



NSW Education Standards Authority

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Centre Number

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Student Number

2023 HIGHER SCHOOL CERTIFICATE EXAMINATION

Primary Industries

General Instructions

- Reading time – 5 minutes
- Working time – 2 hours
- Write using black pen
- Calculators approved by NESA may be used
- Write your Centre Number and Student Number at the top of this page

Total marks: 80

Section I – 15 marks (pages 2–7)

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

Section II – 35 marks (pages 9–17)

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

Section III – 15 marks (pages 18–21)

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

Section IV – 15 marks (page 25)

- 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.

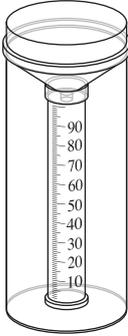
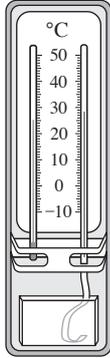
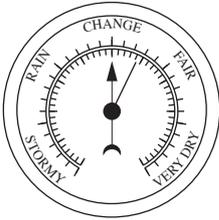
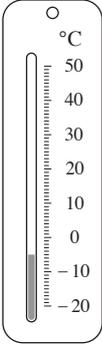
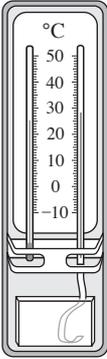
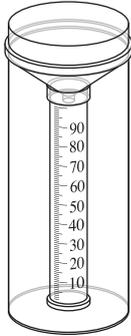
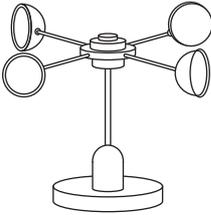
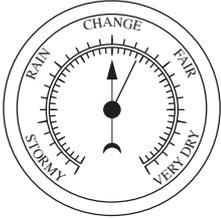
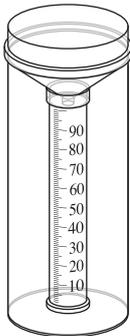
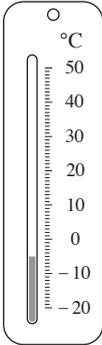
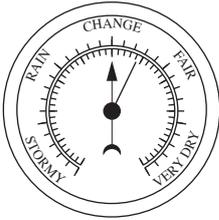
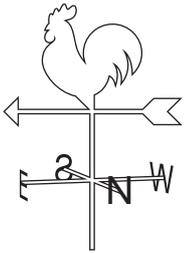
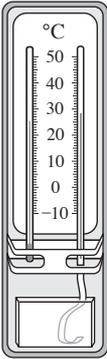
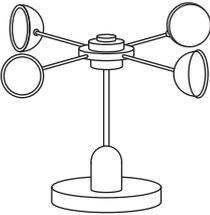
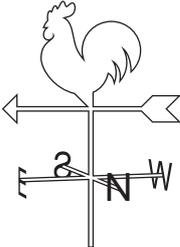
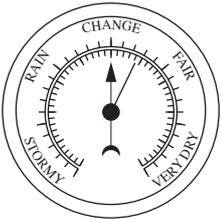
- 1 Why should details be repeated to a customer in a telephone conversation?
 - A. To demonstrate friendliness
 - B. To keep the conversation flowing
 - C. To ensure that they are a genuine customer
 - D. To confirm understanding of what has been said

- 2 Which of the following weather conditions could result in a grazier's alert being issued?
 - A. Cold, dry and no wind
 - B. Warm, dry and light winds
 - C. Cold, wet and strong winds
 - D. Warm, wet and strong winds

- 3 What unit of measurement is used to measure atmospheric pressure?
 - A. BAR
 - B. hPa
 - C. mmHg
 - D. psi

- 4 Why are employers required to provide personal protective equipment (PPE) for their employees?
 - A. To keep their employees warm
 - B. To save employees' costs
 - C. To meet their duty of care
 - D. To avoid compensation claims

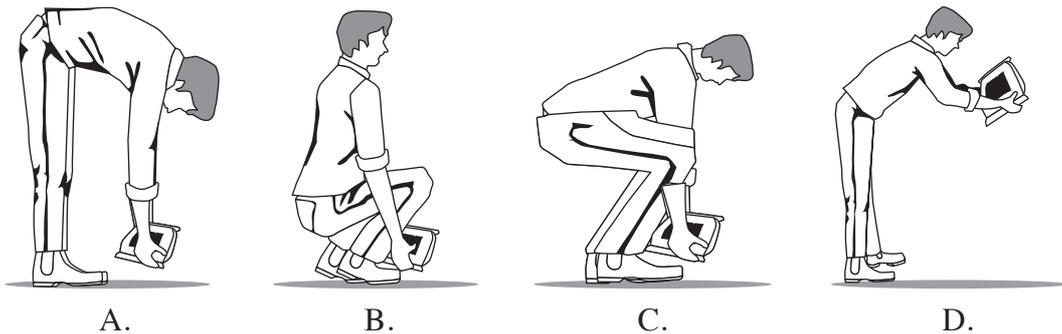
5 Which row of the table correctly matches the instruments to their uses when monitoring weather conditions?

	<i>Precipitation</i>	<i>Humidity</i>	<i>Atmospheric pressure</i>	<i>Wind chill</i>
A.				
B.				
C.				
D.				

- 6 Who has the primary responsibility for providing a safe workplace under the *Work Health and Safety Act 2011*?
- A. Safe Work NSW
 - B. The trade union
 - C. The employer
 - D. Employees

- 7 Which of the following is NOT an indication of a potential environmental issue?
- A. Scalded bare earth
 - B. Increased biodiversity
 - C. Loss of natural habitat
 - D. Algae bloom in a farm dam

- 8 Which of the following is the most correct method to lift a 20 kg bag?



- 9 Which of the following is an example of a sustainable farming practice?
- A. Clearing native vegetation
 - B. Ploughing a field numerous times to remove weeds
 - C. Using agricultural lime to adjust the pH of acidic soils
 - D. Using a creek gully to dispose of empty chemical drums

10 Soil erosion has been diagnosed as an environmental concern on a farm.

Which of the following is the most likely cause?

- A. Overcultivation and overstocking
- B. Increased use of artificial fertiliser
- C. Sediment and nutrient discharge into waterways
- D. Rising water table due to extensive irrigation of crops

11 Which of the following would NOT be used when monitoring resource usage in a primary industries workplace?

- A. Graphs and tables
- B. Invoices and stocktakes
- C. Database and spreadsheets
- D. Rate notices and bank statements

12 An operator notices the protective guard of a revolving power take-off (PTO) shaft has been damaged while operating a tractor.

What should the operator do next?

- A. Continue working the tractor but at a slower speed to ensure that the task is completed
- B. Turn off the tractor engine completely before inspecting the guard, report damage to the supervisor
- C. Disengage the PTO shaft, leave the tractor running while inspecting the guard, report damage to the supervisor
- D. Disengage the PTO shaft, remove the guard, continue to operate the tractor, report to the supervisor after the task has been completed

- 13 The table shows the forecast of weather conditions for four days.

	<i>Day 1</i>	<i>Day 2</i>	<i>Day 3</i>	<i>Day 4</i>
Maximum temperature (°C)	31	30	27	25
Chance of rain (%)	15	nil	nil	70
Rain amount (mm)	5	0	0	15
Wind speed (km/h)	2–5	15–20	3–15	3–15
Relative humidity (%)	25	45	45	75

On which day would it be most appropriate to spray for a pest in an orchard?

- A. Day 1
 - B. Day 2
 - C. Day 3
 - D. Day 4
- 14 A time sheet for two days worked is shown.

	<i>Sunday</i>	<i>Monday</i> <i>(not a public holiday)</i>
Start time	9:00 am	7:30 am
Finish time	3:00 pm	4:30 pm
Lunch	1 hour	1 hour

The pay rate for the job includes:

- \$23.19 per hour for normal time
- time and a half for Sunday
- unpaid lunch time.

What is the gross pay?

- A. \$301.47
- B. \$359.45
- C. \$417.42
- D. \$475.40

- 15 Which row of the table correctly identifies the difference between an *industry award* and a *workplace enterprise agreement*?

	<i>Industry award</i>	<i>Workplace enterprise agreement</i>
A.	Applies across an industry or type of work	Applies to specific tasks or workplaces
B.	Must be filed as a legal document	Can be a verbal agreement
C.	Does not need to comply with State or Federal legislation	Must comply with State or Federal legislation
D.	Entitles all workers to conditions as stated in the award	Is not available to union members and is voluntary

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Centre Number

Primary Industries

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Student Number

Sections II and III Answer Booklet

Instructions

- Write your Centre Number and Student Number at the top of this page.
- Use this answer booklet for Sections II and III.
- Answer BOTH sections.
- Follow the instructions inside this booklet as to where you should write your answers.

Please turn over

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Section II

35 marks

Attempt Questions 16–19

Allow about 50 minutes for this section

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

Show all relevant working in questions involving calculations.

Question 16 (7 marks)

- (a) Describe the purpose of equal employment opportunity (EEO) legislation. **2**

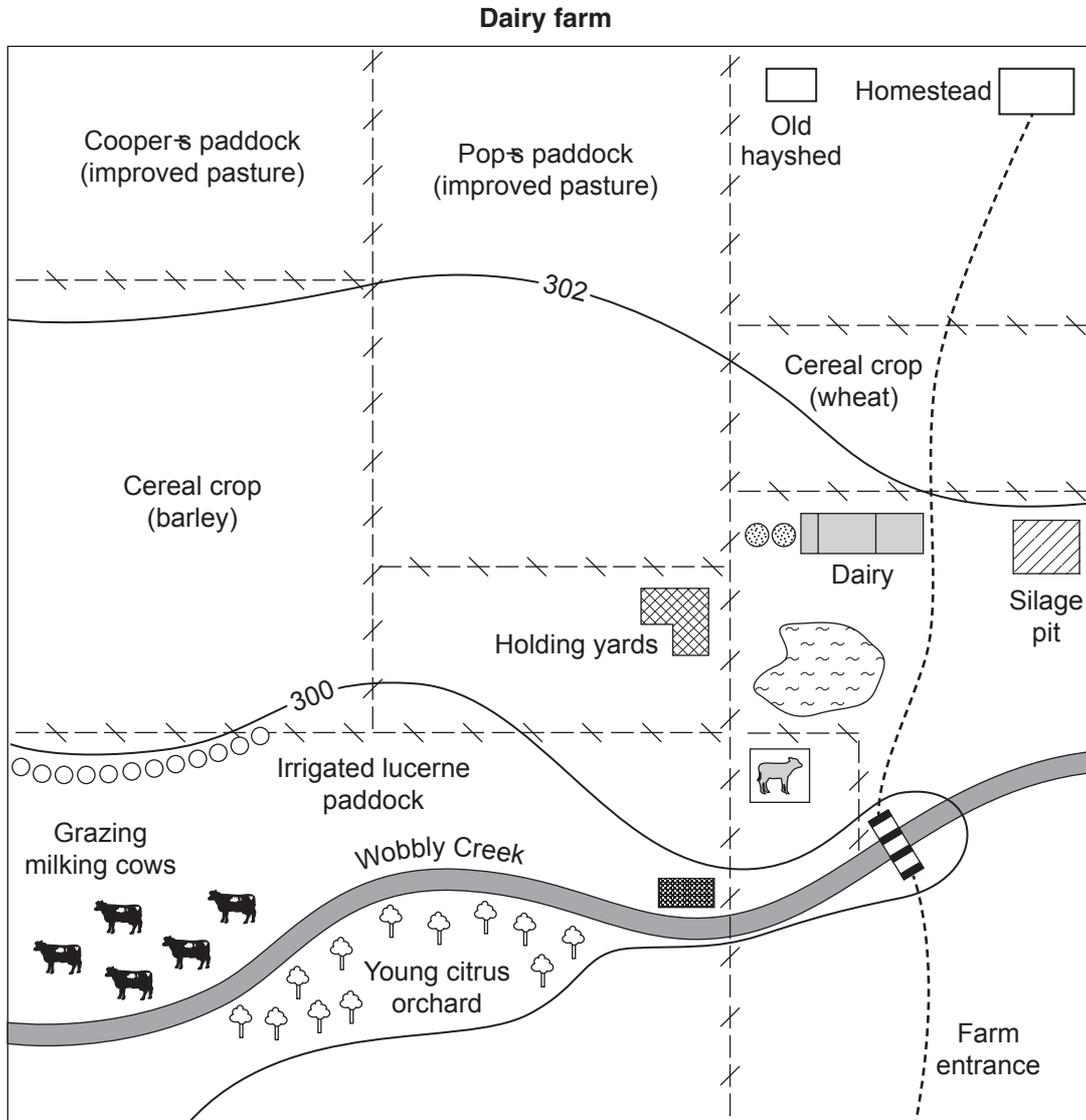
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- (b) Explain the importance of considering communication skills, work ethic and experience for an employer when hiring workers in a primary industry. **5**

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Question 17 (9 marks)

The diagram shows the layout of a dairy farm.



KEY

Scale: 1 cm = 100 metres

	Internal fences		Height above sea level/ contour (m)
	Buildings		Calf nursery (15 dairy calves)
	Irrigation pump house and chemical shed		Feed silo and milk vat
	Access road		Stored silage bales
	Creek		Effluent dam
	Bridge		

Question 17 continues on page 13

Do NOT write in this area.

Question 17 (continued)

- (a) Identify TWO impacts that a severe weather event could have on this farm. 2

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- (b) What actions should the farmer take to reduce the impact of a severe weather event? 3

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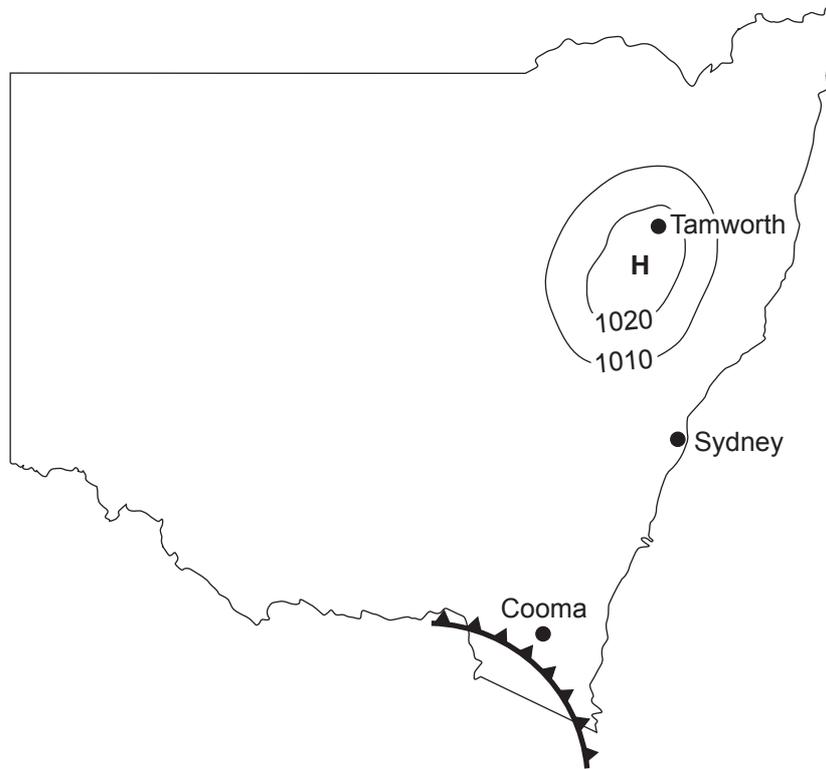
- (c) Explain long-term strategies that could be implemented to minimise the impact of future weather events on this farm. 4

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End of Question 17

Question 18 (9 marks)

The map shows the prevailing weather conditions at two places in New South Wales.



- (a) Outline the prevailing weather conditions occurring at BOTH Cooma and Tamworth. 2

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Question 18 continues on page 15

Question 18 (continued)

- (b) Explain the effect of high humidity AND high temperature on either a plant OR an animal. 3

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- (c) Explain the benefit of using weather forecasting techniques for primary industries workers. 4

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End of Question 18

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Question 19 (10 marks)

- (a) Identify ONE consequence of a workplace injury. **1**

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- (b) Distinguish between a *manageable first aid situation* and an *emergency situation*. In your answer, refer to specific examples. **3**

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Question 19 continues on page 17

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Question 19 (continued)

- (c) The diagram shows primary industry workers involved in a number of unsafe work practices.

6



Using the hierarchy of control, explain how the risk of accidents occurring can be minimised in the scenario shown in the diagram.

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End of Question 19

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Primary Industries

Section IV

15 marks

Attempt either Question 21 or Question 22

Allow about 25 minutes for this section

Answer the question in the Section IV Writing Booklet. Extra writing booklets are available.

Question 21 – Livestock Health and Welfare (15 marks)

- (a) Outline TWO benefits of safe work practices when working with livestock in a primary industries workplace. **3**
- (b) Explain the importance of calibration and correct application of treatments when controlling a pest OR disease in livestock. In your answer, refer to a specific piece of equipment. **4**
- (c) Assess the importance of recognising parasites and their level of infestation in a livestock enterprise. In your answer, include specific examples of a livestock enterprise. **8**

OR

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

- (a) Outline TWO benefits of safe work practices in the treatment and control of plant pests, diseases and disorders. **3**
- (b) Explain the importance of calibration and correct application of treatments when controlling a pest OR disease in plants. In your answer, refer to a specific piece of equipment. **4**
- (c) Assess the importance of recognising parasites and their level of infestation in a plant enterprise. In your answer, include specific examples of a plant enterprise. **8**

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