



basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

**NATIONAL
SENIOR CERTIFICATE**

GRADE 12

AGRICULTURAL MANAGEMENT PRACTICES

FEBRUARY/MARCH 2017

MARKS: 200

TIME: 3 hours

This question paper consists of 12 pages.

INSTRUCTIONS AND INFORMATION

1. This question paper consists of TWO sections.
2. Answer ALL the questions in the ANSWER BOOK.
3. Read the questions carefully and answer only what is asked.
4. Number the answers correctly according to the numbering system used in this question paper.
5. You may use a non-programmable calculator.
6. Round off ALL calculations to TWO decimal places, unless stated otherwise.
7. Write neatly and legibly.

SECTION A**QUESTION 1**

- 1.1 Various options are provided as possible answers to the following questions. Write down the question number (1.1.1–1.1.10), choose the answer and make a cross (X) over the letter (A–D) of your choice in the ANSWER BOOK.

EXAMPLE:

1.1.11

 A B C D

- 1.1.1 You have to ... to determine the nutritional status of soils.
- A take a soil sample
 - B do a soil reaction test
 - C do a soil survey
 - D dig/drill a soil profile
- 1.1.2 A farmer has to ... to minimise the effect of drought on pastures.
- A exceed the carrying capacity
 - B adhere to the carrying capacity
 - C acquire different types of animals
 - D cultivate the soil and leave it bare
- 1.1.3 An advantage of extensive farming is that ...
- A a lot of capital is needed to buy equipment.
 - B labourers must be trained to use the new technology.
 - C production cost is low.
 - D markets are very far from the farm.
- 1.1.4 It is important that a farmer ... when he sets up a yearly budget for a farm.
- (i) predicts future prices
 - (ii) knows the inflation rate on inputs and outputs
 - (iii) knows the type of marketing system for agricultural products
 - (iv) uses current financial statements
- Choose the CORRECT combination:
- A (i), (iii) and (iv)
 - B (ii), (iii) and (iv)
 - C (i), (ii) and (iii)
 - D (i), (ii) and (iv)

- 1.1.5 The balance sheet is best represented by ...
- A income and expenditure.
 - B debits and credits.
 - C assets and liabilities.
 - D pros and cons.
- 1.1.6 Part of the farm labourer contract:
- A Place to spend the holiday
 - B Job description
 - C Mode of transport to work
 - D HIV/Aids status of the labourer
- 1.1.7 A dry-land crop farmer will definitely keep track of ... records that will have the biggest influence on the yield of the crop.
- A fertiliser
 - B rainfall
 - C mechanisation
 - D labour
- 1.1.8 The best way to pay for small daily expenditures:
- A Petty cash
 - B Big overdraft facilities at the bank
 - C Loan sharks
 - D Vegetable production
- 1.1.9 The quality of a meat product can be sustained for short- to medium-term periods by means of ...
- A cold storage.
 - B pasteurisation.
 - C filtration.
 - D infrared light.
- 1.1.10 Marketing function that ensures the quality of agricultural produce:
- A Transport
 - B Sorting
 - C Advertising
 - D Grading
- (10 x 2) (20)

1.2 Choose a description from COLUMN B that matches a term in COLUMN A. Write only the letter (A–L) next to the question number (1.2.1–1.2.10) in the ANSWER BOOK, for example 1.2.11 M. Each description in COLUMN B may be used only ONCE.

COLUMN A		COLUMN B	
1.2.1	Standardisation	A	the sorting of products of the same size and colour
1.2.2	Break-even point	B	delivers services to the farmer
1.2.3	Diversification	C	ensures the same quality of produce worldwide
1.2.4	Supply	D	different production enterprises on one farm
1.2.5	Market equilibrium	E	processing a product by using sweetness to prevent growth of micro-organisms
1.2.6	Direct competition	F	gives more responsibility to a farm worker
1.2.7	Packaging	G	number of animals to sell to cover total costs
1.2.8	Delegating	H	number of products that farmers send to the market
1.2.9	Sugaring	I	when the price that a consumer pays equals the price that the producer is prepared to sell for/to receive
1.2.10	Tertiary agriculture	J	placing products into containers that will protect them
		K	neighbouring farms selling the same product
		L	number of products that consumers will buy at the market

(10 x 2) (20)

- 1.3 Give the CORRECT agricultural term for each of the following descriptions. Write only the term next to the question number (1.3.1–1.3.10) in the ANSWER BOOK, for example 1.3.11 Recording.
- 1.3.1 Determine the value of agricultural products to indicate the money the consumer will spent
- 1.3.2 Structural diagram of the different staff and levels of staff, which is easy to view
- 1.3.3 Type of leave that a farm worker will take once a year to go on holiday
- 1.3.4 Total of all the trading receipts for a given period of time
- 1.3.5 Direct and indirect costs a producer must incur to market a product
- 1.3.6 Type of capital derived from the selling of agricultural products
- 1.3.7 Proof of work done on a farm, indicating cost
- 1.3.8 Records that big commercial farmers use to see who was driving their vehicles and the distances they travelled
- 1.3.9 A resource utilised by farm owners, involving all staff on the farm, which is needed for the smooth running of the farming enterprise
- 1.3.10 Cultivation of different crops successively on the same piece of land (10 x 1) (10)
- TOTAL SECTION A: 50**

SECTION B**QUESTION 2: PHYSICAL AND FINANCIAL PLANNING**

Start this question on a **NEW** page.

- 2.1 CANDIDATE A and CANDIDATE B have been evaluated for different positions on a farm.

The following rating criteria were used: 3 = good, 2 = fair, 1 = weak

CANDIDATES	QUALIFICATION LEVEL	MANAGEMENT SKILLS	TECHNICAL SKILLS
A	3	3	1
B	1	1	3

- 2.1.1 Choose a candidate from the evaluation above that would be most suitable for the following positions on the farm and in EACH case give a reason for your choice:

- (a) Farm manager (2)
- (b) Farm worker (2)

- 2.1.2 Choose a candidate that would NOT be suitable to work in the farm workshop. (1)

- 2.1.3 Identify a possible unskilled worker from the candidates above. Give a reason for your answer. (2)

- 2.2

A farmer owns a mixed production enterprise. The farmer has arable land for crops with access to irrigation. Water is pumped from a borehole to a reservoir. The farmer also keeps small-stock intensively on a small scale. All practices on the farm are according to organic farming practices.

- 2.2.1 Identify THREE examples of fixed capital in the case study above. (3)

- 2.2.2 Name THREE methods that the farmer could use to improve the productivity of this agricultural land. (3)

- 2.2.3 Explain ONE of the methods named in QUESTION 2.2.2 that can be implemented to reduce the risk in a small-scale agricultural industry. (2)

- 2.2.4 State TWO advantages of organic farming to the environment. (2)

- 2.3 Management of the different veld types can be a challenging activity.
- 2.3.1 Describe the carrying capacity of the following FIVE natural veld types. Choose from the following criteria: HIGHEST, MODERATE, LOW, VERY LOW
- (a) Savannah (1)
 - (b) Forest (1)
 - (c) Grassland (1)
 - (d) Karoo (1)
 - (e) Fynbos (1)
- 2.3.2 Sweet veld and sour veld differ with reference to feeding value and management. Briefly explain the difference between the two veld types with reference to feeding value and management as follows:
- (a) Sweet veld (2)
 - (b) Sour veld (3)
- 2.4 The following phases are part of whole farm planning. Arrange the phases in the CORRECT sequence.
- Systems
 - Land utilisation planning
 - Sustainability
 - Data collection
 - Management
 - Alternative and potential (6)
- 2.5 Budgets are prepared in advance to predict income and expenditures for the future against the current economic climate.
- 2.5.1 Name the physical aspects of a farm, as set out by a farm budget. (3)
- 2.5.2 Name TWO basic elements of a budget. (2)
- 2.5.3 Discuss the use of a cash flow budget as a financial tool. (4)
- 2.6 Give TWO reasons for the cultivation of soils. (2)
- 2.7

A crop farmer wants to apply precision farming as a farming method. Physical soil aspects are determined and fertiliser is applied in the beginning of the season according to the physical soil characteristics. A centre-pivot irrigation system irrigates the land weekly, taking into account whether it had rained or not.
- 2.7.1 State whether this farmer adheres to the principles of precision farming. (2)
- 2.7.2 Suggest farming practices that will adhere to the principles of precision farming. (4)

[50]

QUESTION 3: ENTREPRENEURSHIP, RECORDING, MARKETING, BUSINESS PLANNING AND ORGANISED AGRICULTURE

Start this question on a NEW page.

- 3.1 The budget below shows the estimated financial aspects for an animal production enterprise for the 2016/2017 financial year.

ESTIMATED EXPENDITURE		ESTIMATED INCOME	
ITEM	AMOUNT (R)	ITEM	AMOUNT (R)
Veterinary/Medicine	10 300,00	Livestock sales at auction	350 000,00
Feed	22 345,00	Livestock sales at the farm	120 000,00
Labour	24 500,00	Manure sales	7 500,00
Electricity	13 308,00		
Feedlot maintenance	15 555,00		
Pesticides	18 756,00		
Feed supplements	8 800,00		
Total costs		Total returns	

- 3.1.1 Name the management principle of the budget above. (1)
- 3.1.2 Identify THREE possible markets in the data above that this farmer is targeting. (3)
- 3.1.3 Calculate the possible profit/loss that this farmer could generate. Show ALL calculations. (3)
- 3.1.4 State TWO possible ways to increase the income of the enterprise. (2)
- 3.1.5 Identify the section of a business plan that is addressed in this scenario above. (2)
- 3.2 An entrepreneurial process is needed to establish a new agribusiness.
- 3.2.1 Identify FOUR different phases of an entrepreneurial process. (4)
- 3.2.2 Explain the economic importance of a business plan. (5)
- 3.3 Describe THREE important reasons of reviewing a business plan. (3)

- 3.4 The table below shows the number of bags of produce sold at different prices at a local market per week.

PRICE (R/BAG)	NUMBER (BAGS)
R20,00	200
R30,00	150
R35,00	140
R40,00	120
R45,00	100
R60,00	50

- 3.4.1 Predict a factor in the scenario above that determines the price for an agricultural product on the market. (1)
- 3.4.2 Use the data in the table above and draw a line graph to represent the relationship between the numbers of bags sold at a certain price. (6)
- 3.4.3 Identify, in the graph, the TWO values where the most bags were bought. (2)
- 3.5 A group of small-scale farmers wanted to make sure that their products were effectively marketed. They had to develop a marketing strategy.
- 3.5.1 Briefly describe the marketing strategy using the following headings: (3)
- (a) Product (3)
- (b) Place/Location (2)
- 3.5.2 Name THREE marketing costs in the production of a specific product. (3)
- 3.6 Study the list below indicating available assets on a farm.

tractor; pesticides; borehole; farm shed; bags of fertilisers; farm vehicle; cultivated land; cash in bank; livestock
--

- 3.6.1 Place the farm assets under the following headings: (2)
- (a) Fixed assets (2)
- (b) Current assets (2)
- (c) Medium-term assets (2)
- 3.6.2 Name the type of document (recording tool) where you will find the assets and liabilities with their corresponding values. (1)
- 3.7 A debit note serves as proof of returned goods by the business to the creditor. Give THREE reasons for purchased items being returned by a farming enterprise. (3)

[50]

QUESTION 4: HARVESTING, PROCESSING, MANAGEMENT AND AGRITOURISM

Start this question on a NEW page.

- 4.1 In future the storage of agricultural products will be more common than in the past.
- 4.1.1 Discuss TWO advantages of storing farm products on the farm after harvesting. (2)
- 4.1.2 State FOUR storage requirements that must be complied with during the storage of agricultural products. (4)
- 4.2 The Foodstuffs, Cosmetics and Disinfectant Act, 1972 (Act 54 of 1972) contains the regulations according to which the labelling of products (Regulation GNR 1206/2008) is controlled. The main aim of this regulation is to protect South African consumers.
- State TWO aspects of this legislation against which consumers are protected. (2)
- 4.3 The behaviour of micro-organisms at different temperatures during food processing influences the final quality of the final product. Complete the table below by indicating the behaviour of micro-organisms at different environmental temperatures. Write the answer next to the question number (4.3.1–4.3.3) in the ANSWER BOOK.
- | TEMPERATURE | BEHAVIOUR OF MICRO-ORGANISMS |
|----------------------------|------------------------------|
| Above 5 °C but below 10 °C | 4.3.1 |
| Above 100 °C | 4.3.2 |
| Below 0 °C | 4.3.3 |
- (3 x 1) (3)
- 4.4 Regular monitoring and surveillance by health authorities and management of the food handling process are crucial elements in the prevention of food-borne diseases.
- Recommend FOUR principles that should be part of a food handling strategy to a farmer. (4)
- 4.5 Name TWO legal documents that regulate importing meat and dairy products into South Africa. (2)
- 4.6 Explain TWO ways in which the farmer can be included as an agritourism entrepreneur. (2)
- 4.7 Preserving food is very important in sustainable food provision.
- 4.7.1 Distinguish between *pasteurisation* and *sterilisation* of food. (4)
- 4.7.2 Name TWO acids that can be used in preserving food. (2)

- 4.8 The planning process has six steps. State the SIX steps. (6)
- 4.9 Niche markets are particular markets for certain agricultural produce.
- 4.9.1 Define the term *niche market*. (2)
- 4.9.2 Give FIVE steps to be followed in establishing a niche market. (5)
- 4.10 State FIVE management functions that a farmer has to apply to ensure that activities on the farm run smoothly. (5)
- 4.11 Discuss FOUR safety requirements the processing of agricultural products should adhere to, with reference to the Occupational Health and Safety Act (OHSA), 1993 (Act 85 of 1993). (4)
- 4.12 Describe the steps followed in the management control process. (3)
- [50]**
- TOTAL SECTION B: 150**
GRAND TOTAL: 200