

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

2013

**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 9, 11, 13 and 15

Total marks – 80

Section I Pages 2–6

15 marks

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

Section II Pages 9–16

35 marks

- Attempt Questions 16–19
- Allow about 50 minutes for this section

Section III Page 17

15 marks

- Attempt Question 20
- Allow about 25 minutes for this section

Section IV Page 18

15 marks

- Attempt either Question 21 or 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 Which of the following meteorological symbols represents a cold front?



2 The re-entry period is the time which must elapse from when a chemical is applied to a crop to when the crop can be

- (A) grazed by animals.
- (B) sold to an export market.
- (C) oversown with another crop.
- (D) harvested for human consumption.

3 What is the main function of a daily team meeting?

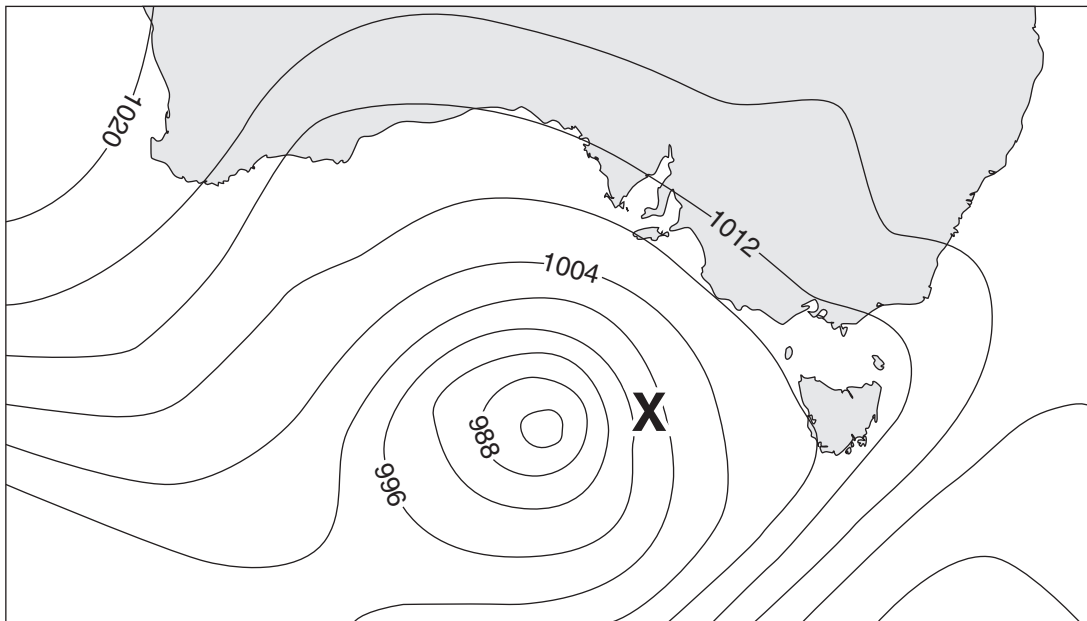
- (A) To discuss trends in your industry
- (B) To develop the work plan for your team
- (C) To report the latest news from your workplace
- (D) To share the latest developments in quality systems

4 An employee works regular hours, is entitled to superannuation paid by the employer but is not entitled to paid sick leave.

What type of employment is this?

- (A) Casual
- (B) Contract
- (C) Full-time
- (D) Part-time

- 5 A supervisor wants to minimise the risk associated with a hazard in the workplace. Of the following methods, which is the LEAST effective?
- (A) Elimination
 - (B) Substitution
 - (C) Engineering controls
 - (D) Personal protective equipment (PPE)
- 6 A weather map is shown.



What weather conditions would you expect at **X**?

- (A) Hot and still
- (B) Cold and still
- (C) Hot and windy
- (D) Cold and windy

- 7 You need to deliver three tonnes of produce to a customer who lives 50 km from the distribution centre.

Which of the following vehicles would use the least amount of fuel to complete the delivery?

	<i>Vehicle load capacity and type</i>	<i>Fuel consumption per 100 km</i>
(A)	1 tonne petrol utility	6 L
(B)	2 tonne diesel truck	7 L
(C)	4 tonne petrol truck	16 L
(D)	8 tonne diesel truck	15 L

- 8 Which of the following weather conditions is likely to have the most adverse impact on the survival rate of lambs?

- (A) Temperature 5°C, wind and rain
- (B) Temperature 5°C, wind and no rain
- (C) Temperature 5°C, rain and no wind
- (D) Temperature -5°C, frost, no wind and no rain

- 9 Which of the following statements about weight limits for manual handling is correct?

- (A) The work health and safety weight limit is 20 kg.
- (B) The work health and safety weight limit is 40 kg.
- (C) The weight limit is determined by size and capability.
- (D) The weight limit is determined separately for males and females.

- 10 Chemicals are absorbed through the skin at different rates for different parts of the body.

In which of the following are the body parts listed from highest to lowest rates of absorption?

- (A) Forehead, upper foot, abdomen, forearm
- (B) Abdomen, forehead, forearm, upper foot
- (C) Forehead, abdomen, upper foot, forearm
- (D) Abdomen, forearm, forehead, upper foot

- 11** An enterprise agreement is governed by
- (A) state workplace relations law and legally overrides an award.
 - (B) federal workplace relations law and legally overrides an award.
 - (C) state workplace relations law and is legally overridden by an award.
 - (D) federal workplace relations law and is legally overridden by an award.
- 12** The main object of the *Work Health and Safety Act (2011)* is to secure the health and safety of
- (A) workplaces and employers.
 - (B) employers and employees.
 - (C) workers and contractors.
 - (D) workers and workplaces.
- 13** The chemical concentrate of a herbicide needs to be mixed at a rate of 200 mL per 100 L of water.

How many litres of the chemical concentrate are required to spray a five-hectare block if the herbicide is applied at a spray volume of 200 L per hectare?

- (A) 2 L
- (B) 5 L
- (C) 20 L
- (D) 50 L

14 In Australia, colours and shapes on safety signs have a particular meaning.

Which row in the table correctly matches the signs with their meanings?

	<i>Emergency equipment and services</i>	<i>Action not permitted</i>	<i>Action must be done</i>	<i>Cautionary and an alert to a hazard</i>
(A)	Yellow triangle with black border	Red hexagon with a line through it	Green rectangle with white symbol or text	Blue solid circle with white symbol
(B)	Blue solid circle with white symbol	Red circle border with a line through it	Green rectangle with white symbol or text	Yellow triangle with black border
(C)	Green rectangle with white symbol or text	Red circle border with a line through it	Blue solid circle with white symbol	Yellow triangle with black border
(D)	Green rectangle with white symbol or text	Red hexagon with a line through it	Yellow triangle with black border	Blue solid circle with white symbol

15 A tractor applying chemicals is moving across a paddock at 5 km/h with a boom spray that covers 5 metres.

How long will it take to spray a 10-hectare paddock?

- (A) 4 hours
- (B) 5 hours
- (C) 25 hours
- (D) 40 hours

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Primary Industries

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Centre Number

Section II

35 marks

Attempt Questions 16–19

Allow about 50 minutes for this section

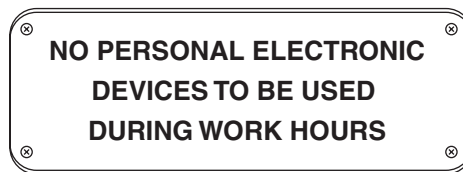
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Student Number

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

Question 16 (9 marks)

This sign is displayed in a workplace.



- (a) List TWO personal electronic devices to which this sign could refer. 2

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- (b) Provide TWO reasons why the employer would issue such a directive. 2

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Question 16 continues on page 10

Question 16 (continued)

- (c) Name TWO emerging technologies in a primary industries workplace or enterprise and outline ONE advantage and ONE disadvantage for each. **5**

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End of Question 16

Primary Industries

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Centre Number

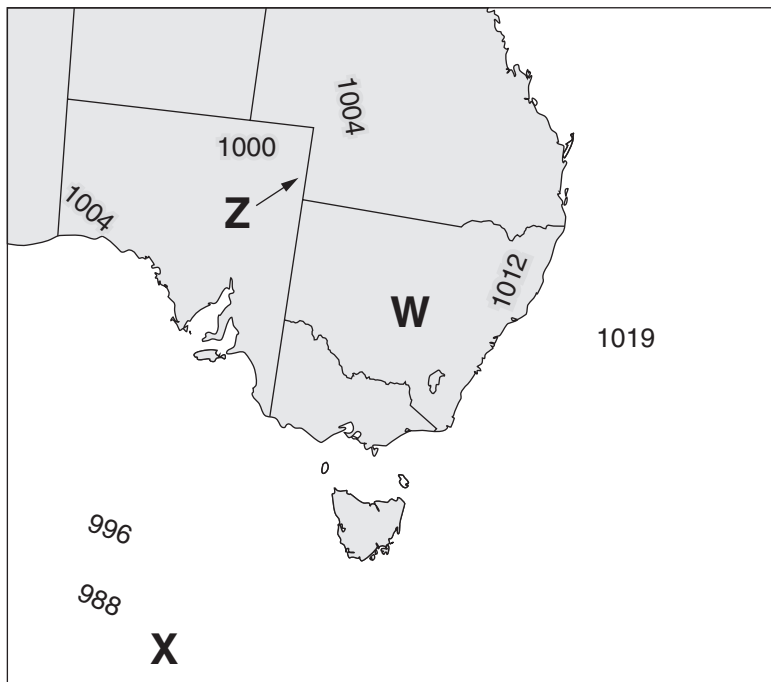
Section II (continued)

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Student Number

Question 17 (9 marks)

The weather map indicates the meteorological conditions across South Eastern Australia for 25 January.



- (a) In what direction would winds circulate in the weather system at **X**? **1**

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- (b) What is the meteorological term for the line at **Z**? **1**

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Question 17 continues on page 12

Question 17 (continued)

(c) It is predicted that there will be 30 to 40 km/h north-westerly winds and a humidity of 5 to 10% at location **W** over the next 36 hours.

(i) Using this information and the weather map provided, outline the weather conditions at **W**. **1**

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(ii) Outline the potential implications of the weather conditions on staff in a primary industries enterprise or workplace at **W**. **2**

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(iii) You want to minimise the effects of the weather conditions at **W** on the work programs of staff. Provide an advantage and a disadvantage for each of TWO preventative actions you could implement. **4**

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End of Question 17



Primary Industries

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Centre Number

Section II (continued)

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Student Number

Question 18 (9 marks)

- (a) Explain the difference between a hazard and a risk. Include an example of each in your answer. **3**

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Question 18 continues on page 14

Question 18 (continued)

- (b) Evaluate THREE risk control measures that could be implemented for a work health and safety hazard.

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Name of hazard:

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End of Question 18

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Centre Number

Section II (continued)

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Student Number

Question 19 (8 marks)

- (a) Outline the general features of TWO items of chemical application equipment used in a primary industries enterprise. **3**

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Question 19 continues on page 16

Primary Industries

Section III

15 marks

Attempt Question 20

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 20 (15 marks)

Name a primary industries enterprise.

Identify the types of resources used in this enterprise and analyse strategies that could be implemented to improve the efficient use of those resources, including methods of measuring and monitoring.

Please turn over

Section IV

15 marks

Attempt either Question 21 or Question 22

Allow about 25 minutes for this section

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

Question 21 — Livestock Health and Welfare (15 marks)

- (a) Outline a process that could be used to assess the health of a livestock species. **3**
- (b) Describe the symptoms of TWO parasite infestations in a livestock species. **4**
- (c) Analyse a range of prevention and treatment strategies that could be used to control a parasite infestation in livestock. **8**

OR

Question 22 — Plant Pests, Diseases and Disorders (15 marks)

- (a) Outline a process that could be used to assess the health of a plant. **3**
- (b) Describe the signs and symptoms of TWO plant pest infestations. **4**
- (c) Analyse a range of prevention and treatment measures that could be used to control a pest infestation in plants. **8**

End of paper