Candidate Name	Centre Number	Candidate Number

ZIMBABWE SCHOOL EXAMINATIONS COUNCIL

General Certificate of Education Advanced Level

HORTICULTURE 6024/2

PAPER 2

SPECIMEN PAPER 2 hours 30 minutes

Additional materials:
Answer paper,
Scientific calculator.

TIME 2 hours 30 minutes

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.

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

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.

FOR EXAMINER'S USE	
Section A	
Section B	
TOTAL	

This specimen paper consists of 9 printed pages and 3 blank pages.

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Section A [60 marks]

Answer **all** questions in this section.

For Examiner's Use

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

1 **(a)** Explain the ecological importance of horticulture.

_____

_____

_____

_____ [2]

(b) Describe how the following factors affect horticulture production:

(i) religious factors,

_____

_____

_____

_____ [2]

(ii) cultural factors.

_____

_____

_____

_____ [2]

(c) State any **two** mitigatory measures for each of the following environmental factors:

For Examiner's Use

(i) high temperatures,

_____

_____

_____

_____[2]

(ii) low moisture.

_____

_____

_____

_____[2]

2 **(a)** Describe the concept of tissue culture in horticulture plant propagation.

_____

_____

_____

_____

_____

_____ [4]

For Examiner's Use

(b) Outline **four** advantages of asexual propagation over sexual propagation of plants in horticulture.

_____

_____

_____

_____

_____

_____ [4]

(c) Identify any **two** possible causes of graft failure.

_____

_____

_____

_____ [2]

3 **(a)** Describe any **two** structural differences between insect and wind pollinated flowers.

_____

_____

_____

_____

_____

_____ [2]

For Examiner's Use

(b) Briefly describe double fertilization in plants.

_____

_____

_____

_____

_____

_____ [4]

(c) Describe the characteristic features that distinguish dicotyledonous from monocotyledonous plants.

_____

_____

_____

_____ [4]

4 **(a)** Describe the following forms of soil moisture:

(i) gravitational moisture,

_____

_____

_____

_____ [2]

(ii) hygroscopic moisture.

_____

_____

_____ [2]

(b) Discuss how the following factors affect water uptake by plants:

For Examiner's Use

(i) soil conditions,

_____

_____

_____

_____

_____ [3]

(ii) water potential gradient.

_____

_____

_____

_____

_____ [3]

5 **(a)** Describe the following types of germination:

epigeal,

_____

_____

_____

_____ [2]

hypogeal.

_____

_____

_____

_____ [2]

(b) Explain the importance of water in seed germination.

For Examiner's Use

_____

_____

_____

_____

_____ [3]

(c) Describe artificial mechanisms of breaking seed dormancy.

_____

_____

_____

_____

_____ [3]

6 **(a)** **(i)** Describe the significance of soil structure in vegetable production.

_____

_____

_____

_____

_____ [3]

(ii) Outline factors that affect soil structure.

_____

_____

_____

_____

_____

_____ [3]

For Examiner's Use

(b) **(i)** Explain how soil micro-organisms promote plant growth.

_____

_____

_____

_____ [2]

(ii) Describe the factors that influence soil micro-organism activities.

_____

_____

_____

_____ [2]

Section B [40 marks]

Answer any **two** questions from this section.

7 Discuss the parameters considered in determining fruit maturity indices. [20]

8 Describe the principles of landscaping in horticulture. [20]

9 Outline the post-harvest care of flowers. [20]

10 Justify factors that influence the choice of ornamental plants. [20]

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