
2024 HSC Primary Industries Marking Guidelines

Section I

Multiple-choice Answer Key

| Question | Answer |
|----------|--------|
| 1 | B |
| 2 | C |
| 3 | D |
| 4 | C |
| 5 | D |
| 6 | D |
| 7 | C |
| 8 | C |
| 9 | A |
| 10 | D |
| 11 | B |
| 12 | A |
| 13 | B |
| 14 | D |
| 15 | A |

Section II

Question 16 (a)

| Criteria | Marks |
|--|-------|
| • Identifies the signal heading and active constituent | 2 |
| • Provides some relevant information | 1 |

Sample answer:

Signal heading: Caution

Active constituent: MCPA

Question 16 (b)

| Criteria | Marks |
|--|-------|
| • Shows correct working in the calculation of the chemical required in litres | 4 |
| • Shows relevant working in the calculation of the chemical required with minor errors | 3 |
| • Makes progress towards the calculation of the chemical required | 2 |
| • Provides some relevant information | 1 |

Sample answer:

Backpacks required

$$\frac{10\,000\text{ m}^2}{625\text{ m}^2} = 16\text{ backpacks}$$

Total solution required

$$\frac{150\text{ mL}}{1000} \times 16 = 2.4\text{ L chemical OR } 0.15\text{ L} \times 16 = 2.4\text{ L chemical}$$

Question 16 (c)

| Criteria | Marks |
|---|-------|
| <ul style="list-style-type: none"> Explains the importance of complying with the manufacturer's instructions when applying chemicals Provides relevant examples | 4 |
| <ul style="list-style-type: none"> Describes the importance of complying with the manufacturer's instructions when applying chemicals Provides a relevant example | 3 |
| <ul style="list-style-type: none"> Outlines a compliance requirement when applying chemicals Provides an example | 2 |
| <ul style="list-style-type: none"> Provides some relevant information | 1 |

Sample answer:

The manufacturer's instructions must be followed to reduce the occurrence of any short or long-term health effects on people and the environment. For example, the manufacturer's instructions include information on withholding periods after livestock drenching. By not complying, meat could be sold within the withholding period, which could lead to health implications, as well as legal consequences.

Furthermore, the manufacturer's instructions for pesticides specify the correct dosage and method required, and not complying could result in nausea, dizziness or even cancer.

Question 17 (a)

| Criteria | Marks |
|---|-------|
| <ul style="list-style-type: none"> Distinguishes between a workplace incident AND a workplace emergency using relevant workplace examples | 3 |
| <ul style="list-style-type: none"> Outlines a workplace incident OR a workplace emergency with a relevant example <p>OR</p> <ul style="list-style-type: none"> Outlines a workplace incident AND a workplace emergency without example(s) | 2 |
| <ul style="list-style-type: none"> Provides some relevant information | 1 |

Sample answer:

A workplace incident is an occurrence that has the potential to cause injury or harm, such as when an employee fails to report or rectify a trip hazard in the workplace. A workplace emergency is when a worker incurs a severe, life-threatening injury such as broken limbs from a bull attack, and emergency services are required.

Question 17 (b)

| Criteria | Marks |
|--|-------|
| <ul style="list-style-type: none"> Demonstrates a sound understanding of how different colours in safety signs indicate potential danger or hazards in a primary industries workplace | 3 |
| <ul style="list-style-type: none"> Demonstrates limited understanding of how different colours in safety signs indicate potential danger or hazards in a primary industries workplace | 2 |
| <ul style="list-style-type: none"> Provides some relevant information | 1 |

Sample answer:

Red-coloured signs are used to indicate danger and/or prohibited actions, such as ‘Do Not Enter’ signs and signs that do not allow smoking near chemicals. Blue-coloured signs are used to indicate mandatory instructions, such as having to wear ear protection when using a tractor.

Question 18 (a)

| Criteria | Marks |
|---|-------|
| <ul style="list-style-type: none"> Demonstrates a comprehensive understanding of the environmental hazards, impacts and solutions to complete all relevant sections of the table | 5 |
| <ul style="list-style-type: none"> Demonstrates a thorough understanding of the environmental hazards, impacts and solutions to complete most sections of the table | 4 |
| <ul style="list-style-type: none"> Demonstrates a sound understanding of the environmental hazards, impacts and solutions to complete most sections of the table | 3 |
| <ul style="list-style-type: none"> Demonstrates limited understanding of the environmental hazard and/or impact and/or solution to complete some sections of the table | 2 |
| <ul style="list-style-type: none"> Provides some relevant information | 1 |

Sample answer:

| <i>Environmental hazard</i> | <i>Environmental impact</i> | <i>Solution</i> |
|------------------------------|---|---|
| Soil erosion | Removes nutrient-rich topsoil | Build erosion control mounds while building the dam |
| Wildlife habitat destruction | Reduces the biodiversity of the flora and fauna in the area | Reduce the amount of vegetation removal during the building of the dam and replace it after the build |

Question 18 (b)

| Criteria | Marks |
|--|-------|
| • Describes the role of a government agency in ensuring environmental compliance, using an example | 3 |
| • Outlines the role of a government agency in ensuring environmental compliance | 2 |
| • Provides some relevant information | 1 |

Sample answer:

Local councils ensure environmental compliance is met by providing appropriate and separate dump sites for oils, green waste, metals and chemicals. They monitor businesses to ensure their waste products are disposed of correctly. They also follow up with penalty notices when breaches occur.

Question 19 (a)

| Criteria | Marks |
|---|-------|
| • Identifies TWO causes of the conflict | 2 |
| • Identifies ONE cause of the conflict | 1 |

Sample answer:

- Lack of communication
- Unpaid overtime work

Question 19 (b)

| Criteria | Marks |
|--|-------|
| • Describes the consequences of Sarah's AND the team leader's inappropriate workplace behaviours | 3 |
| • Describes the consequences of Sarah's OR the team leader's inappropriate workplace behaviour OR • Outlines both Sarah's AND the team leader's inappropriate workplace behaviours | 2 |
| • Provides some relevant information | 1 |

Sample answer:

Sarah arriving late to work without any explanation may mean that other employees have to increase their workloads to ensure tasks are completed. The team leader acted unprofessionally by targeting Sarah in front of other employees which resulted in her becoming upset and may create a negative workplace environment.

Question 19 (c)

| Criteria | Marks |
|--|-------|
| <ul style="list-style-type: none"> Provides a thorough justification of management strategies that can be used to reduce the workplace conflict between Sarah and the team leader | 6 |
| <ul style="list-style-type: none"> Provides some justification of management strategies that can be used to reduce workplace conflict between Sarah and the team leader | 5 |
| <ul style="list-style-type: none"> Describes management strategies that can be used to reduce workplace conflict | 4 |
| <ul style="list-style-type: none"> Outlines ONE relevant management strategy that can be used to reduce workplace conflict <p>OR</p> <ul style="list-style-type: none"> Identifies management strategies that can be used to reduce workplace conflict | 2–3 |
| <ul style="list-style-type: none"> Provides some relevant information | 1 |

Sample answer:

Negotiation

Sarah and the team leader are involved in discussing and reaching a mutually acceptable agreement. For example, when the busy period is over, Sarah is given extra time off. This allows each party to present their needs, which may reduce conflict.

Mediation

A third person helps facilitate communication between Sarah and the team leader. The third person helps identify the issue, clarifying misunderstandings and then promote positive communication. The third person is an independent person who can assist in resolving the issue(s) objectively.

Section III

Question 20 (a)

| Criteria | Marks |
|---|-------|
| • Outlines a method used to identify individual livestock | 2 |
| • Identifies a method used to identify individual livestock | 1 |

Sample answer:

Ear tag – the colour of the ear tag represents the year that the animal was born.

Question 20 (b)

| Criteria | Marks |
|---|-------|
| • Provides a sound explanation of the reporting and recording requirements in relation to animal health and welfare | 5 |
| • Provides some explanation of the reporting and recording requirements in relation to animal health and welfare | 4 |
| • Describes the reporting and recording requirements in relation to animal health and welfare | 3 |
| • Outlines reporting and recording requirements in relation to animal health and welfare | 2 |
| • Provides some relevant information | 1 |

Sample answer:

Reporting and recording are legislative requirements and include tracking animal health/disease incidences and treatments of animals. By keeping detailed records of who administered the treatment, as well as when and to which animals, allows for follow-up if the treatment hasn't been effective. This also allows for traceability when animals are sold, as records must be reported to potential buyers and the farmer can ensure the animals are sold outside of the withholding periods.

Recording incidences of disease, as well as changes in animal performance or weight, enables farmers to monitor whether a disease is of concern. It also indicates whether authorities need to be notified if the disease is a notifiable disease, as this would help prevent the spread of the disease to neighbouring properties.

Question 20 (c)

| Criteria | Marks |
|---|-------|
| <ul style="list-style-type: none"> Provides a comprehensive explanation of the importance of proper selection, use, maintenance and storage of equipment in the treatment of livestock using specific examples | 8 |
| <ul style="list-style-type: none"> Provides some explanation of the importance of proper selection, use, maintenance and storage of equipment in the treatment of livestock using specific examples | 6–7 |
| <ul style="list-style-type: none"> Describes the proper selection, use, maintenance and storage of equipment in the treatment of livestock using specific examples | 4–5 |
| <ul style="list-style-type: none"> Outlines the selection, use, maintenance and/or storage of equipment in the treatment of livestock | 2–3 |
| <ul style="list-style-type: none"> Provides some relevant information | 1 |

Sample answer:

Selecting the right equipment ensures accurate delivery of vaccines or chemicals while preventing unnecessary pain to livestock. For example, in the use of vaccination guns, selecting the correct needle size will ensure that the vaccine is administered effectively without causing excessive bruising or tissue damage.

Using equipment correctly is important for the effective treatment and safety of livestock. For example, when drenching, setting the drench gun to deliver the precise amount of chemical according to the dosage rate and animal's weight will reduce the risk of underdosing, which may lead to ineffective treatment, as well as overdosing, which leads to animal sickness and possible death.

Maintaining equipment includes regular cleaning and inspection for faults to prevent cross-contamination. For example, a well-maintained drench gun reduces the risk of infection by preventing pathogens from accumulating in the gun.

Storing equipment will safeguard against damage and deterioration. For example, storing dehorners indoors will prevent rust and corrosion from the weather. This preserves their functionality and longevity, and blunt dehorners may cause additional stress and injury to animals.

Question 21 (a)

| Criteria | Marks |
|--|-------|
| • Outlines a method used to identify a plant | 2 |
| • Identifies a method used to identify a plant | 1 |

Sample answer:

Leaf shape – the shape of the leaf can be used to identify whether the plant is a monocot or dicot.

Question 21 (b)

| Criteria | Marks |
|--|-------|
| • Provides a sound explanation of the reporting and recording requirements in relation to the treatment and control of plant pests, diseases and disorders | 5 |
| • Provides some explanation of the reporting and recording requirements in relation to the treatment and control of plant pests, diseases and disorders | 4 |
| • Describes the reporting and recording requirements in relation to the treatment and control of plant pests, diseases and disorders | 3 |
| • Outlines reporting and recording requirements in relation to the treatment and control of plant pests, diseases and disorders | 2 |
| • Provides some relevant information | 1 |

Sample answer:

Reporting and recording are legislative requirements and include tracking the occurrences of the disease and the treatments administered. By keeping detailed records of who administered the treatment, as well as when and to which plants, allows for follow-up if the treatment hasn't been effective. This also allows for traceability when produce from the plants are sold, as farmers can ensure the produce from the plants are sold outside of the withholding periods.

Recording incidences of disease, as well as changes in appearance of leaves and output, enables farmers to monitor whether a disease is of concern. It also indicates whether authorities need to be notified if the disease is a notifiable disease, as this would help prevent the spread of the disease to neighbouring properties.

Question 21 (c)

| Criteria | Marks |
|---|-------|
| <ul style="list-style-type: none"> Provides a comprehensive explanation of the importance of proper selection, use, maintenance and storage of equipment in the treatment of plant pests, diseases and disorders using specific examples | 8 |
| <ul style="list-style-type: none"> Provides some explanation of the importance of proper selection, use, maintenance and storage of equipment in the treatment of plant pests, diseases and disorders using specific examples | 6–7 |
| <ul style="list-style-type: none"> Describes the proper selection, use, maintenance and storage of equipment in the treatment of plant pests, diseases and disorders using specific examples | 4–5 |
| <ul style="list-style-type: none"> Outlines the selection, use, maintenance and/or storage of equipment in the treatment of plant pests, diseases and disorders | 2–3 |
| <ul style="list-style-type: none"> Provides some relevant information | 1 |

Sample answer:

Selecting the right equipment is crucial for addressing specific plant pests, diseases and disorders. For example, when dealing with powdery mildew, selecting a sprayer with the right nozzle and spray pattern ensures thorough coverage of affected plant surfaces, which maximises treatment efficacy.

Using equipment correctly is important for achieving desired outcomes and minimising risks. For example, when applying chemical pesticides, the accurate calibration of sprayers according to label instructions helps avoid overapplication or underapplication, thus reduces the risk of environmental contamination and pesticide resistance.

Maintaining equipment regularly prolongs its lifespan and ensures consistent performance. For example, cleaning sprayers after each use prevents residue from building up, which can otherwise cause nozzles to clog and affect spray distribution. Inspecting equipment for wear and tear allows for timely repairs, avoiding breakdowns during critical treatment periods.

Storing equipment safeguards against damage and deterioration. For example, storing chemical applicators in a clean, dry environment protects them from rust and corrosion, preserving their functionality.

Section IV

Question 22

| Criteria | Marks |
|--|-------|
| <ul style="list-style-type: none"> Justifies a comprehensive contingency plan and long-term plan relevant to a named primary industries enterprise at location X Makes specific and clear reference to the appropriate weather conditions from the synoptic chart Presents a logical and cohesive response Communicates ideas and information using relevant industry terminology and workplace examples | 13–15 |
| <ul style="list-style-type: none"> Justifies a contingency plan and long-term plan relevant to a named primary industries enterprise at location X Refers to the appropriate weather conditions from the synoptic chart Presents a logical response Communicates ideas and information using relevant industry terminology and workplace examples | 10–12 |
| <ul style="list-style-type: none"> Describes a contingency plan and long-term plan relevant to a named primary industries enterprise at location X Refers to the weather conditions from the synoptic chart Presents a clear response Communicates ideas and information using some relevant industry terminology and workplace examples | 7–9 |
| <ul style="list-style-type: none"> Outlines some aspects of a contingency plan and/or long-term plan for a general primary industries enterprise Refers to a weather condition Uses some industry terminology and/or workplace examples | 4–6 |
| <ul style="list-style-type: none"> Demonstrates a basic knowledge and understanding of weather Provides some relevant information | 1–3 |

Answers could include:

The map shows a cold front approaching location X. The cold front will bring with it cooler temperatures, potential rain and increased winds. The shaded area on the synoptic chart further suggests that rainfall is likely, and the closeness of the isobars suggests that the wind speed will increase. This weather change could cause issues for a grazier who manages sheep.

Contingency plan:

- The grazier should move sheep closer to the homestead so that they and the weather conditions can be closely observed.
- The grazier should pen all the sheep up in the yards or a shed to keep them out of the cold weather, as this would allow them to use their collective body heat to keep warm, thus reducing the impact of the cold weather on production.
- The farmer should ensure the sheep's water supplies are adequate for the many animals in the reduced area.

- The shed and/or the sheep yards should be inspected prior to moving the sheep into this area, to make sure that they are adequate for housing a larger number of animals for a longer period than usual.

Long-term plans:

- The farmer should reduce livestock numbers to relieve the pressure of having to introduce/buy extra feed and/or having to water and fertilise the pastures extensively.
- The farmer should plan ahead by turning some of the paddocks into pastures that could be grown and used to store as silage or hay for the predicted dry weather. This will allow the farmer to have access to feed when the pasture's nutrition declines due to the hot and dry conditions.
- The farmer should improve water harvesting techniques by building dams, diverting water into dams, connecting roofs to water storage tanks, and increasing water storage capacity. This would give the farmer better access to water during dry weather. By improving water harvesting techniques, there could be more opportunities to capture and save water during higher rainfall periods.
- The farmer should also invest in improving irrigation systems and/or implementing a more efficient irrigation system for the pastures the sheep graze upon. This would allow the pastures to grow better in times of the dry and hot weather than if they were not irrigated, allowing the livestock better nutrition for longer.

2024 HSC Primary Industries Mapping Grid

Section I

| Question | Marks | HSC content – focus area |
|----------|-------|---|
| 1 | 1 | Working in the industry — work practices – page 44 |
| 2 | 1 | Chemicals — work health and safety – pages 26–27 |
| 3 | 1 | Chemicals — safe work procedures and practices – page 32 |
| 4 | 1 | Working in the industry — anti-discrimination – page 46 |
| 5 | 1 | Sustainability — environmentally sustainable work practices – page 37 |
| 6 | 1 | Sustainability — resources – pages 36–37 |
| 7 | 1 | Weather — weather and climate – page 39 |
| 8 | 1 | Working in the industry — employment – page 43 |
| 9 | 1 | Chemicals — working with chemicals – page 28 |
| 10 | 1 | Safety — WHS compliance – page 31 |
| 11 | 1 | Sustainability — environment – page 35 |
| 12 | 1 | Sustainability — resources – page 37 |
| 13 | 1 | Safety — WHS consultation and participation – page 31 |
| 14 | 1 | Safety — risk management – page 32 |
| 15 | 1 | Working in the industry — work practices – page 44 |

Section II

| Question | Marks | HSC content – focus area |
|----------|-------|--|
| 16 (a) | 2 | Chemicals — working with chemicals – page 27 |
| 16 (b) | 4 | Chemicals — working with chemicals – page 27 |
| 16 (c) | 4 | Chemicals — chemical compliance – page 27 |
| 17 (a) | 3 | Safety — incidents, accidents and emergencies – page 33 |
| 17 (b) | 3 | Safety — WHS compliance – page 31 |
| 18 (a) | 5 | Sustainability — environmental hazard identification and risk controls – page 35 |
| 18 (b) | 3 | Sustainability — environmental compliance – page 36 |
| 19 (a) | 2 | Working in the industry — misunderstanding and conflict – page 46 |
| 19 (b) | 3 | Working in the industry — misunderstanding and conflict – page 46 |
| 19 (c) | 6 | Working in the industry — misunderstanding and conflict – page 46 |

Section III

| Question | Marks | HSC content – focus area |
|----------|-------|--|
| 20 (a) | 2 | Livestock health and welfare — identification – page 48 |
| 20 (b) | 5 | Livestock health and welfare — working with livestock – page 48 |
| 20 (c) | 8 | Livestock health and welfare — treatment – page 50 |
| 21 (a) | 2 | Plant pests, disease and disorders — range of plants – page 53 |
| 21 (b) | 5 | Plant pests, disease and disorders — recording and reporting – page 54 |
| 21 (c) | 8 | Plant pests, disease and disorders — management – page 54 |

Section IV

| Question | Marks | HSC content – focus area |
|-----------------|--------------|--|
| 22 | 15 | Weather — monitoring conditions – pages 39–40 Weather — managing conditions – page 40 |