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, 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 9–20
35 marks
• Attempt Questions 16–19
• Allow about 45 minutes for this section

Section III Page 21
30 marks
• Attempt TWO questions from Questions 20–22
• 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 for Questions 1–15.

1 An employee has been bitten on the leg by a snake.

What is the most appropriate action to take?

(A) Apply an elevating sling
(B) Apply a freezing cold pack
(C) Apply a constricting tourniquet
(D) Apply a pressure immobilisation bandage

2 Several people have been injured in an accident.

Which injury should be treated first?

(A) Severe bleeding
(B) Multiple abrasions
(C) Burns to the limbs
(D) A fracture of the lower leg

3 When using a farm chemical, which is the best information source to consult about appropriate personal protective equipment (PPE)?

(A) The MSDS
(B) The employer
(C) The chemical supplier
(D) The local produce store

4 Which records best meet the legislative requirements for record keeping in relation to pesticide application?

(A) Name of operator, name of chemical used, application rate, date of application
(B) Name of operator, name of chemical used, time of day applied, application rate
(C) Name of chemical used, PPE used, application rate, number of weeds per hectare
(D) Name of chemical used, brand of application equipment used, application rate, date of application
The table shows a herbicide application rate for weed control.

<table>
<thead>
<tr>
<th>State</th>
<th>Weeds controlled</th>
<th>Rate (vol/ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA WA only</td>
<td>Barley grass, Volunteer cereals, Wild oats</td>
<td>800 mL</td>
</tr>
<tr>
<td></td>
<td>Canary grass, Variegated thistle, Saffron thistle</td>
<td>1.0 L</td>
</tr>
<tr>
<td>NSW VIC TAS</td>
<td>Annual ryegrass, Paterson’s curse, Saffron thistle</td>
<td>1.2 L</td>
</tr>
<tr>
<td></td>
<td>Erodum, Plantain, Sorrel, Sub-clover</td>
<td>2.0 L</td>
</tr>
<tr>
<td></td>
<td>Dock, Flatweed</td>
<td>2.5 L</td>
</tr>
</tbody>
</table>

Courtesy of Nufarm Australia Limited

How much chemical is required to spray 29 hectares of Saffron thistle in NSW?

(A) 23.2 L  
(B) 29.0 L  
(C) 34.8 L  
(D) 58.0 L

The table shows the amount of product required per animal.

<table>
<thead>
<tr>
<th>Bodyweight (kg)</th>
<th>Dose volume (mL)</th>
<th>Number of sheep treated per 5 L pack</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 10 kg</td>
<td>10 mL</td>
<td>500</td>
</tr>
<tr>
<td>10.1 – 20 kg</td>
<td>12 mL</td>
<td>416</td>
</tr>
<tr>
<td>20.1 – 30 kg</td>
<td>15 mL</td>
<td>333</td>
</tr>
<tr>
<td>30.1 – 55 kg</td>
<td>20 mL</td>
<td>250</td>
</tr>
<tr>
<td>55.1 – 75 kg</td>
<td>25 mL</td>
<td>200</td>
</tr>
<tr>
<td>75.1 – 85 kg</td>
<td>30 mL</td>
<td>166</td>
</tr>
<tr>
<td>85.1 – 95 kg</td>
<td>35 mL</td>
<td>142</td>
</tr>
</tbody>
</table>

Add 5 mL for each 10 kg above 95 kg. © Bayer Australia Limited reproduced by permission

How many 5 L packs would be required to treat 420 lambs weighing 20 kg each and 140 sheep weighing 108 kg each?

(A) 2 packs  
(B) 3 packs  
(C) 4 packs  
(D) 5 packs
7  The diagram shows a weather map.

The pressure system at Point X is moving slowly in an easterly direction.

What weather conditions would you expect at Bourke from the information in the map?

(A) Calm and dry  
(B) Windy and dry  
(C) Hot and windy  
(D) Calm and wet

8  A fencing knot is illustrated.

What is the most appropriate use of this type of knot?

(A) Joining two plain wires  
(B) Joining plain wire to a post  
(C) Joining barbed wire together  
(D) Joining a hinge joint to plain wire
Information regarding the application of Insecticide X is given.

You wish to spray Insecticide X on a crop of carrots growing at Walgett that are going to be harvested on 7 November.

What is the correct application and latest date of application of this chemical to meet harvest requirements for this crop?

(A) Aerial application on 23 October
(B) Aerial application on 1 November
(C) Ground application on 23 October
(D) Ground application on 1 November
A table of toxicity data for four susceptible species is given.

<table>
<thead>
<tr>
<th>Species</th>
<th>Concentration of pesticide that will kill 50% of a population</th>
</tr>
</thead>
<tbody>
<tr>
<td>①</td>
<td>0.225 mg/L</td>
</tr>
<tr>
<td>②</td>
<td>22.5 mg/L</td>
</tr>
<tr>
<td>③</td>
<td>45.0 mg/L</td>
</tr>
<tr>
<td>④</td>
<td>225.0 mg/L</td>
</tr>
</tbody>
</table>

A pesticide has contaminated a water body. According to this data, which species is most susceptible to the pesticide?

(A) ①
(B) ②
(C) ③
(D) ④

A graph of the sale price of cows for a 12 month period is given.

Awaiting copyright

What is the difference in price of cows between September and December?

(A) A decrease of 32c/kg lwt
(B) A decrease of 48c/kg lwt
(C) An increase of 16c/kg lwt
(D) An increase of 48c/kg lwt
**12** What are the most important pieces of information that should be recorded on a telephone message pad when receiving a call?

(A) Date, name of caller, message, time  
(B) Name of caller, time, message, recipient  
(C) Time, date, name of caller, callback time  
(D) Date, time, message, caller contact details

**13** An employee is continually subjected to offensive jokes and written material. The employee has been told by fellow workmates not to make a fuss.

What is the next step the employee should take?

(A) Leave the company  
(B) Report the matter to the supervisor  
(C) Discuss the matter with family members  
(D) Approach the Anti-Discrimination Board
The tables show the following information.

### Hazchem codes with notes for guidance

<table>
<thead>
<tr>
<th>Organochlorine Pesticide, Liquid, Toxic (Contains Endosulfan)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hazchem:</strong> 2 X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Notes for guidance</strong></th>
<th><strong>Notes for guidance for fire or spillage</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FOG</strong></td>
<td>1. JETS 3. FOAM</td>
</tr>
<tr>
<td>In the absence of fog equipment, a fine spray may be used.</td>
<td></td>
</tr>
<tr>
<td><strong>DRY AGENT</strong></td>
<td>2. FOG 4. DRY AGENT</td>
</tr>
<tr>
<td>Water must not be allowed to come into contact with the substance at risk.</td>
<td></td>
</tr>
<tr>
<td><strong>V</strong></td>
<td>FULL</td>
</tr>
<tr>
<td>Can be violently or even explosively reactive.</td>
<td></td>
</tr>
<tr>
<td><strong>FULL</strong></td>
<td>BA</td>
</tr>
<tr>
<td>Full body protective clothing with BA</td>
<td></td>
</tr>
<tr>
<td><strong>BA</strong></td>
<td>BA for FIRE only</td>
</tr>
<tr>
<td>Breathing apparatus plus protective gloves.</td>
<td></td>
</tr>
<tr>
<td><strong>DILUTE</strong></td>
<td>BA</td>
</tr>
<tr>
<td>May be washed to drain with large quantities of water.</td>
<td></td>
</tr>
<tr>
<td><strong>CONTAIN</strong></td>
<td>BA for FIRE only</td>
</tr>
<tr>
<td>Prevent, by any means available, spillage from entering drains or water courses.</td>
<td></td>
</tr>
<tr>
<td><strong>CONSIDER EVACUATION</strong></td>
<td>BA for FIRE only</td>
</tr>
</tbody>
</table>

After dialling 000, which approach is the best method for controlling a spill of this chemical?

(A) Use fog, breathing apparatus, contain  
(B) Use dry agent, full body protective clothing, contain  
(C) Use fog, full body protective clothing, breathing apparatus, contain  
(D) Use dry agent, full body protective clothing, breathing apparatus, contain

According to the Occupational Health and Safety ACT 2000 (NSW), which statement best describes the responsibilities of employers?

(A) To maintain places of work under their control in a safe condition, and to ensure safe entrances and exits.  
(B) To provide the information, instruction, training and supervision necessary to ensure the health and safety of employees.  
(C) To provide and maintain employees or their representatives with the ability to negotiate conditions that are safe and fair.  
(D) To provide and maintain systems of work and work environments that are safe and without risks to health, provide training and consult with employees.
Question 16 (9 marks)
The diagram shows a property with a broadleaf weed infestation.
Question 16 (continued)

(a) What are the potential impacts of the broadleaf weed infestation on this property, on both agricultural production and the environment?

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(b) Propose TWO different control methods for the broadleaf weed. Describe the potential risks associated with these methods on both agricultural production and the environment.

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Question 17 (9 marks)
Question 17 (9 marks)

The dimensions of a paddock are shown on the diagram.

A rabbit proof fence is to be constructed around the paddock.

The fence will be constructed from hardwood posts, rabbit wire netting, steel posts and have 4 plain wires.

Steel posts will be spaced at 3 metre intervals.

(a) Calculate the total length of the fence in metres excluding the gate. 1

Question 17 continues on page 15
Question 17 (continued)

(b) Complete the following table.

<table>
<thead>
<tr>
<th>Number of strainer posts needed</th>
<th>...................................................</th>
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<tbody>
<tr>
<td>Number of diagonal stay posts needed</td>
<td>...................................................</td>
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<tr>
<td>Number of steel posts needed</td>
<td>...................................................</td>
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</tbody>
</table>

(c) Calculate the total cost of all materials needed to construct this rabbit proof fence.

<table>
<thead>
<tr>
<th>Materials needed</th>
<th>Working</th>
<th>Material cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plain wire in 1500 metre rolls at $205 per roll</td>
<td></td>
<td>........................</td>
</tr>
<tr>
<td>Rabbit wire netting in 100 metre rolls at $323 per roll</td>
<td></td>
<td>........................</td>
</tr>
<tr>
<td>Steel posts in bundles of 10 at $62 per bundle</td>
<td></td>
<td>........................</td>
</tr>
<tr>
<td>Strainer posts at $25 each</td>
<td></td>
<td>........................</td>
</tr>
<tr>
<td>Diagonal stay posts at $15 each</td>
<td></td>
<td>........................</td>
</tr>
<tr>
<td>COST OF MATERIALS</td>
<td></td>
<td>........................</td>
</tr>
<tr>
<td>Plus 10% GST</td>
<td></td>
<td>........................</td>
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<tr>
<td>TOTAL COST</td>
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<td>........................</td>
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Question 18 (8 marks)

(a) List THREE ways in which you could communicate details of this clearing sale to potential buyers.

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Question 18 continues on page 18
(b) From the communication methods listed in part (a) select TWO and justify your selections in terms of maximising potential buyer interest.

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End of Question 18
Question 19 (9 marks)

A 200 litre container located in a workshop displays the following dangerous goods diamond.

(a) Complete the table below by identifying the potential hazard, outlining TWO possible risks and describing appropriate control measures for the hazard.

<table>
<thead>
<tr>
<th>Potential hazard</th>
<th>Possible risks</th>
<th>Appropriate control measure</th>
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<tbody>
<tr>
<td>....................................................................................................................</td>
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</tbody>
</table>
(b) Describe the actions you would take in the event that a person was severely burnt by a flammable liquid.

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End of Question 19
Question 20 (15 marks)

Describe the implications of a technological change that has occurred in an industry in which you have gained experience. Evaluate a range of sources of information that you could use to remain ‘up to date’ with technological change in your industry.

Question 21 (15 marks)

Describe the risks associated with the transportation, storage, preparation and use of dangerous pesticides. Evaluate a range of measures that could be used to control these risks.

Question 22 (15 marks)

Evaluate a range of methods that can be used to control a weed species you have studied. In your evaluation, you should consider effectiveness, economic feasibility and impact on the environment.

End of paper