

**BOARD OF STUDIES**  
NEW SOUTH WALES

**2001**

**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 page 9

**Total marks – 80**

**Section I** Pages 2–7

**15 marks**

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

**Section II** Pages 9–15

**35 marks**

- Attempt Questions 16–21
- Allow about 45 minutes for this section

**Section III** Page 17

**30 marks**

- Attempt TWO questions from Questions 22–24
- 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* →

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- 1 A customer in a produce store notices that feed bags stacked on pallets are likely to fall. The customer immediately informs the produce store owner.

Whose responsibility is it to ensure that the feed bags are either correctly restacked or moved to a safer position?

- (A) The customer
  - (B) The produce store owner
  - (C) An employee of the produce store
  - (D) An Occupational Health and Safety officer
- 2 Which emergency action should an operator take first when fumigant is leaking from a valve in a wheat silo?
- (A) Repair the valve
  - (B) Put on full protective gear
  - (C) Inform the supervisor immediately
  - (D) Find the source of the fumigant and shut off the chemical flow
- 3 To control a pest in a crop, a person wishes to apply a chemical at a rate of 1 L/ha. The output from the boom spray is 100 L/ha.

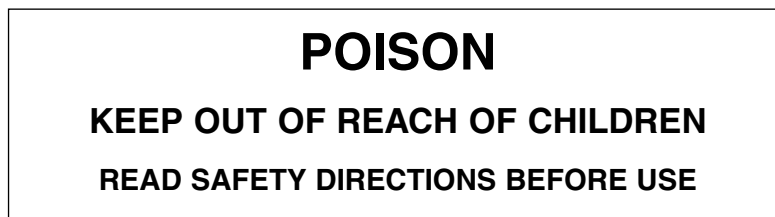
How much chemical should be added to the 500 L boom spray tank?

- (A) 1 L
  - (B) 5 L
  - (C) 100 L
  - (D) 500 L
- 4 A married female applicant is unsuccessful in gaining a position in a farm supplies business. She is told that it is company policy not to employ females because pregnancy may interfere with their work.

What form of discrimination may the applicant have experienced?

- (A) Discrimination on the basis of race
- (B) Discrimination on the basis of gender
- (C) Discrimination on the basis of disability
- (D) Discrimination on the basis of marital status

- 5 How should a plastic bag, which had contained a veterinary or agricultural chemical, be disposed of?
- (A) Burn the plastic bag.
  - (B) Place the plastic bag in a recycle bin.
  - (C) Triple rinse the bag and return it to point of supply.
  - (D) Rinse, puncture and bury the plastic bag in a local authority landfill.
- 6 Where should the quantity of an agricultural chemical used on a farm be recorded?
- (A) In chemical storage records
  - (B) In the farmer's diary
  - (C) On the label of the container
  - (D) On the wall of the storage shed
- 7 You are asked to collect a chemical container from your employer's chemical storage. It has the following signal heading:



- What is the hazard level of this chemical?
- (A) Slightly toxic
  - (B) Moderate toxicity
  - (C) Moderate to highly toxic
  - (D) Highly toxic
- 8 Which of the following best describes the withholding period of an animal health product?
- (A) The period of time for which the animal health product is effective
  - (B) The period from administration of the product until the animal is sold
  - (C) The period from administration of the product until the animal is fit for human consumption
  - (D) The period from administration of the product until the animal can be slaughtered for human consumption

- 9** A farmer is responsible for providing which of the following items to a full-time farm hand?
- (A) Meal allowance and safe workplace
  - (B) Protective work clothes and meal allowance
  - (C) Safe workplace and superannuation scheme
  - (D) Superannuation scheme and protective work clothes

- 10** A primary industry worker wishes to remove a 200 L drum of diesel fuel from the rear of a table top truck.

Which of the following is the recommended way to achieve this task?

- (A) Reverse the vehicle up to a platform that is the same height as the vehicle and slide the drum off.
  - (B) Tip the drum on its side and let it roll off the back of the vehicle onto the ground.
  - (C) Lift the drum off with help from other workers who are standing on the vehicle.
  - (D) Tip the drum on its side and roll it into the bucket of a tractor or front end loader.
- 11** The pest management strategies carried out on four different farms are shown.

Farm 1: Pests are managed by mechanical controls only.

Farm 2: Pests are managed by using agricultural chemicals.

Farm 3: Pests are managed by using the cheapest available method.

Farm 4: Pests are managed by a variety of strategies that may include agricultural chemicals.

On which farm is integrated pest management used?

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

- 12** How would you calibrate a piece of equipment used to apply a pesticide?
- (A) Apply the pesticide and note its effectiveness.
  - (B) Compare the piece of equipment with a newly purchased piece of equipment.
  - (C) Use the numbers on the piece of equipment that indicate the amount of pesticide to be used.
  - (D) Compare the amount of pesticide delivered by the piece of equipment with a known standard.
- 13** The table shows dosage information provided on a 5 L container of an animal health product.

<i>Live weight</i> (kg)	<i>Dose</i> (mL)
10	2.5
11–20	5
21–30	7.5
31–40	10
41–50	12.5
51–60	15.0
61–70	17.5
71–80	20.0

A grazier wishes to drench a flock of 1200 adult sheep, whose live weight range is 41–60 kg.

How many containers of the above product would the grazier need to purchase?

- (A) 1
- (B) 2
- (C) 4
- (D) 20

- 14** Which is the best source of information on the appropriate personal protective equipment needed when using a farm chemical?
- (A) A newspaper
  - (B) A neighbouring farmer
  - (C) The chemical retailer
  - (D) The safety directions on the label
- 15** Within Australia, which activity has resulted in the greatest number of injuries in primary industries?
- (A) Tractor driving
  - (B) Falls from horses
  - (C) Handling and shearing sheep
  - (D) Lifting, pulling and pushing objects

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# Primary Industries

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Centre Number

## Section II

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Student Number

35 marks

Attempt Questions 16–21

Allow about 45 minutes for this section

Answer the questions in the spaces provided.

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**Question 16** (8 marks)

**Please turn over**

**Question 16** (8 marks)

(a) Identify and explain TWO work hazards shown in the drawing.

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**Question 16 continues on page 11**

**Question 16 (continued)**

- (b) Identify and explain how ONE piece of legislation that relates to a primary industry area attempts to make the workplace a safer environment. **4**

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**Question 17 (5 marks)**

Discuss the role of the employee in the management of noise hazards in modern agriculture. **5**

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**Question 18** (4 marks)

Select ONE of these pieces of equipment used for chemical application.

- Vaccinator
- Drench gun
- Spot sprayer
- Syringe

Name the piece of equipment selected

For the equipment you have selected:

- (a) Describe a pre-operative procedure required for that piece of equipment. **2**

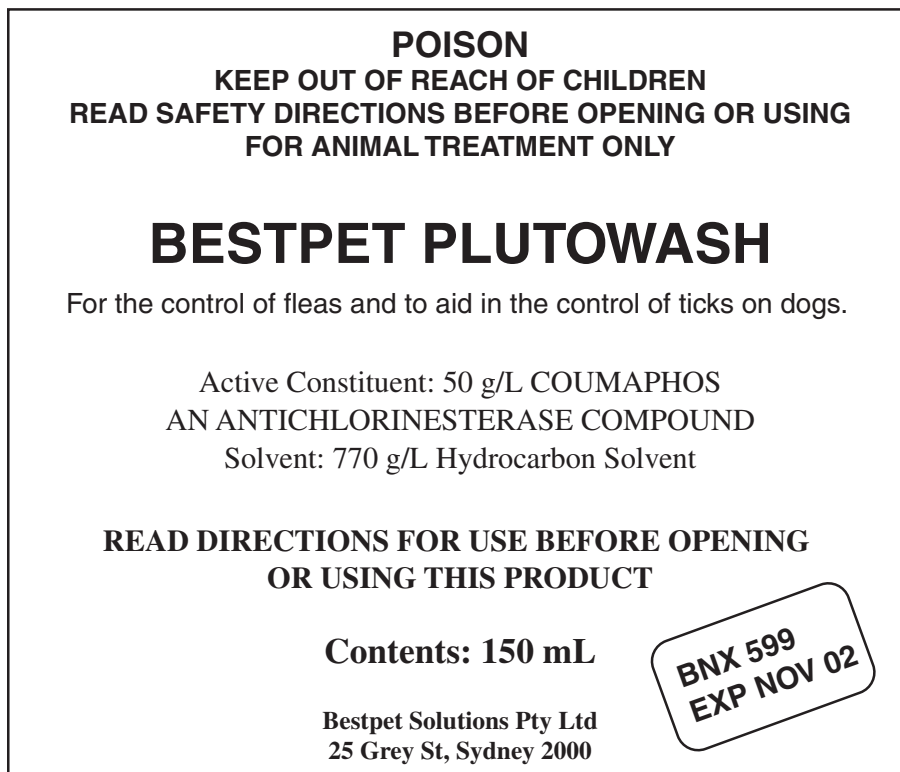
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- (b) Explain why a post-operative procedure is necessary. **2**

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**Question 19** (5 marks)

On 1 August 2001, your employer purchased a product containing Coumaphos from Smiths Farm Supplies. It had the following label front panel.



(a) Complete the following chemical inventory entry. 2

<i>Date purchased</i>	<i>Product name</i>	<i>Active ingredient</i>	<i>Manufacturer</i>	<i>Quantity in</i>	<i>Batch No</i>	<i>Expiry date</i>

(b) Why is it important to record the batch number and expiry date? 3

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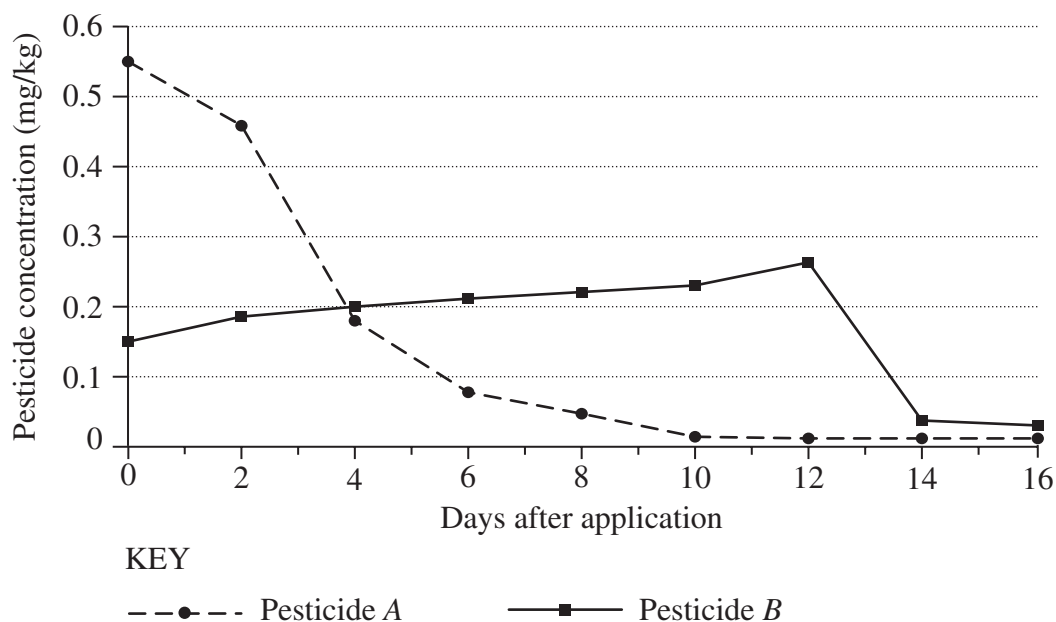
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**Question 20** (6 marks)

The graph represents the pesticide concentrations typically found on livestock after treatment with Pesticide A or Pesticide B to control external parasites.



- (a) On Day 3, what is the approximate pesticide concentration on livestock treated with Pesticide A? 1

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- (b) The re-entry period for a pesticide is the time from application until its concentration drops to an acceptable level. 1

For Pesticide A, this concentration is 0.2 mg/kg, for Pesticide B it is 0.05 mg/kg.

If animals were treated with BOTH pesticides at the same time, what would be the earliest day on which re-entry would be permitted?

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- (c) Explain the consequences that may result from slaughtering livestock for human consumption before the re-entry period has elapsed. 4

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**Question 21** (7 marks)

Your supervisor has planned a daily schedule of activities for you. The supervisor has instructed you to continue the safety audit of the business (to be completed in six months), collect and distribute mail, and attend to telephone messages.

You must also attend to some personal shopping.

As you arrive at your workplace, you observe that a fellow employee has been injured while operating equipment at work and requires assistance.

- (a) List, in priority order, the tasks and activities you will undertake during the day. **2**

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- (b) Justify your choice of the task to which you gave the highest priority. **2**

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- (c) Later in the day, you receive a customer complaint. You are unable to deal with the complaint, and leave a written message for your supervisor. Summarise the information that you would include in your written message. **3**

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## Primary Industries

### Section III

**30 marks**

**Attempt TWO questions from Questions 22–24**

**Allow about 1 hour for this section**

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

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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
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#### **Question 22** (15 marks)

Critically examine a range of occupational health and safety (OH&S) issues in a primary industry OR veterinary care workplace, and the strategies that could be used to inform employees of these issues.

#### **Question 23** (15 marks)

Evaluate a range of procedures that could be implemented to both minimise and manage chemical spills in primary industry workplaces.

#### **Question 24** (15 marks)

Evaluate the procedures used in designing and implementing a chemical control program that you have studied.

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