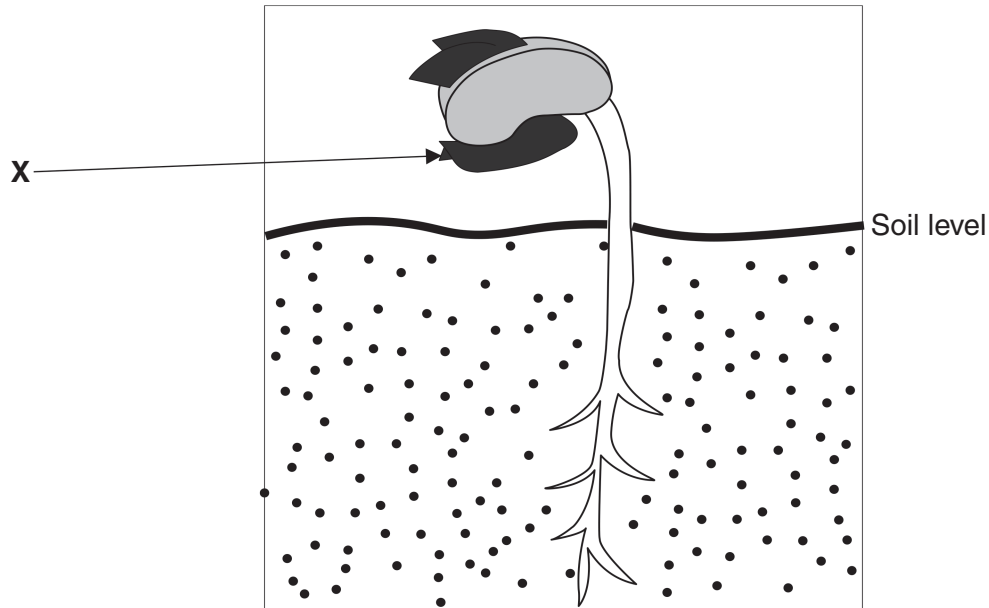


Fig 5.1

(a) (i) Name the part labelled **X** on **Fig. 5.1**.

..... [1]

(ii) What **type** of germination is shown on **Fig. 5.1**?

..... [1]

(b) State any **two** conditions necessary for germination.

1

2 [2]

(c) Describe the process by which water enters the root hair cell.

.....

.....

.....

..... [3]

(d) Farmers do not always plant crops from seeds.

Suggest any **three** reasons for growing crops using asexual reproduction.

1

.....

2

.....

3

..... [3]

[10 Marks]

6 **Fig 6.1** shows an aphid feeding on a plant tissue.

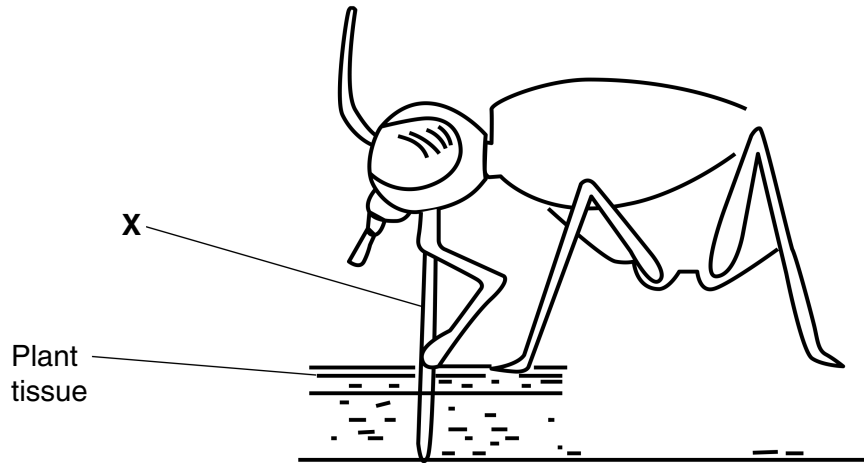


Fig 6.1

(a) Name part **X** in **Fig 6.1**.

..... [1]

(b) The pest in **Fig 6.1** feeds by piercing and sucking.

(i) Suggest **two** ways this reduces crop yields.

1

.....

2

..... [2]

(ii) Explain how this pest is controlled by the use of a systemic pesticide.

.....

.....

.....

..... [2]

(c) A pesticide application rate on a crop is 1.6 kg in 200 litres of water per hectare.

(i) How much pesticide is needed for 0.45 hectares? (Show your working)

.....

.....

.....

..... [2]

(ii) How much of this pesticide should be mixed with 8 litres of water?
(Show your working).

.....

.....

.....

..... [2]

(d) Describe bio-intensive integrated pest management.

.....

.....

..... [2]

[11 marks]

7 (a) What is meant by a balanced ration?

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

(b) Give any **two** functions of proteins in an animal's ration.

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

(c) Suggest **two** reasons for adequate water supply in livestock nutrition.

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

(d) **Fig. 7.1** is a diagram of a digestive system in ruminants.

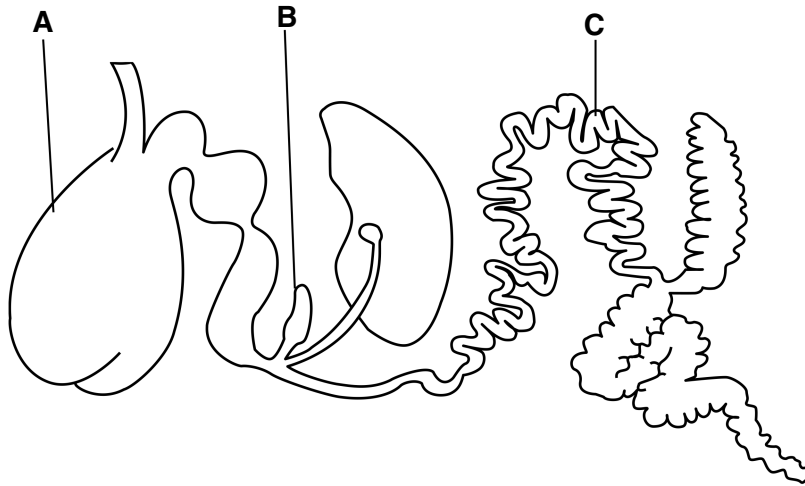


Fig. 7.1

(i) Name organ **B** on **Fig. 7.1**.

B [1]

(ii) State the function of the part labelled **C** on **Fig. 7.1**.

..... [1]

(iii) Suggest any **three** roles of the rumen (**A**) in the process of digestion.

1

.....

2

.....

3

..... [3]

[10 marks]

Section B: Essay Questions

Answer any **two** questions from this section **(30 marks)**

- 8** (a) Describe any **two** breeding practices in rabbit production. [4]
- (b) Explain with details how you would feed a doe at different stages of production using pellets only. [6]
- (c) Suggest advantages of using indigenous breeds in livestock production. [5]
- [15 marks]**
- 9** (a) Describe the **two** methods that can be used to collect water for agricultural use. [4]
- (b) Explain with reasons how water in the soil can be conserved by farmers. [6]
- (c) Suggest the positive effects of high temperature on crop growth. [5]
- [15 Marks]**
- 10** (a) Describe any **two** factors considered when selecting a suitable site for farm buildings. [4]
- (b) Explain with reasons how wooden posts could be preserved. [6]
- (c) Suggest advantages of using living fence. [5]
- [15 marks]**

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