



B O A R D O F S T U D I E S
NEW SOUTH WALES

2012

**HIGHER SCHOOL CERTIFICATE
EXAMINATION**

Primary Industries

General Instructions

- Reading time – 5 minutes
- Working time – 2 hours
- Write using black or blue pen
Black pen is preferred
- Board-approved calculators may be used
- Write your Centre Number and Student Number at the top of pages 13, 17, 19 and 21

Total marks – 80

Section I Pages 2–9

15 marks

- Attempt Questions 1–15
- Allow about 20 minutes for this section

Section II Pages 13–23

35 marks

- Attempt Questions 16–20
- Allow about 50 minutes for this section

Section III Page 25

15 marks

- Attempt Question 21
- Allow about 25 minutes for this section

Section IV Page 26

15 marks

- Attempt Question 22
- Allow about 25 minutes for this section

Section I

15 marks

Attempt Questions 1–15

Allow about 20 minutes for this section

Use the multiple-choice answer sheet for Questions 1–15.

- 1** What is the recommended first aid treatment for burn injuries?
- (A) Apply ice pack for at least twenty minutes
 - (B) Apply cold running water for at least twenty minutes
 - (C) Apply water for ten minutes and cover burn with butter
 - (D) Apply water for ten minutes and cover burn with wound cream
- 2** An intense cold snap bringing high winds and freezing conditions is expected to move across a grazing and cropping property in the next 24 hours.
- Which of the following would be the LEAST important job to carry out immediately?
- (A) Move livestock to shelter
 - (B) Feed high energy rations to livestock
 - (C) Add anti-freeze to your tractor radiator
 - (D) Check the float valves on stock water troughs
- 3** Major flooding has occurred 252 kilometres upstream from a flood-prone property. The peak water level is moving downstream at a rate of 9 kilometres per day.
- How long will it take for the floodwaters to reach this property?
- (A) 3 weeks
 - (B) 4 weeks
 - (C) 5 weeks
 - (D) 6 weeks

- 4 According to the *Noxious Weeds Act 1993* (NSW), a Class 1 weed is one that is
- (A) state prohibited.
 - (B) locally controlled.
 - (C) regionally prohibited.
 - (D) regionally controlled.
- 5 A farmer treats a flock of sheep for external parasites with a product that has an ESI of 28 days.

What does the letter E in ESI stand for?

- (A) Export
 - (B) External
 - (C) Expected
 - (D) Extended
- 6 The following is an extract from a broadleaf herbicide label.

Plant-back period* (in months) for rotational crops following application of a broadleaf herbicide		
Crop	Rate of application	
	200 mL/ha	300 mL/ha
Wheat	2	2
Barley	2	2
Canola	2	4
Faba beans	4	4
Chick pea	4	6
Lucerne	6	9

*The plant-back period is the minimum period between the application of a chemical and the planting of the following crop

A 12 ha paddock was sprayed with 3.6 L of broadleaf herbicide on 5 January.

What is the earliest date that canola can be planted in this paddock?

- (A) 5 March
- (B) 5 April
- (C) 5 May
- (D) 5 June

7 The following advertisement appeared in a newspaper.

Experienced Diesel Mechanic required for rural NSW property
<ul style="list-style-type: none"> • At least 5 years relevant experience • Trade certificate • Own tools and own PPE • Single male applicants preferred <p>Enquiries ABC Pastoral Company Phone: (02) 12312312</p>

How many of the following four Acts does this advertisement breach?

- *Anti-Discrimination Act 1977* (NSW)
- *Sex Discrimination Act 1984* (Cth)
- *Disability Discrimination Act 1992* (Cth)
- *Work Health and Safety Act 2011* (NSW) – replacing *Occupational Health and Safety Act 2000* (NSW)

- (A) 1
- (B) 2
- (C) 3
- (D) 4

8 Which option in the table correctly matches each enterprise with its sector?

	<i>Wheat enterprise</i>	<i>Potato enterprise</i>	<i>Beef enterprise</i>	<i>Turf enterprise</i>
(A)	Amenity Horticulture	Crop Production	Livestock Production	Production Horticulture
(B)	Production Horticulture	Crop Production	Livestock Production	Amenity Horticulture
(C)	Crop Production	Amenity Horticulture	Livestock Production	Production Horticulture
(D)	Crop Production	Production Horticulture	Livestock Production	Amenity Horticulture

- 9** Two farm hands are fencing a canola paddock. One is stung by a bee and has a severe allergic reaction.

Using the steps below, what is the correct sequence of action to be taken by the other farm hand?

- 1 Send or call for help.
- 2 Check for a response by talk and touch.
- 3 Check to see if there are any more bees nearby.
- 4 Check to see if the patient is breathing.
- 5 Open the patient's airway and ensure it is clear.

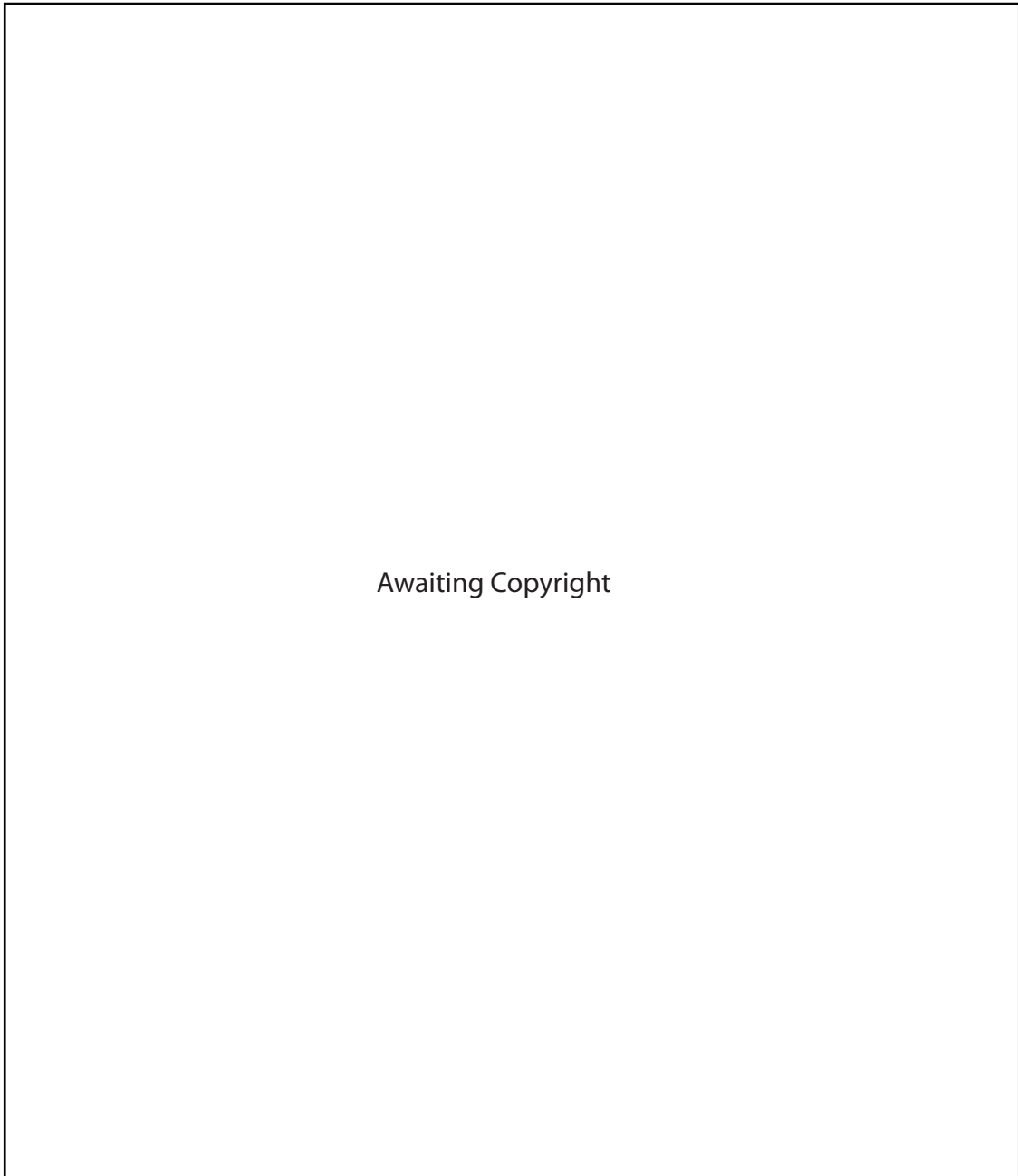
- (A) 1, 2, 3, 4, 5
(B) 1, 3, 2, 5, 4
(C) 3, 1, 2, 4, 5
(D) 3, 2, 1, 5, 4

- 10** Health and safety laws, regulations and codes of practice are important for the control and regulation of health and safety in the workplace.

Which of these statements is NOT correct?

- (A) Regulations are legally enforceable.
(B) Codes of Practice are legally enforceable.
(C) An Act sets out requirements ensuring that workplaces are healthy and safe.
(D) A Code of Practice provides advice on how to meet regulatory requirements.

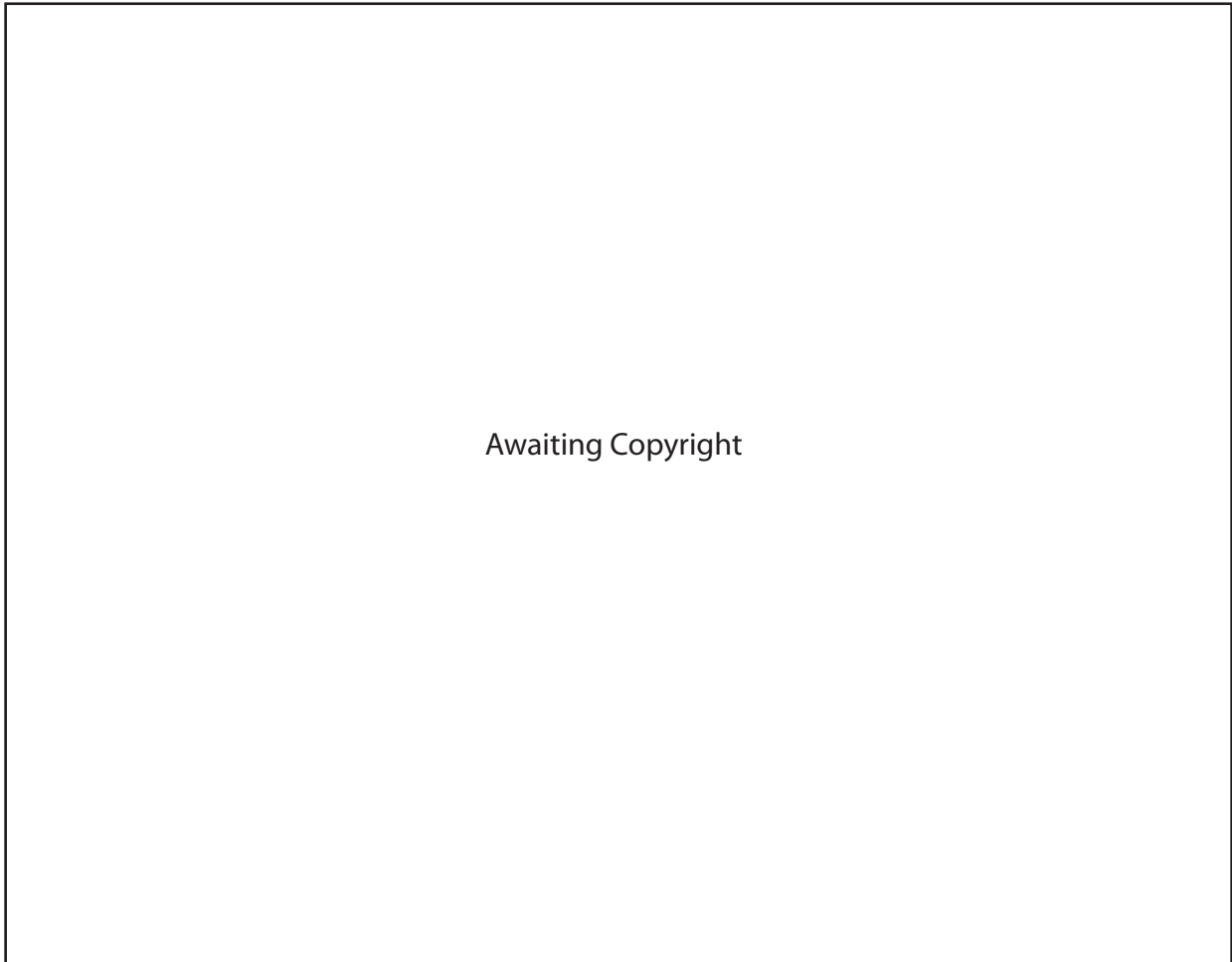
- 11 The diagrams show extracts from an emergency information panel and a HAZCHEM Emergency Action Code.



After dialling 000, which set of actions is recommended to control a spill of this chemical?

- (A) Use a fine spray and breathing apparatus, contain the spill and consider evacuation
- (B) Use a dry agent and breathing apparatus, dilute the chemical and consider evacuation
- (C) Use foam and breathing apparatus, wear a liquid-tight chemical protective suit and contain the spill
- (D) Use a fine spray, consider evacuation, wear a liquid-tight chemical protective suit and dilute the chemical

12 You have been asked to spray a 120 ha pasture paddock in NSW to control capeweed.



Using this chemical label extract, how much chemical is required to spray this paddock?

- (A) 14 litres
- (B) 100 litres
- (C) 168 litres
- (D) 280 litres

13 The following table shows your work diary for last week.

<i>Day/date</i>	<i>Employer</i>	<i>Hours worked or number of runs</i>	<i>Base Rate of pay</i>
Monday	J. Smith	4	\$50/ run
Tuesday	J. Smith	4	\$50/ run
Wednesday	B. Jones	8	\$20/ hour
Thursday	B. Jones	8	\$20/ hour
Friday	B. Jones	8	\$20/ hour

You worked as a shed hand for the first two days of the week and were paid by the run. The next three days you worked as a farm hand and were paid by the hour. Friday was a public holiday and you were paid double time. Your employers are required to pay the minimum superannuation contribution of 9% of your gross salary to your superannuation fund.

What is the correct amount of total superannuation contributions to be made by your employers?

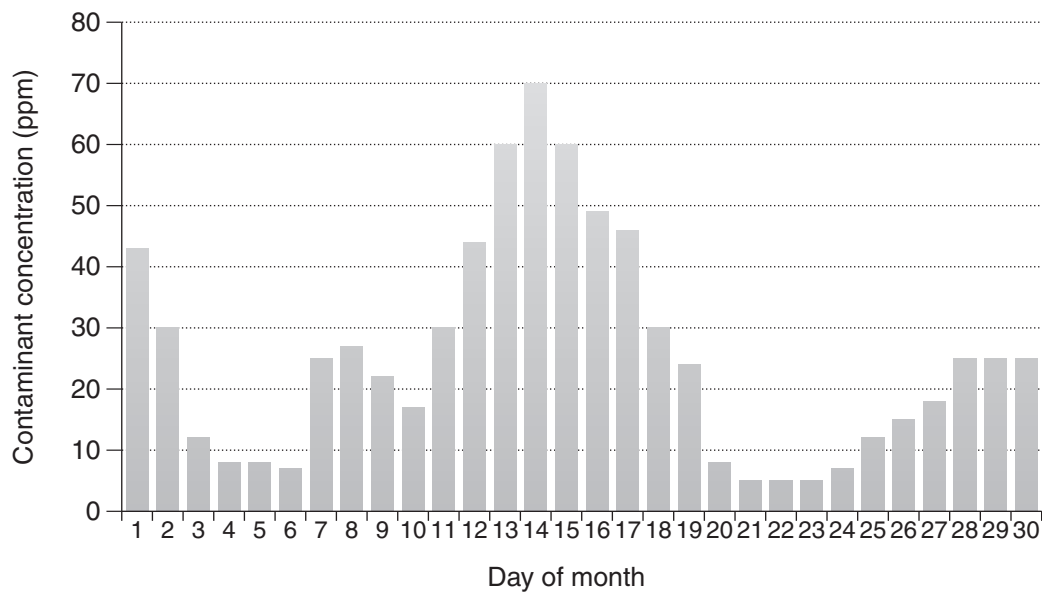
- (A) \$93.60
- (B) \$79.20
- (C) \$9.36
- (D) \$9.00

14 Fencing wire can be joined using different knots.

In which of the following is each situation matched with the most appropriate knot?

	Joining plain wire of the same gauge over long strains	Joining barbed wire	Joining plain wire in short strains
(A)	Figure 8	Double loop	Pin and loop
(B)	Double loop	Figure 8	Bullwire
(C)	Pin and loop	Bullwire	Figure 8
(D)	Bullwire	Pin and loop	Double loop

- 15 The concentration of a contaminant in a stream is monitored over 30 days. The results are graphed below.



The table shows the maximum contaminant concentration allowable for use in livestock drinking water, and the irrigation of food and non-food crops.

<i>Water use</i>	<i>Maximum contaminant concentration (ppm)</i>
Water for livestock	Less than 10
Irrigation for food crop	Less than 20
Irrigation for non-food crop	Less than 50

Which option correctly shows the number of days that water was available for each specific use?

	Livestock drinking water	Irrigation for food crop	Irrigation for non-food crop
(A)	8	14	24
(B)	27	15	8
(C)	8	13	27
(D)	22	17	3

BLANK PAGE

BLANK PAGE

BLANK PAGE

Primary Industries

--	--	--	--	--

Centre Number

Section II

35 marks

Attempt Questions 16–20

Allow about 50 minutes for this section

--	--	--	--	--	--	--	--	--

Student Number

Answer the questions in the spaces provided. These spaces provide guidance for the expected length of response.

Question 16 (4 marks)

There is severe gully erosion in a paddock used for livestock. The farmer decides to fence the gully off and take that part of the paddock out of production.

(a) Why is it important to fence the gully?

1

.....

.....

.....

.....

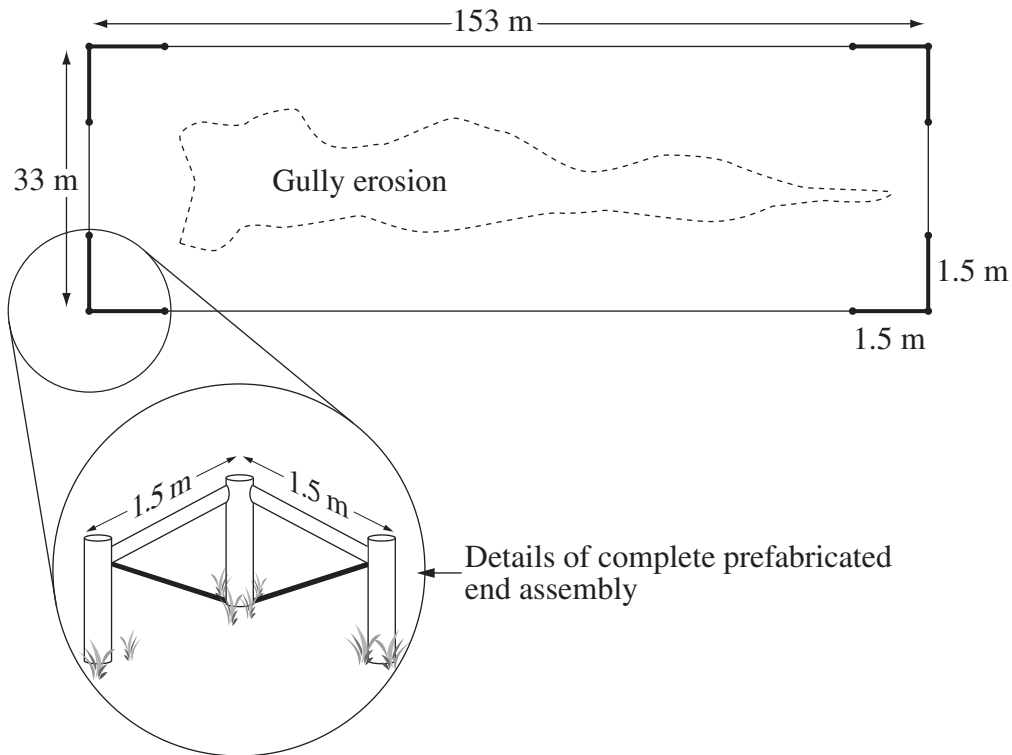
Question 16 continues on page 14

Question 16 (continued)

- (b) The fence will consist of three strands of plain wire with rabbit-proof wire netting attached. It will be supported by steel line posts spaced at five-metre intervals. There will be four prefabricated corner end assemblies used. Wire will be purchased by the roll.

3

The diagram shows the fencing job required.



Complete the table to show the costs of materials required and the total cost.

<i>Materials</i>	<i>Number required</i>	<i>Cost (\$)</i>
Steel line posts at \$7 each		
Plain wire at \$100 per 1200 metre roll		
Wire netting at \$260 per 400 metre roll		
Prefabricated corner end assemblies at \$100 per unit		
	Total cost of materials =	

End of Question 16

Question 17 (6 marks)

Kerry is one of a team of trainees at a rural produce store. The supervisor has a team meeting every fortnight. Staff rosters are put up at these meetings.

At a meeting two months ago, Kerry asked to have a weekend off to attend an important family function. The supervisor agreed to this request. Two weeks before the function, the roster showed Kerry was down to work that weekend. Kerry said to the supervisor, ‘Two months ago I organised with you to have this weekend off.’ The supervisor replied, ‘I don’t remember that. The roster is set and it is our big weekend.’

- (a) Outline how meeting procedures could have been improved to avoid this situation. **3**

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

- (b) Provide strategies that the supervisor could use to resolve this situation with Kerry. **3**

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

BLANK PAGE

Primary Industries

--	--	--	--	--

Centre Number

Section II (continued)

--	--	--	--	--	--	--	--	--

Student Number

Question 18 (9 marks)

A farmer plans to install a water pipeline from the farm shed to the farm residence. The pipeline will be laid 600 mm underground and is 200 metres long. A pipe-layer will be attached to a tractor via the three-point linkage system.

- (a) Identify TWO hazards associated with this activity. 2

.....

.....

.....

.....

- (b) Describe the risks associated with ONE of the hazards identified in part (a). 2

.....

.....

.....

.....

Question 18 continues on page 18

Question 18 (continued)

- (c) Evaluate control strategies that could be used to minimise the risks associated with this activity.

5

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

End of Question 18

Primary Industries

--	--	--	--	--

Centre Number

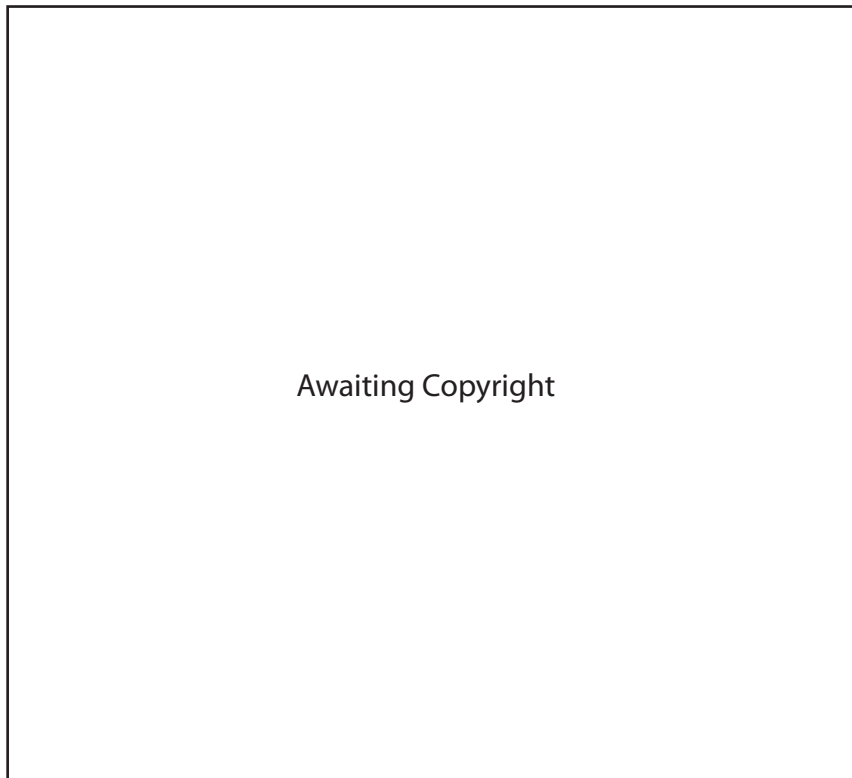
Section II (continued)

--	--	--	--	--	--	--	--	--	--

Student Number

Question 19 (7 marks)

The weather map indicates the weather across NSW for 25 August. The front is moving at a constant speed of 25 km/hour in an easterly direction.



- (a) How long before the front should reach X?

1

.....

Question 19 continues on page 20

Question 19 (continued)

- (b) What are the likely impacts of the weather conditions associated with this front on the prime-lamb production enterprise at X? **2**

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

- (c) Explain strategies to reduce the impacts of these weather conditions at the prime-lamb enterprise. **4**

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

End of Question 19



2012 HIGHER SCHOOL CERTIFICATE EXAMINATION

Primary Industries

--	--	--	--	--

Centre Number

Section II (continued)

--	--	--	--	--	--	--	--	--

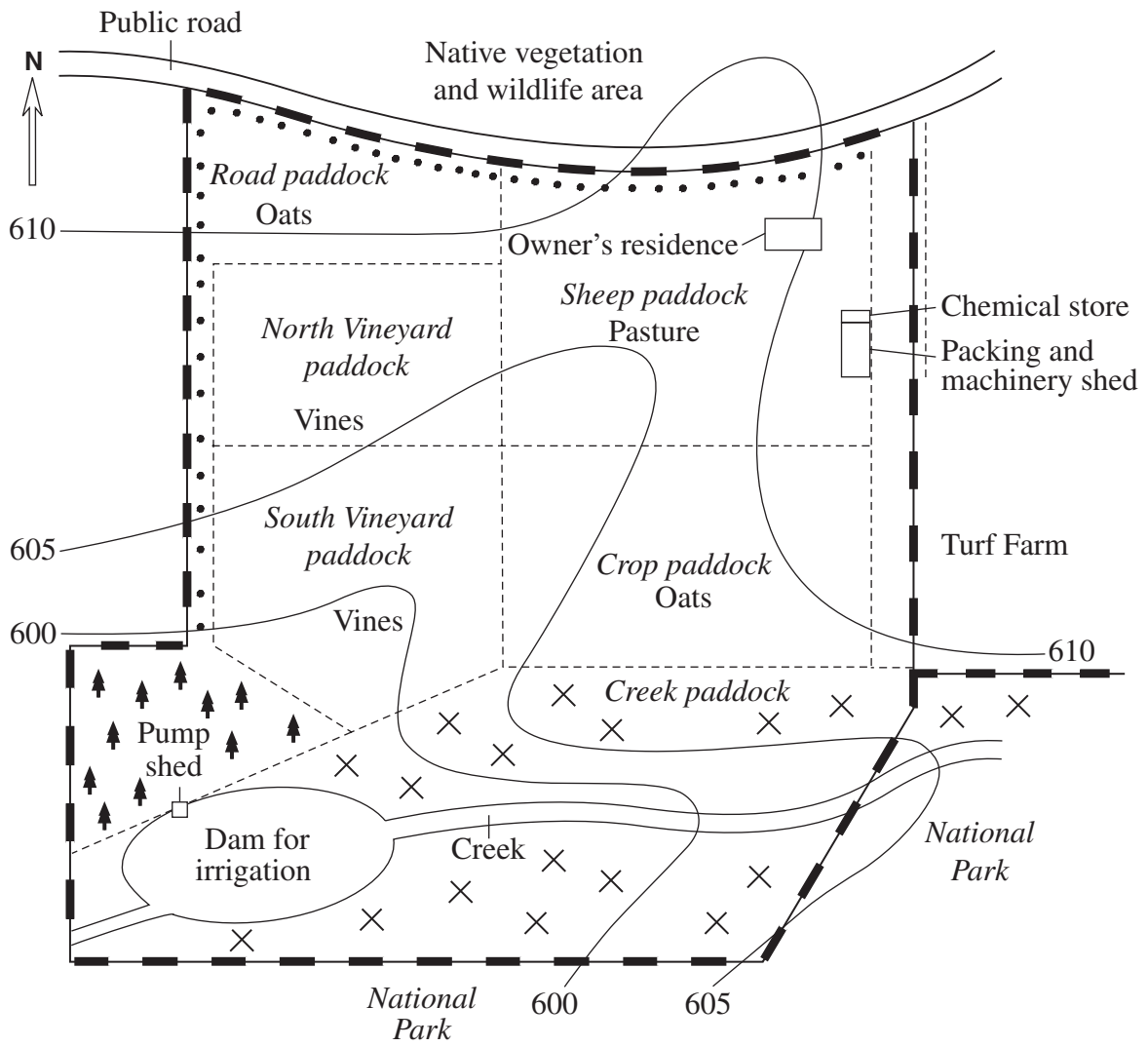
Student Number

Question 20 (9 marks)

Please turn over

Question 20 (continued)

The diagram shows a plan of a farm with a number of enterprises.



KEY	
Scale: 1 cm = 100 metres	1 hectare (1 ha) = 10 000 m ²
— Property boundary	605 ~ Height above sea level (m)
- - - Internal fences	• Windbreak
□ Buildings	▲ Woodlot
× Native vegetation and wetland	

Question 20 continues on page 23

Question 20 (continued)

- (a) Name ONE risk that would have to be considered when using chemicals to control a ryegrass infestation in the crop paddock. **1**

.....

- (b) What strategies could be implemented to reduce this risk? **2**

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

- (c) Following treatment for ryegrass in the crop paddock, areas of ryegrass survived. Describe TWO possible reasons for this. **2**

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

- (d) Describe strategies that could be used to reduce the likelihood of this occurring again. **4**

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

End of Question 20

BLANK PAGE

Primary Industries

Section III

15 marks

Attempt Question 21

Allow about 25 minutes for this section

Answer the question in a writing booklet. Extra writing booklets are available.

In your answer you will be assessed on how well you:

- demonstrate knowledge and understanding relevant to the question
 - communicate ideas and information using relevant workplace examples and industry terminology
 - present a logical and cohesive response
-

Question 21 (15 marks)

Evaluate the effectiveness of a range of communication strategies used in primary industry enterprises for both routine and emergency situations.

Please turn over

Section IV

15 marks

Attempt Question 22

Allow about 25 minutes for this section

Answer the question in a SEPARATE writing booklet. Extra writing booklets are available.

Question 22 (15 marks)

Awaiting Copyright

A fencing project is planned for TWO consecutive days on the boundary between a property and a national park. The area to be fenced is in an isolated part of the property. A seven day weather forecast for the area is shown in the table.

- (a) Justify reasons for choosing particular days to carry out this project in terms of personal safety, climatic considerations and work efficiency. **6**
- (b) Develop and evaluate an emergency plan for this project including examples of emergency risks that should be considered. **9**

End of paper