



basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

**NATIONAL
SENIOR CERTIFICATE**

GRADE 12

AGRICULTURAL MANAGEMENT PRACTICES

FEBRUARY/MARCH 2012

MARKS: 200

TIME: 2½ hours

This question paper consists of 17 pages and a 1-page answer sheet.

INSTRUCTIONS AND INFORMATION

1. This question paper consists of FOUR questions. Answer ALL the questions.
2. SECTION A (QUESTION 1) must be answered on the attached ANSWER SHEET.
3. Place the ANSWER SHEET for SECTION A (QUESTION 1) inside the front cover of the ANSWER BOOK.
4. SECTION B (QUESTIONS 2 to 4) must be answered in the ANSWER BOOK.
5. Start EACH question in SECTION B on a NEW page.
6. Read the questions carefully and align your responses accordingly.
7. Number the answers correctly according to the numbering system used in this question paper.
8. Non-programmable calculators may be used.
9. ALL calculations must be rounded off to TWO decimals unless stated otherwise.
10. Give special attention to units where applicable.
11. Write neatly and legibly.

SECTION A**QUESTION 1**

- 1.1 Various options are provided as possible answers to the following questions. Choose the answer and make a cross (X) in the block (A–D) next to the question number (1.1.1 – 1.1.10) on the attached ANSWER SHEET.

Example:

1.1.11	<input checked="" type="checkbox"/> A	B	C	D
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- 1.1.1 The economic characteristic of land that determines that the yield potential of the soil can never be exceeded by extra input of fertilisers:
- A Law of economic scale
 - B Durability
 - C Law of diminishing returns
 - D Indestructibility
- 1.1.2 The difficulty in the cultivation of soil which is caused by extremes in soil texture like dominantly sandy or dominantly clay soils will always be lessened by ...
- A water provision.
 - B early cultivation.
 - C contour ploughing.
 - D increasing the organic matter content.
- 1.1.3 The type of worker who is trained and knows how to do related specialised tasks on the farm for a long time:
- A Temporary worker
 - B Skilled worker
 - C Casual worker
 - D Unskilled worker
- 1.1.4 The type of farm planning that addresses the programme from the beginning until the end of each day:
- A Physical farm planning
 - B Business plan
 - C Daily planning
 - D Maintenance plan

- 1.1.5 The process in the management of a farm whereby a choice is made between two alternatives:
- A Motivation
 - B Decision making
 - C Control
 - D Leadership
- 1.1.6 The management action that a farmer utilises to encourage the workers to do their best to increase production:
- A Implement a bonus system
 - B Appoint more supervisors
 - C Use an electronic attendance register
 - D Use close circuit cameras
- 1.1.7 The farm financial planning tool which is necessary to ensure that money required keeping the production process going is available at all times:
- A Income tax statement
 - B Insurance fund records
 - C Cash flow budget
 - D Estate duty form
- 1.1.8 The following are the main functions directly related to the marketing process of agricultural products:
- i Storage
 - ii Financing
 - iii Transport
 - iv Processing
- A i and iv
 - B i, ii and iii
 - C ii and iv
 - D i, iii and iv
- 1.1.9 This is the type of credit that a farmer normally uses to purchase land and its fixed improvements such as buildings, fences and boreholes where a huge capital investment is needed:
- A Intermediate credit
 - B Medium-term credit
 - C Long-term credit
 - D Short-term credit

1.1.10 A merchant who buys large volumes of products directly from producers, processors or other marketing intermediaries for resale to retail outlets countrywide:

- A Café owner
- B Stock broker
- C Agent of a fresh produce market
- D Wholesaler

(10 x 2) (20)

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

COLUMN A		COLUMN B
1.2.1	Soil qualities	A anything that has a financial value in the possession of the farming business
1.2.2	Natural grazing	B use of advanced and modern technology to optimise the production output of the farm
1.2.3	Climate	C the difference between the total farming income and the expenditure
1.2.4	Total costs	D the main factor determining whether a region is suitable for the cultivation of a particular crop
1.2.5	Assets	E heating of the product during processing to remove all pathogenic micro-organisms and prolonging its shelf life
1.2.6	Net farming income	F credit that must be paid back within the same season or year
1.2.7	Current liabilities	G used to record stock in the trading inventory
1.2.8	Receipts	H source documents that are issued to acknowledge that the money has been received by the business
1.2.9	Sterilization	I deducted from soil data and soil information
1.2.10	Precision farming	J the sum of total costs used in the enterprise for a particular year
		K the most economical source of animal feed
		L total costs less total production factor costs

(10 x 2) (20)

- 1.3 The following statements are INCORRECT. Change the underlined word(s) to make each statement CORRECT. Write the correct word(s) next to the question number (1.3.1–1.3.10) on the attached ANSWER SHEET, for example 1.3.11 Recording.
- 1.3.1 A business plan normally shows the work that needs to be done on the farm at different times of the year.
- 1.3.2 Movable capital refers to the capital goods that are used for one production season such as seeds, fertilisers and fuel.
- 1.3.3 The portion of the total available capital in the farming enterprise which is supplied by a certain financial institution, is known as own capital.
- 1.3.4 The relationship between a change in price and demand for the product is known as the price elasticity of supply.
- 1.3.5 The market structure is a group of people with unique desires and who constitute a smaller group of the total market.
- 1.3.6 The product sale is the result of the interaction between supply and demand on a market.
- 1.3.7 The total quantity of a commodity that a producer wishes to sell at a market is called the demand of the product.
- 1.3.8 The processing process consists of a series of activities to get the product from the farmer to the consumers.
- 1.3.9 At village markets the sale of fresh produce is done by market agents on behalf of the farmer on a commission basis.
- 1.3.10 Farm workers spend most of their time on planning, administration, marketing and supervisory tasks on the farm. (10 x 1) (10)

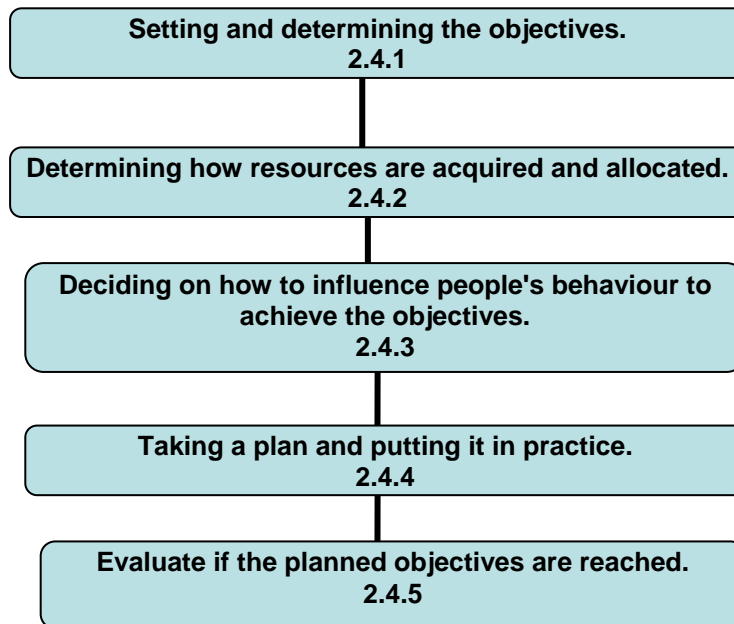
TOTAL SECTION A: 50

SECTION B**QUESTION 2: ANIMAL AND CROP PRODUCTION**

Start this question on a NEW page.

- 2.1 Enterprise guides emphasise the importance of entrepreneurs to assess their personal and farm objectives.
- 2.1.1 Name THREE types of plans that need to be set up by the farmer to achieve their farming objectives. (3)
- 2.1.2 Outline the most important objectives of a commercial farmer. (2)
- 2.1.3 Name FOUR ways whereby a farmer can evaluate the planning of his/her farming enterprise. (4)
- 2.2 Give FOUR reasons why it is important for a livestock farmer to divide the farm into camps. (4)
- 2.3 In South Africa there are a number of production systems available for the various enterprises. The choice of the production system is critical as it will affect the profitability and the stability of the enterprise.
- Give ONE reason why each of the following factors is important when a farmer considers choosing a production system for livestock:
- 2.3.1 Markets (1)
- 2.3.2 Efficiency of production (1)
- 2.3.3 Feed available (1)
- 2.3.4 Veld type (1)
- 2.3.5 Profitability (1)

2.4 Both the farm managers and the general managers of the farm businesses perform five management functions. The schematic representation below refers to the management process.



Name the related management function, marked 2.4.1–2.4.5 in the schematic representation above. (5)

2.5 South Africa must offer workers equal employment opportunities as defined in South Africa's Code of Good Practice on Employment Equity. Workers on fair trade farms enjoy the freedom of association, safe working conditions and living wages. Child labour is strictly prohibited.

LEGISLATION	AIM
Occupational Health and Safety Act, 1993 (Act 85 of 1993)	2.5.1
Basic Conditions of Employment Act, 1997 (Act 75 of 1997)	2.5.2
Compensation for Occupation Injuries and Diseases Act, 1993 (Act 130 of 1993)	2.5.3

Match the legislation above with the appropriate aim below. Write down only the LETTER (A–C) next to the question number.

Aim:

- A. Ensures that fair labour practices exist by regulating the basic remuneration and working hours of workers.
- B. Dealing with measures to prevent injuries and provision of protective clothing at workplaces.
- C. Assist employers and employees who are injured, disabled or killed as a result of workplace accident.

(6)

2.6 Normal farming activities have no influence on soil texture, but other soil characteristics such as soil structure and nutrient status are variable. It is important for the farmer not to allow the weakening of certain properties which determine the soil potential.

Name FIVE ways to improve the productivity of sandy soil. (5)

2.7 The following statements refer to both crops and animals' production systems. Categorise these production systems as intensive system, semi-intensive system and extensive system.

2.7.1 Rearing the livestock on natural grazing only (1)

2.7.2 Keeping livestock in a feedlot (1)

2.7.3 Farm animals kept in the feedlot are sometimes given access to natural grazing or planted grazing (1)

2.7.4 Planting crops inside a greenhouse (1)

2.7.5 Practising dry-land crop production (1)

2.8 Mechanisation is the use of machines instead of people to do the work. It is often driven by mechanical power from tractors, engines and/or animals.

State the advantages of mechanisation by referring to FIVE points to emphasise the importance of using farm implements in farming processes. (5)

2.9 A small-scale crop producer with 350 ha of land in the Limpopo Province has been recording crop yields obtained from a field for the past six years. Different quantities of fertiliser were applied to the cropping land and the yield increased gradually on an annual basis, but sometimes remained constant.

The table below represents the yields obtained from the cropping field with the respective levels of fertilisers that were applied.

CROPPING SEASON (YEAR)	QUANTITY OF FERTILISERS APPLIED (kg/ha)	YIELD (tons/ha)
1	20	20
2	50	55
3	80	100
4	110	150
5	140	165
6	170	165

Plot a line graph using the above data to show the relationship between the crop yield and fertiliser application on this cropping field. (6)

[50]

QUESTION 3: RECORDING, FINANCIAL STATEMENTS AND ENTREPRENEURSHIP

Start this question on a NEW page.

3.1 When a business transaction takes place, a source document is prepared. A receipt is an example of such a source document.

Indicate TWO instances when the farming enterprise would issue a receipt to the customer. (2)

3.2 Many farmers in South Africa still prefer payment by cheque for farming expenses.

3.2.1 Name TWO advantages of paying by cheque instead of making cash payments. (2)

3.2.2 Some of the important information that is contained on a cheque may be divided into three parts, namely:

- (a) Bank information (2)
- (b) Business information (drawer) (2)
- (c) Transaction information (2)

Give TWO examples of detail on a cheque that are linked to each of the three divisions mentioned above.

3.3 It is important to keep records in a farming enterprise. Use the table below to classify the following list of records as production, physical or financial records.

LIST OF RECORDS

- Workshop tool inventory
- Stock of seeds for the next planting season
- Crop yield per ton of fertiliser used
- Number and condition of young animals born from a single mother
- Cash flow

PRODUCTION RECORDS	PHYSICAL RECORDS	FINANCIAL RECORDS

(5)

3.4 An entrepreneur is somebody who has the ability to identify a unique market opportunity and is then prepared to take a risk to develop a business.

3.4.1 Explain the necessity of an entrepreneur having visionary leadership qualities by referring to the statement above. (2)

3.4.2 Identify TWO characteristics that show the financial skills of the entrepreneur. (2)

3.4.3 State the best way to measure the success of an entrepreneur. (2)

3.5 There is a growing demand for food and other commodities worldwide. Drastic changes are taking place in agricultural sectors and this is forcing us to rethink the role played by the farmers to support the economy.

Briefly explain how each of the following aspects needs to be dealt with to satisfy the growing need for agricultural products:

3.5.1 Risk (2)

3.5.2 Sustainability (2)

3.6 The following table represents the attendance register for a farm.

WORKERS' ATTENDANCE REGISTER

Employer		Mmbila Farms						Week		2	May 2011	TO	8	May 2011
Employee		Initials		Surname				Code		Occupation				
		KK		Clever				09		Storekeeper				
Day	Date	Hours worked						Total hours	Total hours worked		Reason absent	Signature		
		on	off	on	off	on	off		Normal	Overtime		Farmer	Worker	
1	2										Public holiday	LB	KK	
2	3	7:00	13:00	14:00	17:00							LB	KK	
3	4	7:00	13:00	14:00	17:00							LB	KK	
4	5	7:00	13:00	14:00	17:00							LB	KK	
5	6	7:00	13:00	14:00	17:00	17:00	19:00					LB	KK	
6	7	7:00	13:00									LB	KK	
7	8													

3.6.1 Deduce the length of the normal working hours for KK Clever on this farm during this period in May 2011. (2)

3.6.2 Identify the date that KK Clever worked overtime and indicate the number of hours involved. (2)

3.6.3 Calculate the total number of hours that KK Clever worked during this week. Show ALL calculations. (4)

3.6.4 No working hours were recorded for KK Clever on day 1 (02-05-2011). Give a reason for this. (1)

3.7 The profit or loss of the farming enterprise is called the gross margin. To calculate the gross margin of a farming enterprise, the total expenses are subtracted from the total income of that enterprise. Knowing the gross margin helps the farmer to make decisions on the profitability of the farming enterprise.

A farmer has the following income values for both the crop and livestock enterprises:

- Crop enterprise = R10 500,34
- Livestock enterprise = R12 300,15

The tables below reflect the expenses incurred by the farmer.

EXPENSES OF RUNNING A LIVESTOCK ENTERPRISE		
Date	Expenses	Amount (R)
12/3/11	Purchase of 8 x 50 kg starter pellets at R50,00 a bag	400,00
25/3/11	Purchase of dip 2 x 5 litres at R120,00 each	240,00
26/6/11	Purchase of deworming medicines	145,00
10/7/11	Purchase of licks	300,00
22/8/11	Purchase of vaccines	250,00
22/8/11	Purchase of 8 x 50 kg grower pellets at R56,50 a bag	452,00
17/10/11	Purchase of 50 kg feed supplements	2 300,00
23/12/11	Purchase of lucerne hay	3 940,00
	TOTAL	8 027,00

EXPENSES OF GROWING 3 ha OF CROPS		
Date	Expenses	Amount (R)
8/9/11	Ploughing of land at R210,00 a hectare	630,00
12/9/11	Harrowing of land at R180,00 a hectare	540,00
15/9/11	Fertilising of land at R100,00 a hectare	300,00
15/9/11	Purchase of 15 x 50 kg mixed fertilisers at R80,00 a bag	1 200,00
16/9/11	Runners for planting 15 x 50 kg bags of runners at R50,00 a bag	750,00
19/9/11	Food for the planting workers	200,00
15/10/11	12 x 50 kg LAN at R95,00 a bag	1 140,00
15/11/11	12 x 50 kg LAN at R95,00 a bag	1 140,00
	TOTAL	5 900,00

- 3.7.1 Calculate the gross margin of both enterprises using the information in the tables above. (4)
- 3.7.2 Deduce the most profitable enterprise. Substantiate your answer by giving a reason. (4)
- 3.7.3 Calculate the net income of this farm. (3)

- 3.8 For a sustainable farming business the prospective business person must prepare a good business plan.

Discuss the business plan under the following headings:

- 3.8.1 Internal forces that can lead to great success in a farming business (2)
- 3.8.2 External forces that provide opportunities for the business to expand in future (2)
- 3.8.3 Potential risks (1)
- [50]**

QUESTION 4: HARVESTING, VALUE-ADDING, MARKETING, AGRITOURISM AND INDUSTRY

Start this question on a NEW page.

- 4.1 Eight emerging small-scale farmers are planning to produce an edible crop and small livestock products.

Supply FIVE outlets where these farmers can sell their produce. (5)

- 4.2 Processing of agricultural products requires good management skills and practices. The risk of supplying poor quality products should be avoided and losses through spoilage and consequently profit losses avoided.

Write down the importance/reasons for each of the following activities that must be implemented when processing an agricultural product:

4.2.1 Cleaning (1)

4.2.2 Covering (1)

4.2.3 Cutting (1)

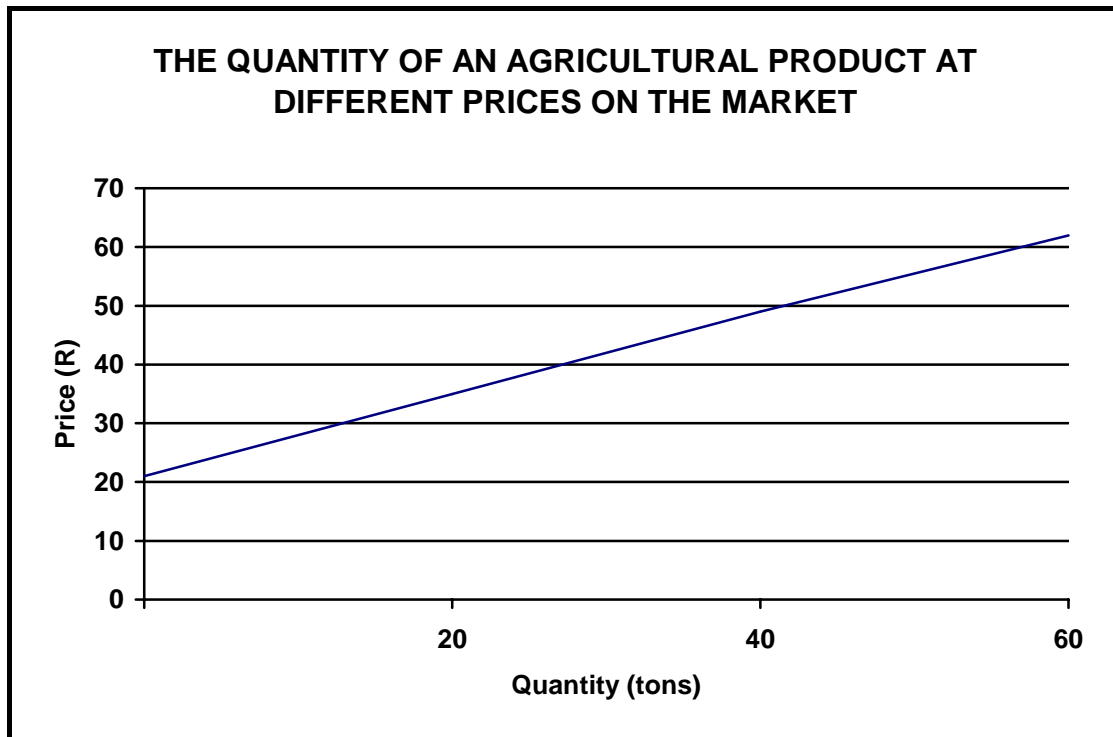
4.2.4 Mixing (1)

4.2.5 Dividing into sizes or portions (1)

4.2.6 Put into containers, for example bottling, canning (1)

- 4.3 Many crops require sun drying before they are processed, stored or marketed. Name FOUR factors that will influence the time needed to dry a harvested crop in the sun or just in the open environment. (4)

- 4.4 The graph below shows the quantity of an agricultural product that producers/farmers will supply to the central market at a given price.



- 4.4.1 Identify the concept of marketing represented by the graph above. (1)
- 4.4.2 Deduce from the graph above the quantity of the product supplied if the price is set at R25,00 per unit. (2)
- 4.4.3 Briefly explain the effect of the quantity of a product supplied and the price per unit (in rand) in a free-market system with reference to the following:
- (a) A very good harvest during that season/period (2)
 - (b) A scarcity of the commodity, for example during a drought (2)
- 4.5 Like all forms of business undertakings, co-operatives are also guided by set principles. Describe the meaning of each of the following principles used by co-operatives in the agribusiness environment:
- 4.5.1 Democratic control (2)
 - 4.5.2 Member's economic participation (2)
 - 4.5.3 Autonomy (2)

- 4.6 Chemicals used on the farm are dangerous when handled carelessly, not only to the user but also to OTHERS in the environment. It must also be noted that most of the danger/poison is found in the form of residues of these chemicals which occur on harvested agricultural products and is carried on to grading and packaging up until the product reaches the consumer.

Name FOUR of the OTHERS (organisms that can be affected) mentioned in the paragraph above. (4)

- 4.7 It is important that the farmer generates and collects knowledge exactly about the market for his/her produce. Some of this essential knowledge is obtained by doing market research. Three important questions in market research are given below:

- What is the size of the market?
- Is the market stable?
- How much competition is in that market?

Explain the importance of each of these THREE questions in market research. (6)

- 4.8 A farming family plans to add value to their family's farming business and engage in agritourism. The table below represents a part of the business plan for the agritourism section of their farm and the estimated cost of each item.

ITEM	COST (R)
Old model non-running tractor	400,00
Furnishing of mini museum	5 000,00
All terrain 4x4 vehicle	300 000,00
Tuck shop	20 000,00
First-aid kit	600,00
Bed and breakfast facility	90 000,00
Four sets of binoculars	4 000,00
TOTAL	

Use the information in the table above to answer QUESTIONS 4.8.1–4.8.4.

- 4.8.1 Identify the item in the business plan that has the highest cost. (1)
- 4.8.2 Which of the items in the business plan is meant to conform to the requirements of the Occupational Health and Safety Act? (1)
- 4.8.3 Calculate the total estimated cost of establishing the agritourism section of the farm according to this business plan. (2)
- 4.8.4 Calculate the percentage of the total costs which is allocated to the bed and breakfast facility. (2)

4.9 Dealing with the following issues in agriculture for harvesting, processing and other operations will result in larger yields, more profitable enterprises and optimal utilisation of resources:

- AgriBEE
- Scientific approach and technology in agriculture
- Food security

Link the aspects mentioned above to each of the following challenges and give ONE reason for your answer:

4.9.1	Poverty	(2)
4.9.2	Low volumes of food products	(2)
4.9.3	Employment and equity	(2)
		[50]

TOTAL SECTION B: 150
GRAND TOTAL: 200

CENTRE NUMBER:

EXAMINATION NUMBER:

SECTION A

QUESTION 1.1

1.1.1	A	B	C	D
1.1.2	A	B	C	D
1.1.3	A	B	C	D
1.1.4	A	B	C	D
1.1.5	A	B	C	D
1.1.6	A	B	C	D
1.1.7	A	B	C	D
1.1.8	A	B	C	D
1.1.9	A	B	C	D
1.1.10	A	B	C	D

(10 x 2) (20)

QUESTION 1.3

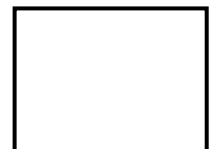
- 1.3.1
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- 1.3.7.....
- 1.3.8.....
- 1.3.9.....
- 1.3.10.....

(10 x 1) (10)

QUESTION 1.2

1.2.1	
1.2.2	
1.2.3	
1.2.4	
1.2.5	
1.2.6	
1.2.7	
1.2.8	
1.2.9	
1.2.10	

(10 x 2) (20)



TOTAL SECTION A: 50