

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

2008

**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, 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

- 5 The table shows a herbicide application rate for weed control.

<i>Herbicide application rate</i>		
<i>State</i>	<i>Weeds controlled</i>	<i>Rate (vol/ha)</i>
SA WA only	Barley grass, Volunteer cereals, Wild oats	800 mL
	Canary grass, Variegated thistle, Saffron thistle	1.0 L
NSW VIC TAS	Annual ryegrass, Paterson's curse, Saffron thistle, Scotch thistle	1.2 L
	Erodium, Plantain, Sorrel, Sub-clover	2.0 L
	Dock, Flatweed	2.5 L

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
- 6 The table shows the amount of product required per animal.

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

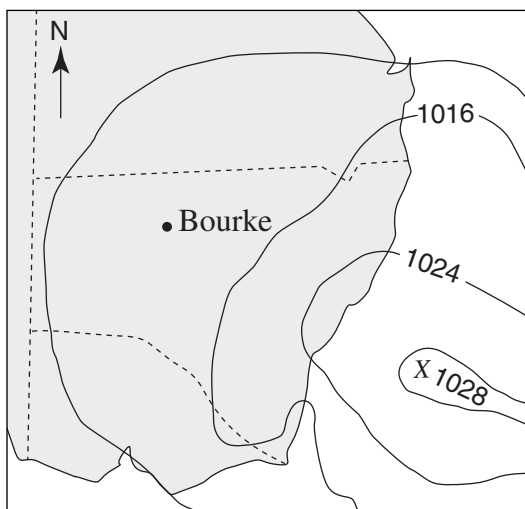
Add 5 mL for each 10 kg above 95 kg.

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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.

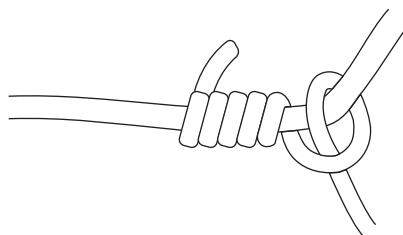


The pressure system at Point X is moving slowly in an easterly direction.

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.



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NSW Department of Primary Industries

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

9 Information regarding the application of Insecticide X is given.

Awaiting copyright

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

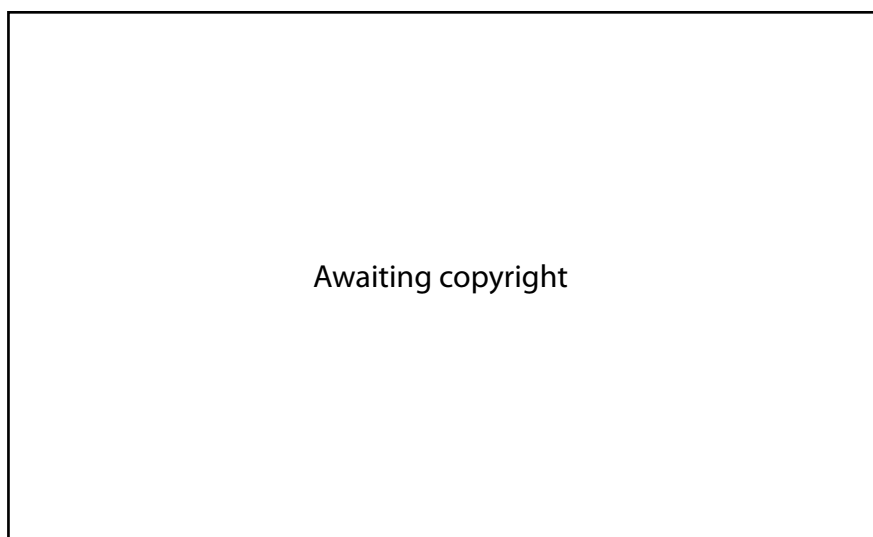
10 A table of toxicity data for four susceptible species is given.

<i>Species</i>	<i>Concentration of pesticide that will kill 50% of a population</i>
①	0.225 mg/L
②	22.5 mg/L
③	45.0 mg/L
④	225.0 mg/L

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

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



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

- 14 The tables show the following information.

Hazchem codes with notes for guidance

	Notes for guidance		Notes for guidance for fire or spillage																																								
	<p>FOG In the absence of fog equipment, a fine spray may be used.</p> <p>DRY AGENT Water must not be allowed to come into contact with the substance at risk</p> <p>V Can be violently or even explosively reactive.</p> <p>FULL Full body protective clothing with BA</p> <p>BA Breathing apparatus plus protective gloves.</p> <p>DILUTE May be washed to drain with large quantities of water.</p> <p>CONTAIN Prevent, by any means available, spillage from entering drains or water courses.</p>		<p>1. JETS</p> <p>2. FOG</p> <p>3. FOAM</p> <p>4. DRY AGENT</p>																																								
	<p>ORGANOCHLORINE PESTICIDE, LIQUID, TOXIC (CONTAINS ENDOSULFAN)</p> <p>HAZCHEM: 2 X</p>	<table border="1"> <tr><td>P</td><td>V</td><td rowspan="2">FULL</td><td rowspan="10">DILUTE</td></tr> <tr><td>R</td><td></td></tr> <tr><td>S</td><td>V</td><td>BA</td></tr> <tr><td>S</td><td>V</td><td>BA for FIRE only</td></tr> <tr><td>T</td><td></td><td>BA</td></tr> <tr><td>T</td><td></td><td>BA for FIRE only</td></tr> <tr><td>W</td><td>V</td><td>FULL</td></tr> <tr><td>X</td><td></td><td></td></tr> <tr><td>Y</td><td>V</td><td>BA</td></tr> <tr><td>Y</td><td>V</td><td>BA for FIRE only</td></tr> <tr><td>Z</td><td></td><td>BA</td></tr> <tr><td>Z</td><td></td><td>BA for FIRE only</td></tr> <tr><td>E</td><td></td><td colspan="2">CONSIDER EVACUATION</td></tr> </table>	P	V	FULL	DILUTE	R		S	V	BA	S	V	BA for FIRE only	T		BA	T		BA for FIRE only	W	V	FULL	X			Y	V	BA	Y	V	BA for FIRE only	Z		BA	Z		BA for FIRE only	E		CONSIDER EVACUATION		
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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
- 15 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.

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Centre Number

Section II

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Student Number

35 marks

Attempt Questions 16–19

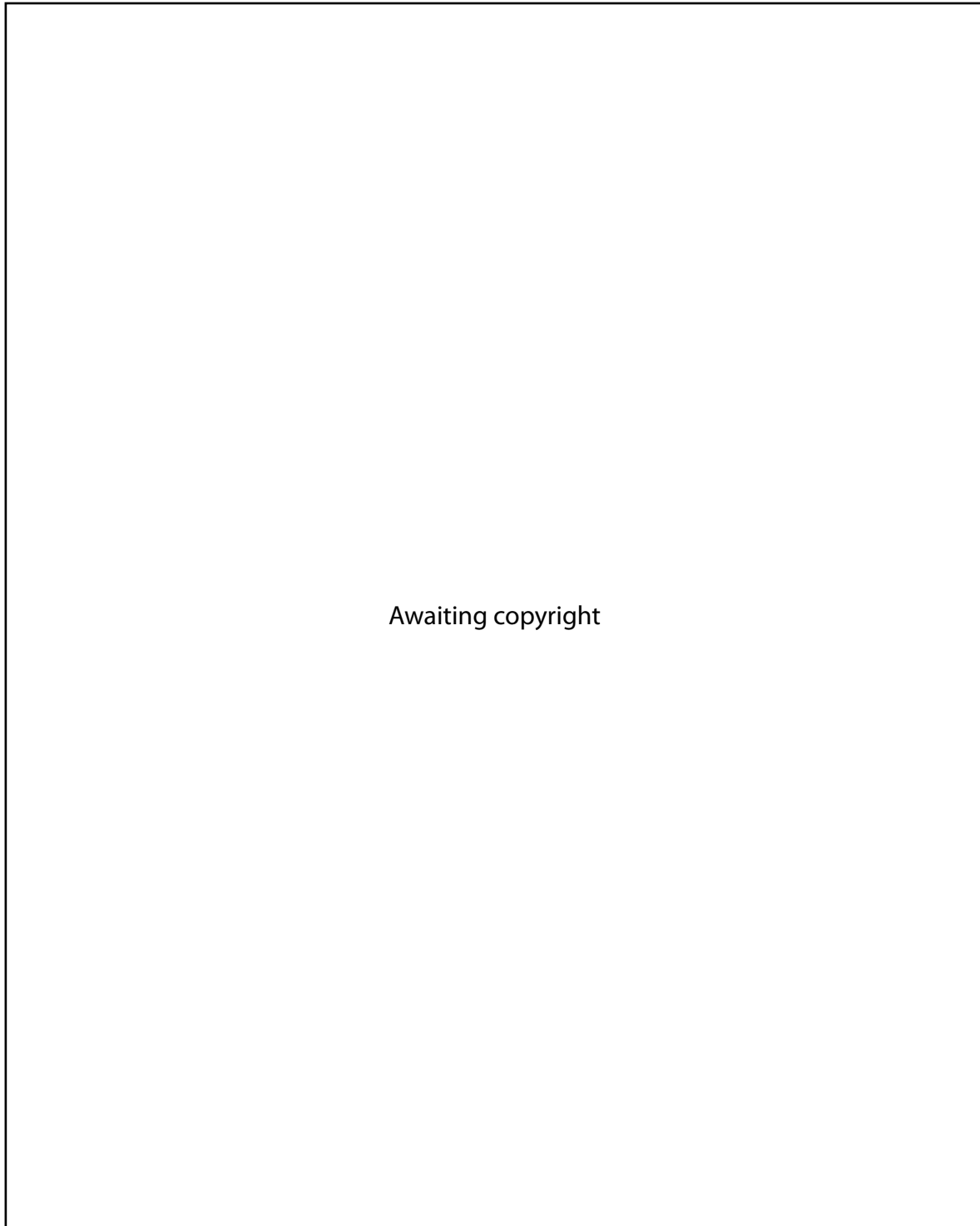
Allow about 45 minutes for this section

Answer the questions in the spaces provided.

Question 16 (9 marks)

Question 16 (9 marks)

The diagram shows a property with a broadleaf weed infestation.



Question 16 continues on page 11

Question 16 (continued)

- (a) What are the potential impacts of the broadleaf weed infestation on this property, on both agricultural production and the environment? **3**

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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. **6**

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End of Question 16

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Section II (continued)

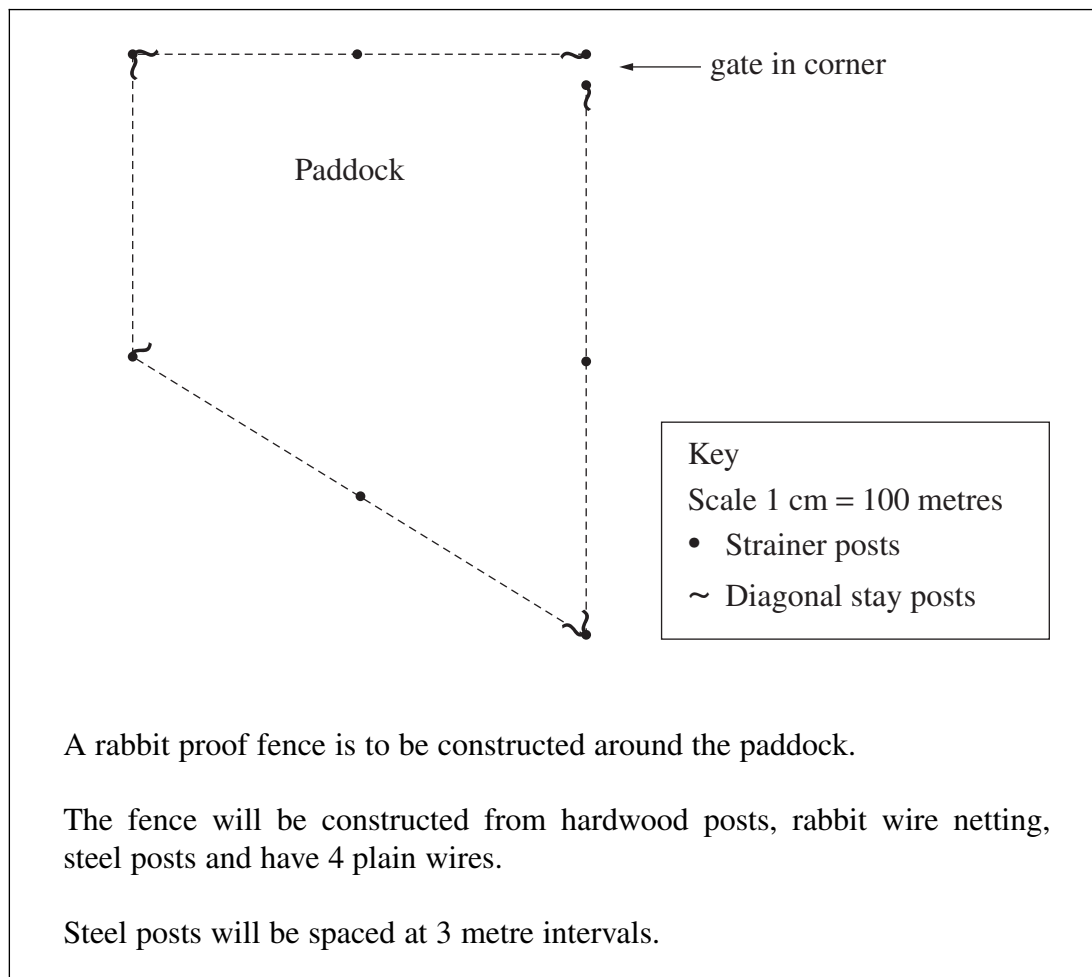
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Student Number

Question 17 (9 marks)

Question 17 (9 marks)

The dimensions of a paddock are shown on the diagram.



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

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Question 17 continues on page 15

Question 17 (continued)

(b) Complete the following table.

3

Number of strainer posts needed
Number of diagonal stay posts needed
Number of steel posts needed

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

5

<i>Materials needed</i>	<i>Working</i>	<i>Material cost</i>
Plain wire in 1500 metre rolls at \$205 per roll	
Rabbit wire netting in 100 metre rolls at \$323 per roll	
Steel posts in bundles of 10 at \$62 per bundle	
Strainer posts at \$25 each	
Diagonal stay posts at \$15 each	
COST OF MATERIALS	
Plus 10% GST	
TOTAL COST	

End of Question 17

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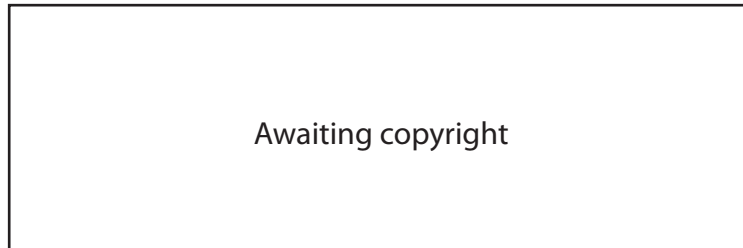
Section II (continued)

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Student Number

Marks

Question 18 (8 marks)



- (a) List THREE ways in which you could communicate details of this clearing sale to potential buyers. **2**

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Question 18 continues on page 18

Question 18 (continued)

- (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

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Section II (continued)

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Student Number

Marks

Question 19 (9 marks)

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



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- (a) Complete the table below by identifying the potential hazard, outlining TWO possible risks and describing appropriate control measures for the hazard. **5**

Potential hazard
Possible risks
Appropriate control measure

Question 19 continues on page 20

Question 19 (continued)

- (b) Describe the actions you would take in the event that a person was severely burnt by a flammable liquid. **4**

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End of Question 19

Primary Industries

Section III

30 marks

Attempt TWO questions from Questions 20–22

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 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

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