

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

2005

**HIGHER SCHOOL CERTIFICATE
EXAMINATION**

Primary Industries

General Instructions

- Reading time – 5 minutes
- Working time – 2 hours
- Write using black or blue pen
- Board-approved calculators may be used
- Write your Centre Number and Student Number at the top of pages 9, 11, 13, 17 and 19

Total marks – 80

Section I Pages 2–8

15 marks

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

Section II Pages 9–21

35 marks

- Attempt Questions 16–20
- Allow about 45 minutes for this section

Section III Page 23

30 marks

- Attempt TWO questions from Questions 21–23
- Allow about 1 hour for this section

Section I

15 marks

Attempt Questions 1–15

Allow about 15 minutes for this section

Use the multiple-choice answer sheet.

Select the alternative A, B, C or D that best answers the question. Fill in the response oval completely.

Sample: $2 + 4 =$ (A) 2 (B) 6 (C) 8 (D) 9
A B C D

If you think you have made a mistake, put a cross through the incorrect answer and fill in the new answer.

A B C D

If you change your mind and have crossed out what you consider to be the correct answer, then indicate the correct answer by writing the word *correct* and drawing an arrow as follows.

A B C D
correct ↙

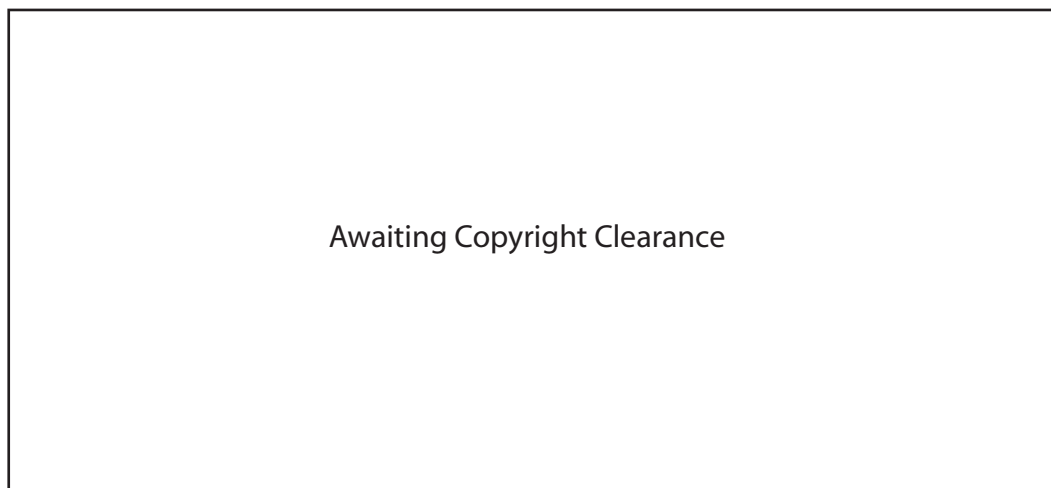
1 Which of the following NSW Acts of Parliament is NOT environmental legislation?

- (A) OHS Act 2000
- (B) Water Management Act 2000
- (C) Protection of the Environment Operations Act 1997 (NSW)
- (D) National Parks and Wildlife Amendment Act 2001 (NSW)

2 Which of the following classes of livestock is most affected by wind-chill exposure?

- (A) Adult livestock
- (B) Newborn livestock
- (C) Livestock following marking
- (D) Livestock following weaning

3 Which of the following knots has the LEAST effect on the tensile strength of joined wire?



4 You find a workmate unconscious on the floor of a workshop.

Which of the following shows the most correct order of first-aid action?

- (A) Check for your safety, check response, check airways, check breathing, check pulse
- (B) Check for your safety, check pulse, check response, check breathing, check airways
- (C) Check pulse, check breathing, check airways, check for your safety, check response
- (D) Check pulse, check for your safety, check response, check airways, check breathing

- 5 You do not understand an instruction given to you by your workplace supervisor.
What is the most appropriate course of action to deal with this problem?
- (A) Ask another worker.
 - (B) Ask the supervisor to clarify the instructions.
 - (C) Interrupt the supervisor while he/she is talking to you.
 - (D) Commence the task and work out the problem yourself.
- 6 What does the *active constituent* statement on a chemical label tell us?
- (A) The level of the hazard and PPE requirements
 - (B) The name of the chemical and its concentration
 - (C) The manufacturer of the product and container size
 - (D) The chemical mode of action and dangerous goods class
- 7 Which TWO parties agree on an industrial award?
- (A) Employers and employees
 - (B) Employers and unions
 - (C) Unions and employees
 - (D) Unions and government

8 The table shows a comparison of some frequently used tick treatments.

<i>Product</i>	<i>Domestic meat withholding period</i>	<i>ESI (Export Slaughter Interval)</i>	<i>Milk withholding period</i>	<i>Minimum re-treatment interval to maintain the withholding period</i>
<i>A</i>	0	0	0	21 days
<i>B</i>	14 days	28 days (multiple treatments 40 days)	N/A	28 days
<i>C</i>	42 days	42 days	N/A	42 days
<i>D</i>	28 days	42 days	N/A	28 days
<i>E</i>	42 days	42 days	N/A	56 days
<i>F</i>	42 days	49 days	N/A	28 days
<i>G</i>	42 days	42 days	N/A	42 days
<i>H</i>	8 days	21 days	N/A	21 days

Reproduced with the permission of Fort Dodge Australia Pty Ltd

A group of animals was treated 43 days ago with one of these products. They are now past the domestic meat withholding period but still within the ESI.

Which product was used on the group of animals?

- (A) Product *C*
- (B) Product *E*
- (C) Product *F*
- (D) Product *G*

- 9 Which Act does this advertisement breach?

Landscape Estimating Cadetship
Looking for a career in landscaping?

This is an excellent opportunity for a person under 25 years to start a career as a landscape estimator for a leading landscape construction company located in Goldtown. Ideally suited to a school leaver who enjoys a challenge and can solve problems. Must have own transport.

Please call on 1234 5678
or fax résumé to 8765 4321

- (A) Affirmative Action Act 1986
- (B) Anti-Discrimination Act 1977 (NSW)
- (C) Sex Discrimination Act 1984 (NSW)
- (D) Racial Discrimination Act 1975 (NSW)
- 10 An employee arrives at work to find an item of equipment with a safety tag attached. The tag states 'DO NOT OPERATE'.
- What procedure should be followed?
- (A) Leave the tag in place and look for alternative equipment to do the job.
- (B) Remove the tag, check the equipment and then operate the equipment.
- (C) Leave the tag in place and inform the supervisor that you are using the equipment.
- (D) Leave the tag in place, check the equipment for faults and then operate the equipment.
- 11 Which of the following hierarchies of options for waste management will maximise conservation of resources?
- (A) Dispose, recycle, re-use, avoid
- (B) Recycle, dispose, avoid, re-use
- (C) Avoid, re-use, recycle, dispose
- (D) Avoid, dispose, re-use, recycle

12 The table below shows what to do in a chemical emergency.

Which row in the table shows the correct order of procedures to follow in a chemical emergency?

	<i>Remain upwind of emergency scene</i>	<i>Determine if anybody is injured</i>	<i>Notify emergency services</i>	<i>Identify the type of emergency</i>	<i>Note time and location of emergency</i>	<i>Identify the chemical involved</i>
(A)	1	3	6	2	5	4
(B)	1	5	2	6	3	4
(C)	1	4	6	3	5	2
(D)	1	3	4	2	5	6

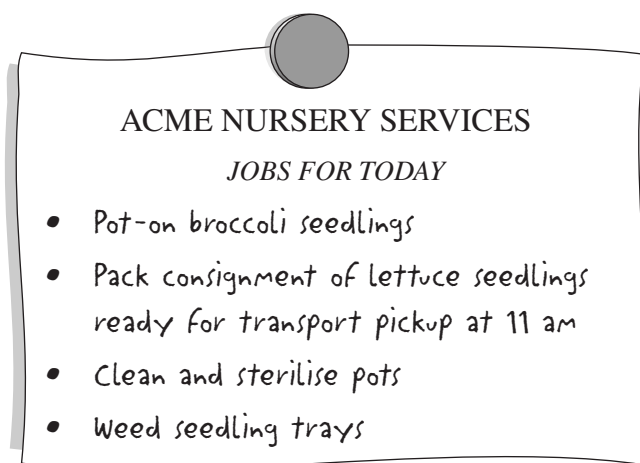
13 The table below shows the cost per pack of four different agricultural products.

	Product A	Product B	Product C	Product D
<i>Pack size</i>	15 litre	5 litre	5 litre	20 litre
<i>Application rate (per unit)</i>	35 mL	35 mL	20 mL	75 mL
<i>Cost per pack</i>	\$1325 .00	\$563 .00	\$766 .00	\$616 .00

Which product is the MOST expensive per dose?

- (A) Product A
- (B) Product B
- (C) Product C
- (D) Product D

- 14 What procedure is followed in NSW if a noxious weed is declared as category W3?
- (A) The weed must not be sold, propagated or knowingly distributed.
 (B) The weed must be fully and continually suppressed and destroyed.
 (C) The weed's presence must be notified to the local control authority.
 (D) The weed must be prevented from spreading and its numbers reduced.
- 15 On arrival at work at 8.00 am, you find the following list of jobs fixed to the glasshouse.



NSW Department of Primary Industries, 'Noxious weed declarations in NSW': <http://www.agric.nsw.gov.au/tools/weedindex.html?find=category>

Upon entering the glasshouse you notice that the seedlings have wilted because the watering system is leaking.

Using the information in the table, which is the most important priority order for the tasks?

<i>Tasks</i>	<i>Priority order 1</i>	<i>Priority order 2</i>	<i>Priority order 3</i>	<i>Priority order 4</i>
Weed seedling trays	1	5	4	5
Fix watering system	2	4	5	1
Pot-on broccoli seedlings	3	3	1	4
Pack lettuce seedling consignment	4	2	2	2
Clean and sterilise pots	5	1	3	3

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

Primary Industries

--	--	--	--	--

Centre Number

Section II

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

Student Number

35 marks

Attempt Questions 16–20

Allow about 45 minutes for this section

Answer the questions in the spaces provided.

	Marks
Question 16 (7 marks)	
(a) Define the term <i>weed</i> .	1
.....	
.....	
(b) Name TWO important botanical structures that help you identify a weed.	2
.....	
.....	
(c) Evaluate the relevance and reliability of TWO sources of information you accessed about the identification and distribution of weeds.	4
.....	
.....	
.....	
.....	
.....	
.....	

BLANK PAGE

--	--	--	--	--

Centre Number

Section II (continued)

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

Student Number

Marks

Question 17 (7 marks)

Use the following information to answer parts (a)–(c).

Trailer sprayer 200 litre

Multi-purpose trailer sprayer complete with 12-volt diaphragm pump, heavy duty frame, large flotation tyres for stability, 4-metre Blockmaster galvanised (hot-dipped) folding boom, 6 metres of hose and adjustable spray lance.



Reproduced with the permission of Croplands

- (a) If you are required to add 8 mL of chemical to 80 litres of water, calculate how much chemical is required in a full tank of the trailer sprayer. 1

.....

- (b) List TWO pieces of information that you would require to calibrate this trailer sprayer. 2

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

- (c) Outline the steps in a pre-operational check of the trailer sprayer. 4

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

BLANK PAGE

Primary Industries

--	--	--	--	--

Centre Number

Section II (continued)

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

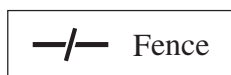
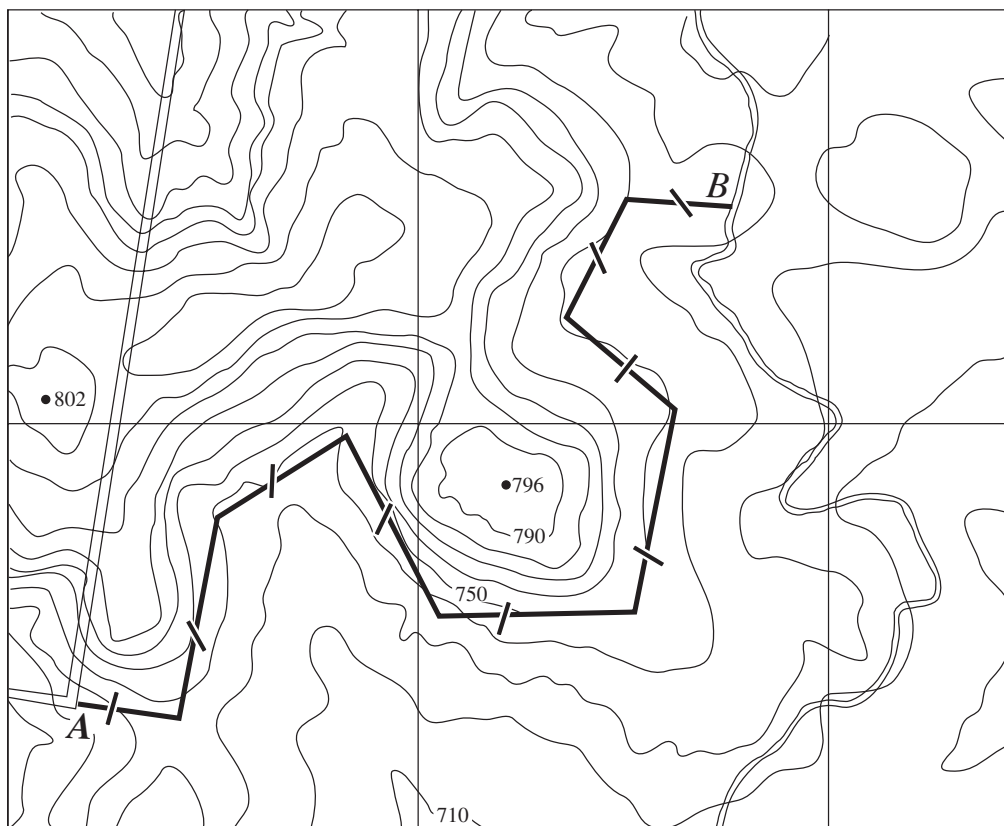
Student Number

Question 18 (7 marks)

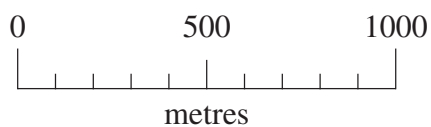
Please turn over

Question 18 (7 marks)

Use the contour map and table of information to answer parts (a)–(c).



Contour interval 10 metres



(c) Department of Lands, Panorama Avenue Bathurst 2795
www.lands.nsw.gov.au (Hypertext linkage)

<i>Wire size</i>	<i>Length per coil</i>	<i>Approximate weight per coil</i>
2.5 mm Tyeasy® high-tensile plain wire	1500 metres	58 kg
1.8 mm high-tensile barbed wire	500 metres	28 kg

Question 18 continues on page 15

Question 18 (continued)

- (a) Determine the length of the fence from point *A* to point *B*. **1**

.....

- (b) The fence is constructed of four plain wires and two barbed wires. **2**

Calculate how many coils of plain wire and barbed wire need to be purchased.

Coils of plain wire:

Coils of barbed wire:

- (c) Explain TWO reasons why the farmer has chosen to site the fence as shown on the map. **4**

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

End of Question 18

BLANK PAGE

Primary Industries

--	--	--	--	--

Centre Number

Section II (continued)

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

Student Number

Marks

Question 19 (6 marks)

You are working in a nursery located in an urban area. The nursery backs onto bushland with a creek running through it.

It is Friday afternoon and the owner of the business is away. The load of five tonnes of loam you have been waiting for for the last two days arrives at 4.30 pm. The truck driver is in a hurry and dumps the load on the sloping area in front of the storage bunkers. Overnight there is a storm that drops 150 mm of rainfall on the nursery.

Upon arrival next day you notice that a large quantity of the soil has washed down through the bushland into the creek.

- (a) Name the NSW Act of Parliament that has been contravened in this incident. **1**

.....

- (b) Which government agency is responsible for administering this Act? **1**

.....

- (c) Outline FOUR strategies that could be used to prevent this incident happening again. **4**

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

BLANK PAGE

Primary Industries

--	--	--	--	--

Centre Number

Section II (continued)

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

Student Number

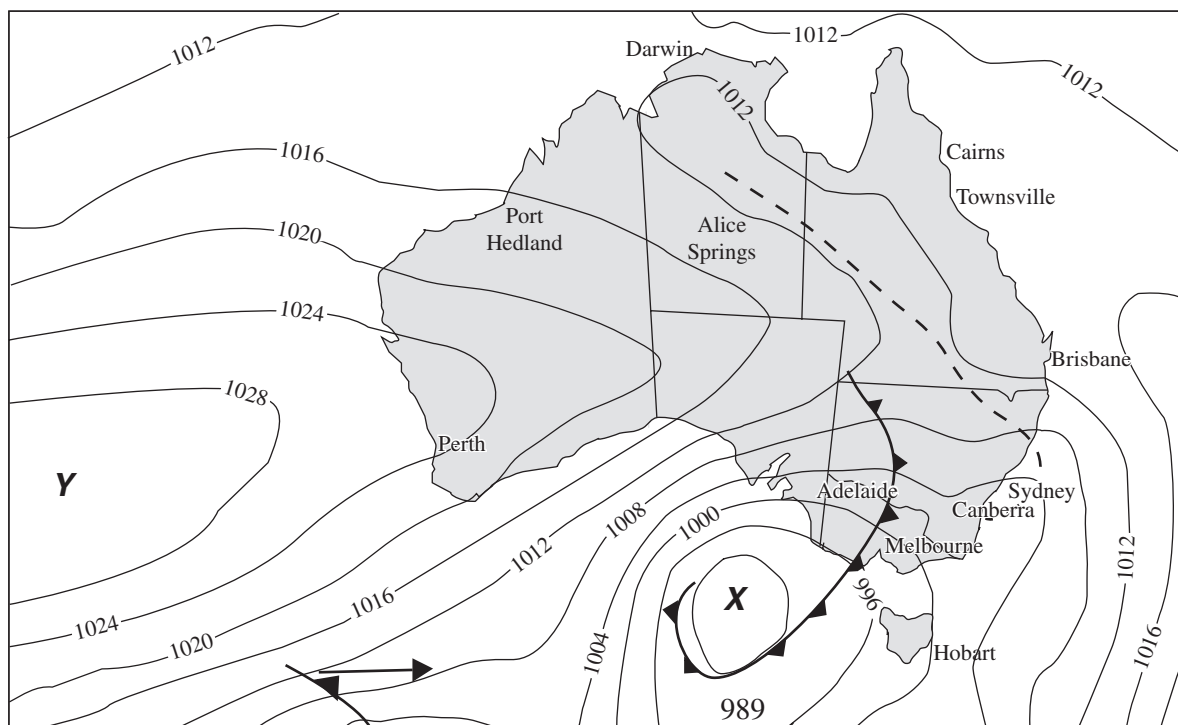
Question 20 (8 marks)

Please turn over

Question 20 (8 marks)

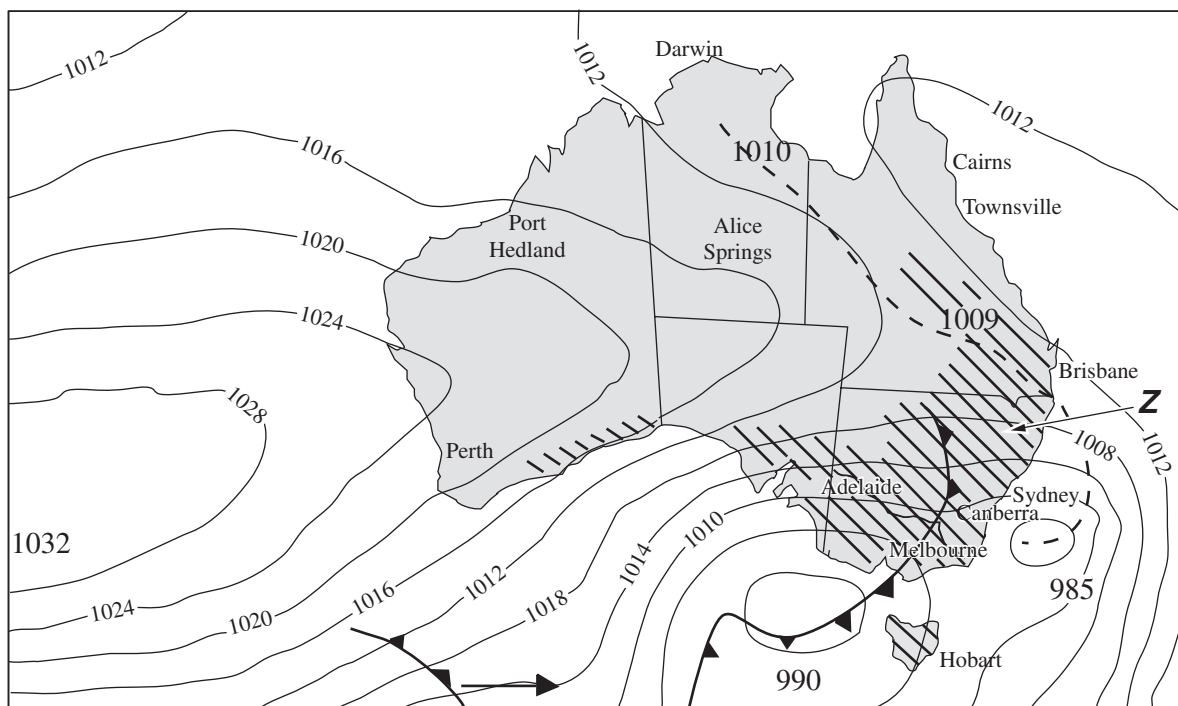
Refer to maps *A* and *B* to answer parts (a)–(d).

Map A — 10 pm 2 August 2004



Provided by the Australian Government Bureau of Meteorology

Map B — 4.00 am 3 August 2004



Provided by the Australian Government Bureau of Meteorology

Question 20 continues on page 21


Question 20 (continued)

- (a) Identify the type of pressure system at point **X** and at point **Y** located on map A. **2**

.....
.....

- (b) In which direction will winds travel around pressure system **X**? **1**

.....

- (c) What does the symbol  indicate on the weather maps? **1**

.....

- (d) Using information from maps *A* and *B*, outline the changes in weather conditions at point **Z** between 10 pm on 2 August and 12 noon on 3 August 2004, and identify a possible consequence of this weather on a named agricultural enterprise at point **Z**. **4**

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

End of Question 20

BLANK PAGE

Primary Industries

Section III

30 marks

Attempt TWO questions from Questions 21–23

Allow about 1 hour for this section

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

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

- demonstrate relevant knowledge and understanding
 - communicate ideas and information, using precise industry terminology and appropriate workplace examples
 - organise information in a well-reasoned and cohesive response
 - solve proposed issues or problems
-

Question 21 (15 marks)

Describe the potential hazards that should be taken into account when developing a chemical-control plan for a broad-area weed control program.

Evaluate measures to control the identified hazards.

Justify the information you need to communicate to adjoining landholders and the communication strategies you might employ.

Question 22 (15 marks)

Analyse the OHS issues associated with the use of machinery and equipment during fence construction.

Construct a set of Standard Operating Procedures (SOPs) to minimise the OHS issues that you have identified.

Question 23 (15 marks)

Outline the life cycle of a weed that you have studied and its economic and environmental impacts.

Describe various measures that may be used to control the weed, and evaluate them against IPM principles.

Justify your inclusion OR non-inclusion of chemical control in your IPM program.

End of paper

BLANK PAGE