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.

Question 1 — Agribusiness (15 marks)

(a) Describe how a financial technique may be used when considering changing or expanding a present enterprise. 3

(b) Explain how a farmer would endeavour to obtain finance for an enterprise change. 4

(c) Describe and evaluate a research study carried out to investigate the impact of a large rural business organisation on the agricultural industries in which it is involved. In your answer, focus on:
   • research design;
   • data analysis and presentation;
   • conclusion and recommendation. 8

Question 2 — Animal Management (15 marks)

(a) Describe how ONE breeding technique is used to manage the reproductive outcome of farm animals. 3

(b) Explain how objective measurement is used in breeding programs in an animal industry that you have studied. 4

(c) Describe and evaluate a research study carried out to investigate a current technique/technology which is advancing productivity in an animal production system. In your answer, focus on:
   • research design;
   • data analysis and presentation;
   • conclusion and recommendation. 8
Question 3 — Horticulture (15 marks)

(a) Describe how the characteristics of an individual plant can affect its use in horticulture.

(b) Explain how ONE physiological process in plants can be manipulated to increase productivity in a horticultural system.

(c) Describe and evaluate a research study carried out to investigate a technological innovation aimed at improving productivity in a particular horticultural industry. In your answer, focus on:
   • research design;
   • data analysis and presentation;
   • conclusion and recommendation.

Question 4 — Innovation and Diversification (15 marks)

(a) Describe ONE feature of the biology of a plant or animal and how it is related to the management of an alternative enterprise or production method.

(b) Explain how knowledge of the potential market and marketing techniques is important in alternative enterprises or production methods.

(c) Describe and evaluate a research study carried out to investigate the development and/or implementation of an alternative agricultural production system or technology. In your answer, focus on:
   • research design;
   • data analysis and presentation;
   • conclusion and recommendation.

Please turn over
Question 5 — Plant Management (15 marks)

(a) Describe how plant density affects vegetative yield and reproductive yield.  
(b) Explain how TWO environmental factors may limit the physiological process of photosynthesis.  
(c) Describe and evaluate a research study carried out to investigate advancing productivity in plant production systems. In your answer, focus on:
   • research design;
   • data analysis and presentation;
   • conclusion and recommendation.

Question 6 — Sustainable Land and Resource Management (15 marks)

(a) Describe the farming practices that have led to ONE form of soil degradation in Australia.  
(b) Explain the detailed soil processes that have led to ONE form of soil degradation and how this degradation affects plant growth.  
(c) Describe and evaluate a research study carried out to investigate an innovative technology or practice that assists conservation of, or effective use of, water in agriculture. In your answer, focus on:
   • research design;
   • data analysis and presentation;
   • conclusion and recommendation.

End of paper