BOARD OF STUDIES
NEW SOUTH WALES

2012 HSC Agriculture Marking Guidelines

Section I, Part A

Multiple-choice Answer Key

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

Section I, Part B

Question 21

Criteria	Marks
• Identifies similarities and differences in the use of introduced and native pasture species and links these to animal production	5
• Identifies similarities and differences in the use of introduced and native pasture species	4
• Identifies uses of a native or introduced pasture species and links them to animal production	3
• Identifies a feature of native and a feature of an introduced pasture species OR • Identifies TWO or more features of either a native or an introduced pasture species	2
• Identifies a feature of either a native or introduced pasture species	1

Question 22 (a)

Criteria	Marks
• Both correct	2
• One correct	1

Question 22 (b)

Criteria	Marks
• Outlines a design of a relevant trial which includes replication, randomisation, a control and standardised conditions	4
• Outlines a trial with TWO or THREE relevant design components (randomisation, replication, control or standard conditions)	2–3
• Outlines a trial with only ONE relevant design component (randomisation, replication, control or standard conditions)	1

Question 23 (a)

Criteria	Marks
• Identifies at least TWO water sources	2
• Identifies only ONE water source	1

Question 23 (b)

Criteria	Marks
• Identifies TWO strategies and explains how both of them maintain water quality	4
• Identifies TWO strategies that can be used to maintain water quality AND • Explains how ONE of them maintains water quality	3
• Identifies TWO strategies that can be used to maintain water quality	2
• Identifies a strategy that can be used to maintain water quality	1

Question 24 (a)

Criteria	Marks
• Identifies the relationship between carcase weight and fat percentage and relates these to producing carcases for different markets	2
• Identifies the relationship between carcase weight and fat percentage	1

Question 24 (b)

Criteria	Marks
• Comprehensively explains how at least TWO management techniques can be used to modify carcase composition	6
• Identifies and explains how TWO management techniques can be used to modify carcase composition	4–5
• Identifies TWO management techniques and explains how ONE of them can be used to modify carcase composition OR • Identifies TWO management techniques	2–3
• Identifies ONE management technique that can be used to modify carcase composition	1

Question 25 (a)

Criteria	Marks
• Identifies a characteristic and relates how changing it can improve crop production	2
• Identifies one characteristic	1

Question 25 (b)

Criteria	Marks
• Provides detailed characteristics and features of TWO plant breeding systems	4
• Provides some characteristics and features of TWO plant breeding systems OR • Provides detailed characteristics and features of ONE plant breeding system	2–3
• Identifies at least ONE plant breeding system	1

Question 26 (a)

Criteria	Marks
• Makes clear links between management techniques and their contribution to sustainable soil management	4
• Sketches in general terms at least TWO soil management techniques OR • Shows some links between at least TWO soil management techniques and sustainability	2–3
• Identifies at least ONE relevant management technique	1

Question 26 (b)

Criteria	Marks
• Identifies similarities and/or differences between management practices from mid 1900s and present day • Clearly links these practices to impacts on soil fertility	6
• Identifies similarities and/or differences between management practices from mid 1900s and present day • Attempts some linking of these practices to soil fertility	4–5
• Sketches in general terms management practices from mid 1900s and/or present day OR • Identifies two management practices	2–3
• Identifies a management technique from either mid 1900s or present	1

Question 27 (a)

Criteria	Marks
• Identifies a possible method of selling the product AND indicates the main features of this method	2
• Identifies a possible method of selling the product	1

Question 27 (b)

Criteria	Marks
• Identifies a government decision and relates the impact of it to farm production or marketing	2
• Identifies a government decision that may impact on farm production or marketing	1

Question 27 (c)

Criteria	Marks
• Provides clear and detailed judgements relating to the value of relevant management strategies	6
• Provides some judgements relating to the value of relevant management strategies	4–5
• Outlines strategies that can improve product quality	2–3
• Identifies at least ONE strategy that can improve product quality	1

Question 28 (a)

Criteria	Marks
• Clearly explains at least ONE effect of rising input costs and links it to a range of decisions made on the farm	4
• Outlines an effect of rising input costs and links it to a decision made on a farm	3
• Outlines an effect of rising input costs	2
• Identifies an effect of rising input costs	1

Question 28 (b)

Criteria	Marks
• Provides detailed points for and/or against the use of gross margins in farm management	5
• Provides some points for and/or against the use of gross margins in farm management	3–4
• Sketches in general terms the use of gross margins in farm management • Defines the term ‘gross margin’	1–2

Section II

Question 29 (a) (i)

Criteria	Marks
• Names a research study and clearly identifies a reason for conducting the research	2
• Names a research study OR • Identifies the research problem	1

Question 29 (a) (ii)

Criteria	Marks
• Provides a detailed outline of the research findings AND • Clearly explain how the findings can be used	6
• Provides a general outline of the research findings AND • Explains how the findings can be used	4–5
• Provides a limited outline of the research findings AND/OR • Gives a limited explanation of how the findings can be used	2–3
• Provides a feature of the research findings OR • Proposes a use of the research	1

Question 29 (b)

Criteria	Marks
• Demonstrates extensive knowledge and deep understanding of the production of specific genetically modified crops • Addresses ethical/legal/social/economic implications of growing genetically modified crops • Response is logical and cohesive throughout	10–12
• Demonstrates knowledge and understanding of the production of specific genetically modified crops • Gives some details of the ethical/legal/social/economic impacts of growing genetically modified crops • Response is mainly logical and cohesive	7–9
• Demonstrates limited knowledge and understanding of the production of specific genetically modified crops • Identifies some of the ethical/legal/social/economic impacts of growing genetically modified crops • Response is organised	4–6
• Identifies some genetically modified crops and/or features of them • Response is disorganised	1–3

Question 30 (a) (i)

Criteria	Marks
• Names a research study and clearly identifies a reason for conducting the research	2
• Names a research study OR • Identifies the research problem	1

Question 30 (a) (ii)

Criteria	Marks
• Provides a detailed outline of the research findings AND • Clearly explains how the findings can be used	6
• Provides a general outline of the research findings AND • Explains how the findings can be used	4–5
• Provides a limited outline of the research findings AND/OR • Gives a limited explanation of how the findings can be used	2–3
• Provides a feature of the research findings OR • Proposes a use of the research	1

Question 30 (b)

Criteria	Marks
• Demonstrates extensive knowledge and deep understanding of specific management strategies that maintain production • Provides clear links between each management strategy and maintenance of production • Response is logical and cohesive throughout	10–12
• Demonstrates knowledge and understanding of specific management strategies that maintain production • Makes some links between strategies and maintenance of production • Response is mainly logical and cohesive	7–9
• Demonstrates limited knowledge and understanding of management strategies that maintain production • Describes management strategies available to farms • Response is organised	4–6
• Identifies management strategies available to farms • Response is disorganised	1–3

Question 31 (a) (i)

Criteria	Marks
• Names a research study and clearly identifies a reason for conducting the research	2
• Names a research study OR • Identifies the research problem	1

Question 31 (a) (ii)

Criteria	Marks
• Provides a detailed outline of the research findings AND • Clearly explains how the findings can be used	6
• Provides a general outline of the research findings AND • Explains how the findings can be used	4–5
• Provides a limited outline of the research findings AND/OR • Gives a limited explanation of how the findings can be used	2–3
• Provides a feature of the research findings OR • Proposes a use of the research	1

Question 31 (b)

Criteria	Marks
• Demonstrates extensive knowledge and deep understanding of the impact of specific recently introduced technologies • Addresses in detail the management changes that have resulted from these technologies • Response is logical and cohesive throughout	10–12
• Demonstrates knowledge and understanding of the impact of specific recently introduced technologies • Gives some details of the management changes that have resulted from these technologies • Response is mainly logical and cohesive	7–9
• Demonstrates limited knowledge and understanding of the impact of recently introduced technologies • Outlines some management changes that have resulted from these technologies • Response is organised	4–6
• Identifies a recently introduced technology OR management change • Response is disorganised	1–3

Agriculture

2012 HSC Examination Mapping Grid

Section I
Part A

Question	Marks	Content	Syllabus outcomes
1	1	Role of advertising and promotion	H3.3
2	1	Describes factors of supply and demand	H3.1
3	1	Outline plant breeding systems and breeding systems in animal production	H2.1
4	1	Definition of oestrous cycle	H2.2
5	1	Integrated pest management	H2.2
6	1	Reproductive techniques	H2.2
7	1	Role of hormones	H2.2
8	1	The place of the farm	H3.1
9	1	Outline effects of plant hormones	H2.1
10	1	Evaluate ways … value add	H3.3
11	1	Outline role of objective measure	H2.2
12	1	Chemical and physical characteristics of soil	H2.1
13	1	Perform first-hand investigation	H2.1
14	1	Beneficial relationship between microbes and animals	H2.2
15	1	Analyse/interpret data	H4.1
16	1	Define integrated pest management	H1.1
17	1	Use techniques to analyse	H3.1
18	1	Interpret pesticide label	H2.1
19	1	Nitrogen cycle	H2.1
20	1	Construct diagram … energy	H2.2

Section I
Part B

Question	Marks	Content	Syllabus outcomes
21	5	Identify native and introduced pasture species	H2.1, H2.2
22 (a)	2	Present data	H4.1
22 (b)	4	First-hand investigation	H4.1
23 (a)	2	Water sources	H1.1
23 (b)	4	Maintain water quality	H3.4
24 (a)	2	Compare bone, muscle and fat	H2.2
24 (b)	6	Evaluate management techniques	H3.4, H5.1
25 (a)	2	Plant breeding systems	H3.4
25 (b)	4	Plant breeding systems	H3.3, H2.1
26 (a)	4	Sustainable techniques	H2.1
26 (b)	6	Sustainable techniques and historical data	H2.1
27 (a)	2	Marketing chain	H3.2
27 (b)	2	Outline government influence	H3.2
27 (c)	6	Quality and quantity criteria	H3.1
28 (a)	4	Outline the financial pressures	H3.1
28 (b)	5	Use techniques to analyse	H3.1

Section II364

Question	Marks	Content	Syllabus outcomes
29 (a) (i)	2	Analyse a research study	H4.1
29 (a) (ii)	6	Analyse a research study	H4.1
29 (b)	12	A wide range of potential applications	H3.4, H5.1
30 (a) (i)	2	Analyse a research study	H4.1
30 (a) (ii)	6	Analyse a research study	H4.1
30 (b)	12	Management techniques available to farmers	H3.4, H5.1
31 (a) (i)	2	Analyse a research study	H4.1
31 (a) (ii)	6	Analyse a research study	H4.1
31 (b)	12	Evaluate a range of new technology developments	H3.4, H5.1