

1

90924



909240



NEW ZEALAND QUALIFICATIONS AUTHORITY
MANA TOHU MĀTAURANGA O AOTEAROA

QUALIFY FOR THE FUTURE WORLD
KIA NOHO TAKATŪ KI TŌ ĀMUA AO!

SUPERVISOR'S USE ONLY

Level 1 Agricultural and Horticultural Science, 2015

90924 Demonstrate knowledge of horticultural plant management practices and related plant physiology

9.30 a.m. Monday 30 November 2015
Credits: Five

Achievement	Achievement with Merit	Achievement with Excellence
Demonstrate knowledge of horticultural plant management practices and related plant physiology.	Demonstrate in-depth knowledge of horticultural plant management practices and related plant physiology.	Demonstrate comprehensive knowledge of horticultural plant management practices and related plant physiology.

Check that the National Student Number (NSN) on your admission slip is the same as the number at the top of this page.

You should attempt ALL the questions in this booklet.

If you need more room for any answer, use the extra space provided at the back of this booklet.

Check that this booklet has pages 2–8 in the correct order and that none of these pages is blank.

YOU MUST HAND THIS BOOKLET TO THE SUPERVISOR AT THE END OF THE EXAMINATION.

TOTAL

ASSESSOR'S USE ONLY

QUESTION ONE: GLASSHOUSES

Glasshouses can be used to control a number of growing conditions; however, they need careful management to ensure the best growing conditions for the plants inside.

(a) Describe THREE management practices carried out in glasshouses, and explain how each management practice affects ONE of the following plant processes. Cover at least TWO different processes across the three practices:

- photosynthesis
- respiration
- transpiration.

Description of management practice	Effect on plant process
Management practice (1)	
Management practice (2)	
Management practice (3)	

In New Zealand, commercial production of tomatoes is usually done in glasshouses rather than outside.

Glasshouse production of tomatoes



QUESTION TWO: CITRUS

Citrus, which includes lemons, oranges, grapefruit, and mandarins, are common garden trees.

- (a) Describe THREE actions a gardener can take when pruning citrus to ensure plant health, and explain why each of these actions is carried out.

Description of management practice	Effect on plant process
Management practice (1)	
Management practice (2)	
Management practice (3)	

QUESTION THREE: ESTABLISHING TREES

When planting trees, there are a number of actions that the planter can take to improve the survival and growth of young trees.

- (a) Describe THREE actions that the planter could take to improve young tree survival or growth when planting them. Explain why each action is carried out in that way. You may use labelled diagrams to illustrate your answer.

Description of the action	Reason for the action
Action (1)	
Action (2)	
Action (3)	

After trees have been planted, ongoing weed control is important for the long-term success of the tree.

- (b) Explain TWO ways in which weeds can affect the growth of a newly planted tree. Refer to plant processes in your answer.

Mulches (either natural or artificial) and herbicides are two methods that could be used to control weeds around newly planted trees.

Natural mulch

*For copyright reasons, this resource cannot be reproduced here.
See: <http://abeltreeremoval.com>*

Artificial mulch

*For copyright reasons, this resource cannot be reproduced here.
See: <http://www.tubex.com/media/gallery>*

(c) Select and justify the better method for controlling weeds in an orchard by comparing and contrasting it to the other method.

Selected method: _____

In your answer, consider:

- the effectiveness in controlling weeds
- the effect on the newly planted trees
- how the management practice affects the growing conditions.
