

**2002 HSC Notes from  
the Marking Centre  
Primary Industries**

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# 2002 HSC NOTES FROM THE MARKING CENTRE

## PRIMARY INDUSTRIES

### Introduction

This document has been produced for the teachers and candidates of the Stage 6 course in Primary Industries. It provides comments with regard to responses to the 2002 Higher School Certificate Examination, indicating the quality of candidate responses and highlighting the relative strengths and weaknesses of the candidature in each section and each question.

It is essential for this document to be read in conjunction with the relevant syllabus, the 2002 Higher School Certificate Examination, the Marking Guidelines and other support documents which have been developed by the Board of Studies to assist in the teaching and learning of Primary Industries.

### General Comments

In 2002, 454 candidates attempted the Primary Industries examination (an increase of 37 on 2001).

Responses in Section III indicate questions are not being interpreted accurately which results in not all parts of the question being addressed. Responses which indicated a sound understanding of the meaning of key terms as provided in the ‘Glossary of Key Terms’, were generally of a higher standard. The terms such as ‘evaluate’, ‘justify’ and ‘analyse’ were not fully understood.

Many responses focused on only part of the question, providing extensive responses to this section and largely ignoring other aspects of the question. Section II provided a more polarised range of responses with many responses accessing the higher range of marks available.

### Section I – Multiple Choice

Question	Correct Response
1	A
2	B
3	A
4	D
5	B
6	D
7	B
8	B

Question	Correct Response
9	D
10	C
11	D
12	C
13	B
14	A
15	C

## Section II

All questions in this section are compulsory.

### Question 16 (a) 2 marks (b) 2 marks (c) marks (d) marks

- (a) The vast majority of responses were able to identify at least one sensitive area.

Examples of responses included road paddock, organic olives, native vegetation and wildlife area for the higher altitudes and creek paddock, Shiraz paddock, dam and creek for the lower altitude.

- (b) Many responses were able to identify run-off as a major cause of chemical movement to lower altitudes. Better responses were able to identify wind as an agent but could also describe how wind moved the chemical eg wind drift. Other responses included leaching and vaporisation of chemicals. Many responses were unable to accurately describe wind direction eg the term southerly wind was used to describe where the wind was going rather than where it had come from.

Some responses were able to identify wind as an agent but could not explain how wind moved the chemical. Novel answers included the transfer of the spray through irrigation water. Responses such as wind drift could be the same for both sensitive areas.

- (c) Most responses could identify that chemicals had an affect on sensitive areas, but could not provide details or give examples. Some responses used very general terms, eg cause harm, wreck, ruin or contaminate to describe the effect on the sensitive area.

Some responses failed to highlight the consequences of chemicals on sensitive areas, eg loss of organic status and premium price, destruction of vines, damage to non-targeted plant species including olives, destruction of native habitat, poisoning of stock, human allergies and sickness, legal implications, effect on neighbours' livelihood.

- (d) Many responses failed to analyse a control measure, although most were able to identify a valid control measure. Poorer responses stated not to spray on windy days but could not say why. Stronger responses included how high wind speed can lead to spray drift therefore not spraying on a windy day reduces spray drift and lowers the chance of chemicals drifting into sensitive areas.

### Question 17 (5 marks)

- (a) To correctly answer this question the measurement of the horse paddock needed to be correct (5cm x 3cm). Whilst most responses were able to calculate the area in  $\text{cm}^2$ , many failed to convert their response into hectares. Reponses needed to show working to gain full marks.
- (b) Most responses calculated the herbicide requirements of 45L but failed to show working. Some responses divided rather than multiplied their calculations.
- (c) Accurate responses showed that the dilution rate could be calculated by multiplying the 45L of chemical in part (b) by 100 and showed an answer of 4500L of chemical mix. Some responses indicated a failure to understand the use of the term dilution rate and didn't connect

the need to use the response from part (b) in their calculations. Many responses failed to show calculations.

- (d) Many responses failed to show working. Some responses were out of the normal range such as: 9090 x 500 litre tanks for a 15 hectare paddock. Accurate responses indicated correct workings from part (c).

**Question 18 (8 marks)**

- (a) Many responses were able to achieve full marks by correctly stating that the farmer should wear appropriate PPE and turn the tractor or equipment off. Some responses did not identify a safety step and instead described how to fix the problem.
- (b) Better responses were able to both identify a cause eg dirty water, incompatible chemicals and describe a remedy for this situation eg use clean water or install in line filters. Most responses identified only a cause or described a remedy. Some responses incorrectly identified a cause as nozzle blockage.
- (c) To gain a mark responses had to identify suitable PPE eg waterproof overalls, gloves, boots and facemask. Other options included funnels, syphons. Many responses simply stated PPE.
- (d) The majority of responses described a plan but very few justified why such a plan should be followed. Many responses did not mention the importance of their own safety before attempting to rescue the farmer. A large proportion of responses identified DRABC but did not elaborate on its meaning.

**Question 19 (5marks)**

Most responses identified a relevant authority and explained the type of information to be communicated and its importance.

- (a) The majority of responses identified an appropriate authority such as the Fire Brigade, Police and EPA. Some could not identify an appropriate authority and many indicated that the best person to contact was the boss or supervisor rather than an authority.
- (b) Better responses identified two pieces of information relating specifically to the spilt chemical and explained their relevance, for example:
- size of the spill indicating what containment might be necessary
  - name of chemical so authorities can identify precautions that need to be taken eg PPE, containment, neutralisation and level of danger.

Responses in the lower mark range did not provide two different pieces of information and two related reasons.

**Question 20 (4 marks)**

Better responses identified two relevant and necessary documents and stated a meaningful purpose for each. Responses in the middle range of marks provided a purpose for a document not relevant to the commencement of employment, or only correctly listed one document and stated its purpose.

Responses in the lower mark range identified a document which was work-related but not necessary to be completed prior to commencing employment, for example, health fund and workers compensation forms.

### **Question 21 (5 marks)**

Better responses identified a risk created by this hazard. They also identified an appropriate control measure. These responses also provided reasons and supportive or comparative arguments.

Middle range responses correctly identified a risk and an appropriate control measure. However, most were unable to explain or justify the use of the control. Others failed to provide an appropriate control measure but went on to provide a good explanation in part (c) of the question.

On the whole, responses indicated a solid understanding of occupational health and safety principles and procedures.

### **Section III**

Candidates were required to answer 2 out of 3 of the questions provided.

### **Question 22**

This question was optional and attempted by 365 candidates.

Better responses understood that this question formed a communication and were able to justify communication methods and information required for both scenarios. Responses in this range were able to distinguish between the communication methods required for each situation and linked these to purpose and audience.

The majority of responses in the middle mark range identified appropriate communication methods and relevant information required for each scenario but failed to provide justification for each scenario.

Responses in the lower mark range identified methods of communication or the information required in one situation or failed to focus on the communication methods to justify their choices.

### **Question 23**

This optional question and was attempted by 370 candidates.

Responses in the top mark range demonstrated comprehensive knowledge and understanding of hazards in all four situations, identifying at least two hazards per situation. These responses provided reasons why each situation was hazardous. They evaluated two procedures by critically examining and giving sound reasons for each procedure. Terminology used throughout these responses was appropriate.



Average responses did not demonstrate sufficient knowledge of hazardous situations and did not identify hazards in all four situations. Many responses answered half the question as they presented procedures to minimise risks and did not identify hazards first. Judgement of procedures was not well demonstrated at this level.

Responses in the lower mark range provided minimal identification of hazards and limited information on procedures for minimising risks.

**Question 24 (15 marks)**

This optional question was attempted by 154 candidates.

Responses in the high mark range demonstrated a comprehensive understanding of an IPM program. They identified components and interrelationships of an IPM program in their analysis. Responses indicated the differences between an IPM program and a totally chemical program. Terminology used throughout responses was appropriate and industry specific.

Average responses described one or a limited number of components in great detail rather than describing a range of components. Differences were identified but not expanded upon. The information presented was not provided in sufficient detail. The majority of responses did not distinguish between an IPM program and unrelated components of an IPM program.

Responses in the lower mark range failed to identify that chemical use could be included in an IPM program. A limited number of examples of IPM were provided.

# Primary Industries

## 2002 HSC Examination Mapping Grid

Question	Marks	Units of competency
<b>Section I</b>		
1	1	Ag Core 2A
2	1	Ag Core 3A
3	1	Ag Core 2A
4	1	Ag 2020 CHA
5	1	Ag Core 1A
6	1	Ag Core 2A
7	1	Ag Core 5A
8	1	Ag 2011 CHA
9	1	Ag Core 5A
10	1	Ag Core 1A
11	1	Ag Core 6A
12	1	Ag 2009 CHA
13	1	Ag Core 3A
14	1	Ag 2009 CHA
15	1	Ag 2009 CHA
<b>Section II</b>		
16 (a)	1	Ag 2009 CHA
16 (b)	2	Ag 2009 CHA
16 (c)	2	Ag 2009 CHA
16 (d)	3	Ag 2009 CHA
17 (a)	2	Ag Core 4A, Ag 2009 CHA
17 (b)	1	Ag 2007 CHA
17 (c)	1	Ag 2007 CHA
17 (d)	1	Ag 2007 CHA
18 (a)	2	Ag Core 2A
18 (b)	2	Ag Core 2A, Ag 2009 CHA
18 (c)	1	Ag Core 2A
18 (d)	3	Ag Core 2A
19 (a)	1	Ag 2005 CHA, Ag 2012 CHA, Ag Core 4A
19 (b)	4	Ag 2012 CHA, Ag Core 4A, Ag 2005 CHA
20	4	Ag Core 1A
21 (a)	1	Ag Core 2A
21 (b)	2	Ag Core 2A
21 (c)	2	Ag Core 2A

<b>Question</b>	<b>Marks</b>	<b>Units of competency</b>
<b>Section III</b>		
22	15	Ag Core 1A, Ag Core 2A, Ag Core 4A, Ag Core 5A
23	15	Ag 2007 CHA, Ag 2008 CHA, Ag 2010 CHA, Ag Core 1A
24	15	Ag Core 4A, Ag 2006 CHA

## 2002 HSC Primary Industries Marking Guidelines

### Section II

#### Question 16 (a)

*Competency assessed: AG 2009 CHA*

#### MARKING GUIDELINES

Criteria	Marks
<ul style="list-style-type: none"> <li>• Correctly names two sensitive areas from the plan               <ul style="list-style-type: none"> <li>– a sensitive area, at an altitude higher than the <i>Horse paddock</i></li> <li>– a sensitive area, at an altitude lower than the <i>Horse paddock</i></li> </ul> </li> </ul>	2
<ul style="list-style-type: none"> <li>• Correctly names one sensitive area</li> </ul>	1

#### Question 16 (b)

*Competency assessed: AG 2009 CHA*

#### MARKING GUIDELINES

Criteria	Marks
<ul style="list-style-type: none"> <li>• Describes correctly how the chemical could move into both of the sensitive areas in part (a)</li> </ul>	2
<ul style="list-style-type: none"> <li>• Describes correctly how the chemical could move into one of the sensitive areas in part (a)</li> <li>• Just describes how chemical may move</li> </ul>	1

**Question 16 (c)***Competency assessed: AG 2009 CHA***MARKING GUIDELINES**

<b>Criteria</b>	<b>Marks</b>
<ul style="list-style-type: none"><li>Describes two potential effects of the chemical movement into the sensitive areas nominated</li></ul>	2
<ul style="list-style-type: none"><li>Describes one potential effect of the chemical movement into the sensitive area</li></ul>	1

**Question 16 (d)***Competency assessed: AG 2009 CHA***MARKING GUIDELINES**

<b>Criteria</b>	<b>Marks</b>
<ul style="list-style-type: none"><li>Identifies and analyses one control measure that will minimise the risk of the chemical impacting on the sensitive area</li></ul>	2
<ul style="list-style-type: none"><li>Identifies or describes one control measure that will minimise the risk of the chemical impacting on the sensitive area</li></ul>	1

**Question 17 (a)***Competencies assessed: AGCORE 4A, AG 20009 CHA***MARKING GUIDELINES**

<b>Criteria</b>	<b>Marks</b>
<ul style="list-style-type: none"><li>Correctly measures dimensions of the horse paddock</li><li>Uses information in key to correctly calculate and state area of paddock in hectares (must show working)</li></ul>	2
<ul style="list-style-type: none"><li>Correct calculation</li></ul> OR <ul style="list-style-type: none"><li>No working shown</li></ul>	1

**Question 17 (b)***Competencies assessed: AG 2007 CHA***MARKING GUIDELINES**

<b>Criteria</b>	<b>Marks</b>
<ul style="list-style-type: none"><li>Correctly determines the amount of the non-selective herbicide needed (based upon answer in part (a))</li></ul>	1

**Question 17 (c)***Competency assessed: AG 2007 CHA***MARKING GUIDELINES**

<b>Criteria</b>	<b>Marks</b>
<ul style="list-style-type: none"><li>• Correctly determines the amount of water needed (based on the answer given in part (b))</li></ul>	1

**Question 17 (d)***Competency assessed: AG 2007 CHA***MARKING GUIDELINES**

<b>Criteria</b>	<b>Marks</b>
<ul style="list-style-type: none"><li>• Correctly determines the number of tank mixes required (based on the answer given in part (c))</li></ul>	1

**Question 18 (a)***Competency assessed: AG CORE 2A***MARKING GUIDELINES**

<b>Criteria</b>	<b>Marks</b>
<ul style="list-style-type: none"><li>• Correctly states two essential steps that the farmer should follow before trying to remedy the problem of the blocked nozzles</li></ul>	2
<ul style="list-style-type: none"><li>• Correctly states one essential step</li></ul>	1

**Question 18 (b)***Competencies assessed: AG CORE 2A, AG2009 GHA***MARKING GUIDELINES**

<b>Criteria</b>	<b>Marks</b>
<ul style="list-style-type: none"><li>• Identifies one possible cause why the nozzles may have blocked</li><li>• Describes one possible remedy</li></ul>	2
<ul style="list-style-type: none"><li>• Identifies one or more possible cause</li></ul> OR <ul style="list-style-type: none"><li>• Describes a remedy without identifying the cause</li></ul>	1

**Question 18 (c)***Competency assessed: AGCORE 2A***MARKING GUIDELINES**

<b>Criteria</b>	<b>Marks</b>
<ul style="list-style-type: none"><li>• Outlines an appropriate precaution that the farmer should take to prevent future spillage</li></ul>	1

**Question 18 (d)***Competency assessed: AG CORE 2A***MARKING GUIDELINES**

<b>Criteria</b>	<b>Marks</b>
<ul style="list-style-type: none"><li>• Describes and justifies an emergency action plan that the employee could follow</li></ul>	3
<ul style="list-style-type: none"><li>• Describes emergency action plan only</li></ul>	2
<ul style="list-style-type: none"><li>• Lists at least three emergency steps</li></ul>	1

**Question 19 (a)***Competencies assessed: AG 2005 CHA, AG 2012 CHA, AG CORE 4A***MARKING GUIDELINES**

<b>Criteria</b>	<b>Marks</b>
<ul style="list-style-type: none"><li>• Correctly names one authority that should be notified</li></ul>	1

**Question 19 (b) (i)***Competencies assessed: AG 2012 CHA, AG CORE 4A, AG 2005 CHA***MARKING GUIDELINES**

<b>Criteria</b>	<b>Marks</b>
<ul style="list-style-type: none"><li>• Correctly lists ONE piece of information about the chemical that should be communicated</li></ul>	2
<ul style="list-style-type: none"><li>• Explains the importance of the piece of information about the chemical</li></ul>	
<ul style="list-style-type: none"><li>• Correctly lists ONE piece of information about the chemical</li></ul>	1

**Question 19 (b) (ii)**

*Competencies assessed: AG 2012 CHA, AG CORE 4A, AG 2005 CHA*

**MARKING GUIDELINES**

Criteria	Marks
<ul style="list-style-type: none"> <li>Correctly lists ONE piece of information about the chemical that should be communicated</li> <li>Explains the importance of the piece of information communicated</li> </ul>	2
<ul style="list-style-type: none"> <li>Correctly lists ONE piece of information about the chemical</li> </ul>	1

**Question 20**

*Competency assessed: AG CORE 1A*

**MARKING GUIDELINES**

Criteria	Marks
Document 1: <ul style="list-style-type: none"> <li>Correctly lists ONE document that is relevant and should be completed prior to commencing employment in a Primary industry sector</li> <li>States the purpose of this document</li> </ul>	2
<ul style="list-style-type: none"> <li>Lists ONE industry relevant document or generally relevant document</li> </ul> OR <ul style="list-style-type: none"> <li>States the purpose of a generally relevant document</li> </ul>	1
Document 2: Same as for Document 1	

**Question 21 (a)**

*Competency assessed: AG CORE 2A*

**MARKING GUIDELINES**

Criteria	Marks
<ul style="list-style-type: none"> <li>Correctly identifies the risk that has been created by this hazard</li> </ul>	1

**Question 21 (b)**

*Competency assessed: AG CORE 2A*

**MARKING GUIDELINES**

Criteria	Marks
<ul style="list-style-type: none"> <li>Correctly identifies an appropriate control measure</li> </ul>	1



**Question 21 (c)**

*Competency assessed: AG CORE 2A*

**MARKING GUIDELINES**

<b>Criteria</b>	<b>Marks</b>
<ul style="list-style-type: none"> <li>• Appropriately justifies the use of the nominated control measure in (b)</li> <li>• Best answer will give a detailed justification of an appropriate control measure</li> </ul>	3
<ul style="list-style-type: none"> <li>• A good explanation of an inappropriate control measure</li> </ul> OR <ul style="list-style-type: none"> <li>• A good control measure with a poor explanation</li> </ul>	2
<ul style="list-style-type: none"> <li>• Lists a range of control measures, no explanation</li> </ul>	1

**Question 22**

*Competencies assessed: AG CORE 1A, AG CORE 2A, AG CORE 4A, AG CORE 5A*

**MARKING GUIDELINES**

<b>Criteria</b>	<b>Marks</b>
<ul style="list-style-type: none"> <li>• Demonstrates a comprehensive understanding of the different methods of communication appropriate in each situation and exhibits well reasoned justification of each method of communication identified and its content using precise industry and enterprise terminology</li> </ul>	13–15
<ul style="list-style-type: none"> <li>• Demonstrates a detailed understanding of the different methods of communication to be used in each situation and exhibits reasoned discussion of most methods of communication identified and its content using specific industry and enterprise terminology</li> </ul>	10–12
<ul style="list-style-type: none"> <li>• Demonstrates an understanding of the different methods of communication to be used in situations and exhibits good discussion of some methods of communication identified OR its content using basic industry terminology</li> </ul>	7–9
<ul style="list-style-type: none"> <li>• Demonstrates a basic knowledge of methods of communication with a limited description of each method and some relevant information</li> </ul>	4–6
<ul style="list-style-type: none"> <li>• Shows some knowledge of methods of communication and communicates some relevant information</li> </ul>	1–3

**Question 23**

*Competencies assessed: AG 2007 CHA, AG 2008 CHA, AG 2010 CHA, AG CORE 1A*

**MARKING GUIDELINES**

<b>Criteria</b>	<b>Marks</b>
<ul style="list-style-type: none"><li>• Demonstrates a comprehensive knowledge and understanding of potentially hazardous situations within a farm enterprise.</li><li>• Identifies hazards in ALL four situations – at least two hazards per situation</li><li>• Demonstrates critical judgement and sound reasoning for evaluating procedures that could be used to minimise potential risks</li><li>• Must evaluate two procedures</li></ul>	13–15
<ul style="list-style-type: none"><li>• Demonstrates a detailed knowledge and understanding of potentially hazardous situations within a farm enterprise</li><li>• Identifies hazards in ALL four situations</li><li>• Demonstrates sound judgement and reasoning in evaluating procedures that could be used to minimise potential risks</li></ul>	10–12
<ul style="list-style-type: none"><li>• Demonstrates sound knowledge and understanding of some potentially hazardous situations within a farm enterprise</li><li>• Provides a balanced judgement of the value of a range of procedures that could be used to minimise potential risks</li></ul>	7–9
<ul style="list-style-type: none"><li>• Demonstrates a limited knowledge of the potentially hazardous situations within a farm enterprise</li><li>• Describes a range of procedures and provides some supporting evidence</li></ul>	4–6
<ul style="list-style-type: none"><li>• Demonstrates a basic knowledge of potentially hazardous situations within a farm enterprise</li><li>• Describes a basic range of procedures that could be used to minimise some potential risks</li></ul>	1–3

**Question 24***Competencies assessed: AG CORE 4A, AG 2006 CHA***MARKING GUIDELINES**

<b>Criteria</b>	<b>Marks</b>
<ul style="list-style-type: none"><li>• Demonstrates a comprehensive understanding of an IPM program and analyses its components</li><li>• Clearly demonstrates the differences between IPM and a totally chemical control program</li><li>• Communicates ideas and information using precise industry and enterprise terminology</li></ul>	13–15
<ul style="list-style-type: none"><li>• Demonstrates a detailed understanding of IPM and its components</li><li>• Effectively demonstrates the differences between IPM and a totally chemical control program</li></ul>	10–12
<ul style="list-style-type: none"><li>• Describes IPM and its components</li><li>• Makes some comments on the differences between IPM and a totally chemical control program</li></ul>	7–9
<ul style="list-style-type: none"><li>• Describes IPM and indicates some differences with a chemical control program</li></ul>	4–6
<ul style="list-style-type: none"><li>• Provides a limited description of IPM</li></ul>	1–3