



NSW Education Standards Authority

2018 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 pages 9, 11 and 13

**Total marks:
80****Section I – 15 marks** (pages 2–6)

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

Section II – 35 marks (pages 9–14)

- Attempt Questions 16–20
- Allow about 50 minutes for this section

Section III – 15 marks (page 15)

- Attempt Question 21
- Allow about 25 minutes for this section

Section IV – 15 marks (page 16)

- Attempt either Question 22 or Question 23
- Allow about 25 minutes for this section

Section I

15 marks

Attempt Questions 1–15

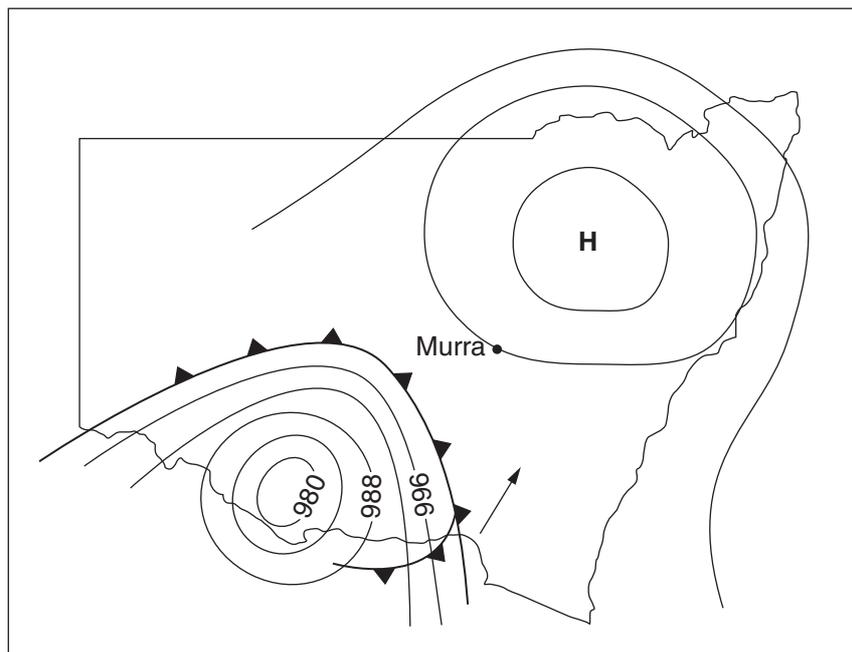
Allow about 20 minutes for this section

Use the multiple-choice answer sheet for Questions 1–15.

- 1** A primary industries worker has been seriously injured in a tractor accident.
As the first person to arrive on the scene, what action should you take first?
- A. Check for danger
 - B. Contact a supervisor
 - C. Call emergency services
 - D. Check for a response from the injured worker
- 2** Which device is used to measure air pressure when monitoring weather?
- A. Anemometer
 - B. Barometer
 - C. Hygrometer
 - D. Thermometer
- 3** Which of the following is a form of non-verbal communication?
- A. Phone call
 - B. Hand gesture
 - C. Television announcement
 - D. Two-way radio announcement
- 4** A primary industries employee should be protected from chemical absorption by
- A. using a respirator.
 - B. wearing cotton gloves.
 - C. working in PVC gloves.
 - D. safely disposing of used needles.

- 5 Which of the following do NOT generate renewable energy?
- A. Solar panels
 - B. Wind turbines
 - C. Hydro-electric turbines
 - D. Coal-fired power stations
- 6 A sign on a storage shed in the workplace displays a yellow triangle with a black border.
- This sign indicates
- A. emergency.
 - B. hazard.
 - C. prohibition.
 - D. restriction.
- 7 In which list are all the items dry chemical formulations?
- A. Pour-ons, aerosols, dusts
 - B. Powders, pour-ons, dusts
 - C. Tablets, granules, aerosols
 - D. Tablets, powders, granules

Refer to the following weather map of NSW to answer Questions 8–9.



- 8 On the weather map the symbol **H** indicates weather that is
- A. stable.
 - B. cyclonic.
 - C. unstable.
 - D. monsoonal.
- 9 Which of the following shows the expected weather conditions for Murra in the next 24 hours?
- A. Cool and calm
 - B. Cool and windy
 - C. Warm and calm
 - D. Warm and windy
- 10 Which pair of extinguishers should be used to fight a fire in a chemical store where there are both flammable and combustible liquids?
- A. Foam and powder
 - B. Powder and water
 - C. Wet chemical and foam
 - D. Water and wet chemical

- 11** Someone has been putting unflattering cartoons of a worker on his locker over the last three weeks.

This type of harassment is

- A. physical.
 - B. psychological.
 - C. sexual.
 - D. verbal.
- 12** Legislation relating to the protection, restoration and enhancement of the quality of the environment is the responsibility of the
- A. Clean Energy Regulator.
 - B. NSW Environment Protection Authority.
 - C. NSW Office of Environment and Heritage.
 - D. Department of the Environment and Energy.
- 13** The role of the health and safety representative (HSR) in a workplace is to
- A. document workplace health and safety policies and practices.
 - B. train all workers in workplace health and safety policies and practices.
 - C. report workers' concerns on workplace health and safety policies and practices.
 - D. ensure all workers comply with workplace health and safety policies and practices.
- 14** *The responsible interaction with the environment to avoid depletion or degradation of natural resources and allow for long-term environmental quality.*
- Which term best matches this definition?
- A. Environmental ethics
 - B. Environmental justice
 - C. Environmental stability
 - D. Environmental sustainability

- 15 Following a workplace audit, your supervisor has put in place a risk minimisation program using the hierarchy of controls.

	<i>Risk minimisation strategies</i>
W	Eliminate the risk
X	Other controls
Y	Monitor and review
Z	Minimise the risk

In what order should the above strategies be applied?

- A. W, Z, X, Y
- B. W, X, Y, Z
- C. W, X, Z, Y
- D. W, Y, X, Z

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Centre Number

Primary Industries

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Student Number

Section II

35 marks

Attempt Questions 16–20

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 (8 marks)

- (a) List TWO advantages of including people from culturally diverse backgrounds in work teams. 2

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- (b) Describe what workplaces can do to support their workers from culturally diverse backgrounds to enable them to feel valued as team members. 3

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Question 16 continues on page 10

Question 16 (continued)

- (c) Outline the rights and responsibilities of employees in relation to anti-discrimination in the workplace. 3

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Question 17 (6 marks)

- Identify TWO emerging technologies and describe the effects of each technology on the primary industries sector. 6

<i>Emerging technology</i>	<i>Effects</i>
1.
2.

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Primary Industries

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Student Number

Section II (continued)

Question 18 (7 marks)

The *Biosecurity Act 2015* (NSW) is designed to protect the environment, primary producers and consumers.

- (a) Identify a biosecurity risk and outline its potential effect on a primary industries enterprise. 2

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- (b) Identify TWO pieces of information that primary producers should record in relation to biosecurity. 2

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- (c) What actions can primary producers take to prevent threats to biosecurity? 3

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Question 19 (7 marks)

- (a) Identify a common primary industries workplace injury and describe the appropriate basic first aid response. **3**

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- (b) Describe safety strategies that could be put in place to prevent workplace injuries from occurring. **4**

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Student Number

Section II (continued)

Question 20 (7 marks)

A worker has been asked to spray the following paddocks with Herbicide X to eradicate weeds.

<i>Paddock name</i>	<i>Paddock size (ha)</i>	<i>Weed</i>	<i>Rate/ha</i>
A	20	Paterson's Curse	Herbicide X at a rate of 1.45 L per 70 L of water per ha
B	35	Capeweed	Herbicide X at a rate of 1.15 L per 70 L of water per ha

- (a) Calculate the total amount of Herbicide X required to spray the two paddocks. **1**

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- (b) What percentage of a full 150-litre drum of Herbicide X would be required to treat the two paddocks? **2**

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Question 20 continues on page 14

Question 20 (continued)

- (c) Explain why it is important to prepare chemicals according to the manufacturer's label. **4**

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End of Question 20

Primary Industries

Section III

15 marks

Attempt Question 21

Allow about 25 minutes for this section

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

Your answer 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
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Question 21 (15 marks)

Explain how weather and climate affect planning and production in the primary industries.

Please turn over

Section IV

15 marks

Attempt either Question 22 or Question 23

Allow about 25 minutes for this section

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

Question 22 — Livestock Health and Welfare (15 marks)

- (a) Outline the purpose of animal welfare guidelines. **2**
- (b) Explain the link between nutrition and livestock health. **5**
- (c) Explain why hygiene, biosecurity and safe work practices are important when working with livestock. **8**

OR

Question 23 — Plant Pests, Diseases and Disorders (15 marks)

- (a) Outline the purpose of legislation in relation to the treatment and control of plant pests, diseases and disorders. **2**
- (b) Identify FIVE parts of a plant and describe their key functions. **5**
- (c) Explain why biosecurity, safe work practices and record keeping are important in the treatment and control of plant pests, diseases and disorders. **8**

End of paper