



B O A R D O F S T U D I E S
NEW SOUTH WALES

2001

**HIGHER SCHOOL CERTIFICATE
EXAMINATION**

Agriculture

Paper 2

General Instructions

- Paper 2 should be attempted only by students who have studied Electives
- Reading time – 5 minutes
- Working time – 1 hour
- Write using black or blue pen
- Board-approved calculators may be used

Total marks – 30

- Attempt TWO questions from Questions 1–6
- Allow about 30 minutes for each question

Total marks – 30

Attempt TWO questions from Questions 1–6

Allow about 30 minutes for each question

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

| | Marks |
|---|--------------|
| Question 1 — Agribusiness (15 marks) | |
| (a) Describe techniques a farmer could use to determine the present financial status of a farm. | 3 |
| (b) A farmer wishes to finance the following ventures: <ul style="list-style-type: none">• Purchase of a new tractor;• Purchase of fertiliser for a plant enterprise. For each venture, identify ONE suitable financing option and explain its suitability. | 4 |
| (c) Name ONE study of the impact of a large rural business organisation on the agricultural industries in which it is involved. Analyse the appropriateness of the research methodology used in this study, and the way in which data have been collected, presented and interpreted. | 8 |
| Question 2 — Animal Management (15 marks) | |
| (a) Describe management techniques available to farmers to manipulate the rates of growth and development of farm animals. | 3 |
| (b) Explain how vaccination works to prevent disease in farm animals. | 4 |
| (c) Name ONE study of a current technique/technology that is advancing productivity in animal production systems. Analyse the appropriateness of the research methodology used in this study, and the way in which data have been collected, presented and interpreted. | 8 |

Question 3 — Horticulture (15 marks)

- (a) Describe how the particular characteristics of a plant you have studied affect its use in horticulture. **3**
- (b) For a horticultural production system you have studied, explain how a manager can improve the economic viability and environmental sustainability of the production system. **4**
- (c) Name ONE study of a technological innovation aimed at improving productivity in a particular horticultural industry. Analyse the appropriateness of the research methodology used in this study, and the way in which data have been collected, presented and interpreted. **8**

Question 4 — Innovation and Diversification (15 marks)

- (a) Describe the marketing techniques that may be used to market an alternative production system or technology you have studied. **3**
- (b) Explain TWO aspects of plant or animal biology that are applied in the management of an alternative production system or technology. **4**
- (c) Name ONE study of the development and implementation of ONE alternative agricultural production system or technology. Analyse the appropriateness of the research methodology used in this study, and the way in which data have been collected, presented and interpreted. **8**

Question 5 — Plant Management (15 marks)

- (a) Describe the role of plant hormones in plant growth and development. **3**
- (b) Roots, stems and leaves are the main organs of plants. Select TWO of these organs, and explain how their cellular anatomy relates to the function of each organ. **4**
- (c) Name ONE study of the role of research in advancing productivity in plant production systems. Analyse the appropriateness of the research methodology used in this study, and the way in which data have been collected, presented and interpreted. **8**

Please turn over

| | Marks |
|---|--------------|
| Question 6 — Sustainable Land and Resource Management (15 marks) | |
| (a) Describe how the Australian land capabilities system has been applied to ensure sustainable land use in an area you have studied. | 3 |
| (b) Explain the causes of dryland salinity and irrigation salinity. | 4 |
| (c) Name ONE study of innovative technologies or practices that assist with the conservation and efficient use of water in agricultural production systems. Analyse the appropriateness of the research methodology used in this study, and the way in which data have been collected, presented and interpreted. | 8 |

End of paper