

## 2019 HSC Primary Industries Marking Guidelines

### Section I

#### Multiple-choice Answer Key

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

## Section II

### Question 16 (a)

Criteria	Marks
• Outlines the impacts of a natural disaster on primary industries	3
• Identifies impacts of a natural disaster on primary industries	2
• Provides some relevant information	1

**Sample answer:**

A natural disaster that could impact on primary industries is drought. Drought leads to a lack of ground cover, allowing soil to be open to erosion. There are long and short-term impacts on financial stability due to the increased cost of purchasing feed and water, and loss of crop production.

### Question 16 (b)

Criteria	Marks
• Explains TWO work practices to minimise the impact of wildlife habitat destruction	4
• Outlines TWO work practices to minimise the impact of wildlife habitat destruction	3
• Outlines ONE work practice to minimise the impact of wildlife habitat destruction OR • Identifies TWO work practices to minimise the impact of wildlife habitat destruction	2
• Provides some relevant information	1

**Sample answer:**

Two work practices are:

- Replanting of indigenous tree species in another area or planting more indigenous tree species on site, so that when land clearing is required the wildlife can relocate to different areas within the same habitat.
- Creating a wildlife corridor – This area would be fenced off to restrict livestock traffic and cropping. Thus limits the destruction of natural habitats for wildlife.

**Question 17 (a)**

Criteria	Marks
<ul style="list-style-type: none"> <li>Identifies the highest priority task for Monday and for Tuesday</li> <li>Provides appropriate reasons for both</li> </ul>	4
<ul style="list-style-type: none"> <li>Identifies the highest priority task for Monday and for Tuesday</li> <li>Provides appropriate reasons for one</li> </ul>	3
<ul style="list-style-type: none"> <li>Identifies the highest priority task for Monday or Tuesday</li> <li>Provides an appropriate reason or reasons</li> </ul>	2
<ul style="list-style-type: none"> <li>Provides some relevant information</li> </ul>	1

**Sample answer:**

- Monday 4/11 –  
Job B/Check stock water troughs following the emptying and cleaning – need to ensure the livestock have clean water following emptying and cleaning and in preparation for the impending hot weather.
- Tuesday 5/11 –  
Job E/Clean out the chicken shed in preparation for the delivery of new layer hens at 9.00 am – the shed needs to be ready for the arrival of the hens. This allows for movement of hens from transport to sheds with minimal impact, focusing on animal welfare. The worker will also be under cover if the weather is wet.

**Question 17 (b)**

Criteria	Marks
<ul style="list-style-type: none"> <li>Explains a safe work practice that could minimise the risk of injury</li> </ul>	2
<ul style="list-style-type: none"> <li>Identifies a safe work practice</li> </ul>	1

**Sample answer:**

These bags may exceed the limit for lifting as an individual. If over your capabilities you would need to ask for help with this task. Bags should be lifted by bending the knees and keeping the weight close to the body. This reduces the chance of muscle strain that could occur due to heavy lifting.

## Question 18

Criteria	Marks
<ul style="list-style-type: none"> <li>• Outlines in detail the advantages and disadvantages of written and verbal communication</li> </ul>	4
<ul style="list-style-type: none"> <li>• Outlines the advantages and disadvantages of written and verbal communication</li> </ul>	3
<ul style="list-style-type: none"> <li>• Identifies the advantages and/or disadvantages of written and/or verbal communication</li> </ul>	2
<ul style="list-style-type: none"> <li>• Provides general statement of advantages or disadvantages of communication methods</li> </ul>	1

### Sample answer:

<i>Communication Method</i>	<i>Advantages</i>	<i>Disadvantages</i>
Written	<ol style="list-style-type: none"> <li>1. Visible and you can refer back to the sheet</li> <li>2. Physical record</li> <li>3. Portable</li> <li>4. Message can be personalised</li> </ol>	<ol style="list-style-type: none"> <li>1. Handwriting can be hard to read</li> <li>2. Can be lost</li> <li>3. Can be altered and smudged</li> <li>4. If you can't read it, then unable to follow the instructions</li> <li>5. Workers with poor English skills may not be able to read the instructions/note</li> </ol>
Verbal	<ol style="list-style-type: none"> <li>1. Current</li> <li>2. Can ask questions to clarify</li> <li>3. Directly targets the appropriate audience</li> <li>4. Appropriate for people with reading difficulties</li> <li>5. Allows for eye contact</li> </ol>	<ol style="list-style-type: none"> <li>1. No record</li> <li>2. Can be quickly forgotten</li> <li>3. Can be misinterpreted</li> <li>4. Body language may intimidate</li> </ol>

### Question 19 (a)

Criteria	Marks
• Explains why pre-operative processes are necessary	3
• Outlines pre-operative processes that are necessary	2
• Provides some relevant information	1

**Sample answer:**

The following pre-operative processes ensure that the application equipment provides the chemical correctly.

Check that the application equipment is clean with no residue to prevent contamination. Check the label. Calibrate the equipment to ensure the correct dose or application rate to prevent under or over use of the chemical and check the PPE is suitable, clean and undamaged to prevent chemical contamination to the user. Check seals of equipment to ensure no leaks and prevent chemical contamination.

### Question 19 (b)

Criteria	Marks
• Explains why post-operative processes are necessary	3
• Outlines post-operative processes that are necessary	2
• Provides some relevant information	1

**Sample answer:**

Following the use of chemicals, it is important to rinse and clean the application equipment, so that it is ready for future use. Chemical residue could damage equipment if not removed. PPE is to be cleaned or disposed of to prevent contamination when next used. Safe disposal of left over chemical and rinsate ensures that the chemical doesn't remain in the application equipment.

### Question 19 (c)

Criteria	Marks
• Justifies the need for keeping accurate chemical records	3
• Outlines the need for keeping accurate chemical records	2
• Provides some relevant information	1

**Sample answer:**

It is essential to keep accurate records as this is a legal requirement for all chemical users. Records allow the primary producer to monitor the types of chemicals being used, the purpose of the chemical, the quantities in stock and conditions at time of application. Records help monitor the withholding and re-entry periods.

### Question 20 (a)

Criteria	Marks
• Selects the appropriate PPE	2
• Identifies ONE item of appropriate PPE	1

**Sample answer:**

This spill requires responders to wear breathing apparatus and protective gloves.

### Question 20 (b)

Criteria	Marks
• Describes relevant workplace procedures required	3
• Shows some understanding of relevant workplace procedures required	2
• Provides some relevant information	1

**Sample answer:**

Contain the spill. Dial 000 OR 112 on a mobile phone, and ask for the fire brigade to assist in the clean-up of the spill. Notify your supervisor, appropriate personnel and neighbours to allow them to respond to the spill. Record the details of the spill to comply with workplace procedures.

### Question 20 (c)

Criteria	Marks
• Provides a comprehensive explanation of environmental issues that could result from the spill	4
• Provides an explanation of environmental issues that could result from the spill	3
• Explains an environmental issue that could result from the spill OR • Outlines environmental issues that could result from the spill	2
• States a relevant environmental issue/issues that could result from the spill	1

**Sample answer:**

Chemicals spreading cause contamination including possible algal blooms, death of aquatic life, poisoning of livestock. Possible long-term contamination of the ground due to chemical permeation: short and long term effects on the environment.

## Section III

### Question 21

Criteria	Marks
<ul style="list-style-type: none"> <li>• Demonstrates extensive knowledge and understanding of the use of an IPM program</li> <li>• Relates this understanding to maximising production and environmental sustainability</li> <li>• Communicates ideas and information using appropriate industry terminology</li> </ul>	13–15
<ul style="list-style-type: none"> <li>• Demonstrates thorough knowledge and understanding of the use of an IPM program</li> <li>• Relates this understanding to maximising production and environmental sustainability</li> <li>• Communicates ideas and information using appropriate industry terminology</li> </ul>	10–12
<ul style="list-style-type: none"> <li>• Demonstrates sound knowledge and understanding of the use of an IPM program</li> <li>• Relates this understanding to improving production and environmental sustainability</li> <li>• Uses some industry terminology appropriately</li> </ul>	7–9
<ul style="list-style-type: none"> <li>• Demonstrates basic knowledge and understanding of the use of an IPM program</li> <li>• Outlines how IPM programs improve production and/or environmental sustainability</li> <li>• Uses some industry terminology</li> </ul>	4–6
<ul style="list-style-type: none"> <li>• Demonstrates elementary knowledge and understanding of the use of an IPM program</li> <li>• Makes generalised statements about production and/or environmental sustainability</li> </ul>	1–3

**Answers could include:**

- A description of an IPM program, with suitable examples, that maximises production and ensures environmental sustainability.

*Production:*

- Reduces the cost of and the reliance on chemicals to control pests and diseases. This also leads to a reduction in the labour and fuel costs in applying the chemicals.
- Reduces resistance build-up in plants and animals.
- Uses biological control methods.
- Reduces the exposure to chemicals for workers and farmers.
- Increases access to more domestic and international markets.
- Increases the quality, quantity and profitability of the product.
- Monitors pest numbers to ensure they do not impact on environmental sustainability.

*Environment:*

- Reduces contamination of the environment.
- Minimises run-off into waterways and sensitive areas.
- Ensures equipment and machinery entering or leaving the property are inspected and cleaned for contaminants.
- Uses biological control methods.
- Reduces the exposure of non-target organisms and the environment to chemicals.
- Monitors pest levels to ensure pest numbers don't reach the economic threshold.



## Section IV

### Question 22 (a)

Criteria	Marks
<ul style="list-style-type: none"> <li>Describes strategies for dealing with animal residue and waste in a primary industries enterprise</li> </ul>	5
<ul style="list-style-type: none"> <li>Describes a strategy for dealing with animal residue and waste in a primary industries enterprise</li> <li>Outlines another strategy</li> </ul>	4
<ul style="list-style-type: none"> <li>Describes a strategy for dealing with animal residue and waste in a primary industries enterprise</li> <li>Identifies another strategy</li> </ul> <p>OR</p> <ul style="list-style-type: none"> <li>Outlines strategies for dealing with animal residue and waste in a primary industries enterprise</li> </ul>	3
<ul style="list-style-type: none"> <li>Outlines a strategy for dealing with animal residue and waste in a primary industries enterprise</li> </ul> <p>OR</p> <ul style="list-style-type: none"> <li>Identifies strategies for dealing with animal residue and waste in a primary industries enterprise</li> </ul>	2
<ul style="list-style-type: none"> <li>Identifies a strategy for dealing with animal residue and waste in a primary industries enterprise</li> </ul>	1

**Sample answer:**

Strategies for dealing with animal wastes and residue would start with contacting government authorities to check on relevant regulations and requirements. Dead livestock could be cremated, rendered, dispatched to knackeries, licensed landfills or burial sites on farm to meet government regulations. Manure and liquid waste can be composted, used in methane generation, separated in setting ponds, used as fertiliser on or off-farm or sold as fertiliser to landscaping companies. Waste chemical could be used on alternative sites, on farm and rinsate could also be applied to an appropriate site or farm space.

## Question 22 (b)

Criteria	Marks
<ul style="list-style-type: none"> <li>• Demonstrates extensive knowledge and understanding of measures that could be implemented as part of a biosecurity plan</li> <li>• Explains the use of measures to minimise the spread of diseases</li> </ul>	9–10
<ul style="list-style-type: none"> <li>• Demonstrates thorough knowledge and understanding of measures that should be implemented as part of a biosecurity plan</li> <li>• Explains the use of a measure to minimise the spread of diseases</li> </ul>	7–8
<ul style="list-style-type: none"> <li>• Demonstrates sound knowledge and understanding of measures that should be implemented as part of a biosecurity plan</li> </ul>	5–6
<ul style="list-style-type: none"> <li>• Demonstrates basic knowledge and understanding of measures that should be implemented as part of a biosecurity plan</li> </ul>	3–4
<ul style="list-style-type: none"> <li>• Provides some relevant information</li> </ul>	1–2

### **Answers could include:**

- Attach a biosecurity sign to the main gate entrance to notify visitors regarding who to contact prior to entry.
- Prevent access by unknown livestock to prevent disease entering the property.
- Quarantine new stock to identify any health issues before mixing with the current stock to prevent the spread of diseases.
- Install a boot and hand wash for visitors prior to unloading and handling livestock.
- Maintain a register of visitors to identify who has entered the property and their potential risk.
- Conduct regular health checks of livestock to monitor any health issues that may occur so they can be treated promptly. Sick livestock can then be isolated and treated immediately.
- Ensure that NLIS requirements are followed to enhance traceability.
- Record all stock and feed movements.

### Question 23 (a)

Criteria	Marks
<ul style="list-style-type: none"> <li>Describes strategies for dealing with diseased plant material and waste in a primary industries enterprise</li> </ul>	5
<ul style="list-style-type: none"> <li>Describes a strategy for dealing with diseased plant material and waste in a primary industries enterprise</li> <li>Outlines another strategy</li> </ul>	4
<ul style="list-style-type: none"> <li>Describes a strategy for dealing with diseased plant material and waste in a primary industries enterprise</li> <li>Identifies another strategy</li> </ul> <p>OR</p> <ul style="list-style-type: none"> <li>Outlines strategies for dealing with diseased plant material and waste in a primary industries enterprise</li> </ul>	3
<ul style="list-style-type: none"> <li>Outlines a strategy for dealing with diseased plant material and waste in a primary industries enterprise</li> </ul> <p>OR</p> <ul style="list-style-type: none"> <li>Identifies strategies for dealing with diseased plant material and waste in a primary industries enterprise</li> </ul>	2
<ul style="list-style-type: none"> <li>Identifies a strategy for dealing with diseased plant material and waste in a primary industries enterprise</li> </ul>	1

**Sample answer:**

When dealing with diseased plant material and waste it is essential to contact local authorities regarding regulations and requirements. Diseased plant material can be moved from the main plant and growing area to prevent spreading. Diseased material can also be burnt, wrapped in plastic and disposed of in designated landfills or collected at DPI points to further prevent the spread of disease.

Equipment should be sterilised. Waste plant material can be composted or mulched. This could be done with prunings, cuttings, damaged fruits or vegetables. Waste chemicals could be used on-site and the rinsate disposed of in an appropriate on-farm site.

### Question 23 (b)

Criteria	Marks
<ul style="list-style-type: none"> <li>• Demonstrates extensive knowledge and understanding of measures that should be implemented as part of a biosecurity plan</li> <li>• Explains the use of measures to minimise the spread of weeds</li> </ul>	9–10
<ul style="list-style-type: none"> <li>• Demonstrates thorough knowledge and understanding of measures that should be implemented as part of a biosecurity plan</li> <li>• Explains the use of a measure to minimise the spread of weeds</li> </ul>	7–8
<ul style="list-style-type: none"> <li>• Demonstrates sound knowledge and understanding of measures that should be implemented as part of a biosecurity plan</li> </ul>	5–6
<ul style="list-style-type: none"> <li>• Demonstrates basic knowledge and understanding of measures that should be implemented as part of a biosecurity plan</li> </ul>	3–4
<ul style="list-style-type: none"> <li>• Provides some relevant information</li> </ul>	1–2

**Answers could include:**

- Attach a biosecurity sign to the main entrance gate to notify visitors regarding who to contact prior to entry.
- Prevent access by unknown sources to prevent weeds entering the property.
- Ensure all plant purchases come with the required documentation to ensure there are no sources of contamination in the purchased plant material.
- Install a boot and hand wash for visitors prior to entry.
- Inspect machinery prior to entering the property.
- Maintain a register of visitors to identify who has entered the property and their potential risk.
- Record all purchases and plant material movements.
- Ensure machinery and equipment are washed prior to entering or leaving the premises.
- Purchase certified clean seeds or seedlings.

# 2019 HSC Primary Industries Mapping Grid

## Section I

Question	Marks	HSC content – focus area
1	1	Safety – risk management – PPE – p35 Safety – safe work procedures and practices – p35
2	1	Working in the industry – anti discrimination – p51
3	1	Weather – weather and climate – p44
4	1	Working in the industry – working with others – p51
5	1	Sustainability – environment – p39
6	1	Weather – monitoring conditions – p44
7	1	Chemicals – working with chemicals – p31
8	1	Safety – safe work procedures and practices – p35
9	1	Safety – PCBU – WHS compliance – pg33 Safety – risk management – risk control – p35
10	1	Weather – weather and climate – p44 Weather – managing conditions – p45
11	1	Safety – work, health and safety – p33
12	1	Sustainability – environment – p39 Sustainability – environmentally sustainable work practices – p41
13	1	Chemicals – working with chemicals – p31
14	1	Chemicals – working with chemicals – p30
15	1	Working in the industry – work practices – p50 Chemicals – working with chemicals – p31

## Section II

Question	Marks	HSC content – focus area
16 (a)	3	Sustainability – environmental hazard identification and risk control – p39
16 (b)	4	Sustainability – environmental hazard identification and risk control – p39 – environmentally sustainable work practices – p41
17 (a)	4	Working in the industry – work practices – p50
17 (b)	2	Safety – safe work procedures and practices – p36
18	4	Working in the industry – working with others – p50
19 (a)	3	Chemicals – equipment – p29
19 (b)	3	Chemicals – equipment – p29
19 (c)	3	Chemicals – equipment – p29
20 (a)	2	Chemicals – work, health and safety – p29
20 (b)	3	Sustainability – environmental hazards, identification and risk control – p39 Chemicals – working with chemicals – p31
20 (c)	4	Sustainability – environment – p39

**Section III**

Question	Marks	HSC content – focus area
21	15	Chemicals – integrated pest / resistance management – p31 Sustainability – environment – p39

**Section IV**

Question	Marks	HSC content – focus area
21 (a)	5	Livestock health and welfare – working with livestock – p54
21 (b)	10	Livestock health and welfare – working with livestock – p54
22 (a)	5	Plant pests, diseases and disorders – management – p60
22 (b)	10	Plant pests, diseases and disorders – management – p60