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Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

**NATIONAL
SENIOR CERTIFICATE**

GRADE 12

AGRICULTURAL MANAGEMENT PRACTICES

NOVEMBER 2023

MARKS: 200

TIME: 3 hours

This question paper consists of 17 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 has been 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. Show ALL steps in the calculations.
7. Start EACH question on a NEW page.
8. 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 write only the letter (A–D) next to the question numbers (1.1.1 to 1.1.10) in the ANSWER BOOK, e.g. 1.1.11 D.

1.1.1 This method will not prevent soil erosion but will encourage it:

- A Planting trees on barren land
- B Mulching
- C Placing rocks where vegetation will be established
- D Redirecting storm water straight down a slope

1.1.2 Water runoff causes the least erosion in ... soils.

- A sandy
- B silt
- C clay
- D loam

1.1.3 When spraying pesticides, spray drift can be reduced by ...

- A high temperatures.
- B small droplets.
- C high wind speed.
- D low pressure.

1.1.4 In agricultural enterprises, the production factors are ...

- A soil, land, labour and entrepreneur.
- B land, labour, capital and management.
- C land, entrepreneur and management.
- D inputs and outputs.

1.1.5 A management principle used to ensure that there are no overlapping of tasks on a farm:

- A Control
- B Motivation
- C Coordination
- D Leadership

- 1.1.6 Part of a farm labourer's contract:
- A Place to spend the holiday
 - B Job description
 - C Mode of transport to work
 - D Health status of the labourer
- 1.1.7 ONE of the following is NOT a characteristic of an entrepreneur:
- A Accountable
 - B Self-starter
 - C Introvert
 - D Motivator
- 1.1.8 Laptop, notebook or palm computers are examples of equipment used in ...
- A precision farming.
 - B subsistence farming.
 - C setting of ploughs.
 - D administering medicines to animals.
- 1.1.9 The use of a trademark, product description and a diagram that represents the content, is part of ...
- A marketing legislation.
 - B standardisation legislation.
 - C labelling legislation.
 - D agricultural product standards legislation.
- 1.1.10 The main reason for cooling agricultural products during the distribution to various markets is to ...
- A reduce product weight
 - B reduce product volume.
 - C improve taste.
 - D prevent product from perishing.
- (10 x 2) (20)

- 1.2 Choose a description from COLUMN B that matches a term/phrase in COLUMN A. Write only the letter (A–L) next to the question numbers (1.2.1 to 1.2.10) in the ANSWER BOOK, e.g. 1.2.11 M. Use each description in COLUMN B only ONCE.

COLUMN A		COLUMN B	
1.2.1	Grading	A	the most economical source of animal feed
1.2.2	Pollution	B	provides measures to maintain standards when evaluating produce after harvesting
1.2.3	Cash flow budget	C	volume of soil that the plant can use and that is available for water capacity
1.2.4	Fertiliser	D	chemical substance that increases the production output of the soil
1.2.5	Value adding	E	extreme loss of water due to dry weather conditions
1.2.6	Natural grazing	F	oversees all farm activities
1.2.7	Soil depth	G	contamination of soil, water or air due to excess application of chemicals
1.2.8	Delegating	H	gives more responsibility to a farm worker
1.2.9	Farm manager	I	the camping of veld with the same nutritional value
1.2.10	Inventory	J	used to determine the projected movement of funds in an enterprise
		K	a record that indicates all assets at a certain time, including their current values
		L	post-harvesting activity that involves changing and/or packaging of a product

(10 x 2)

(20)

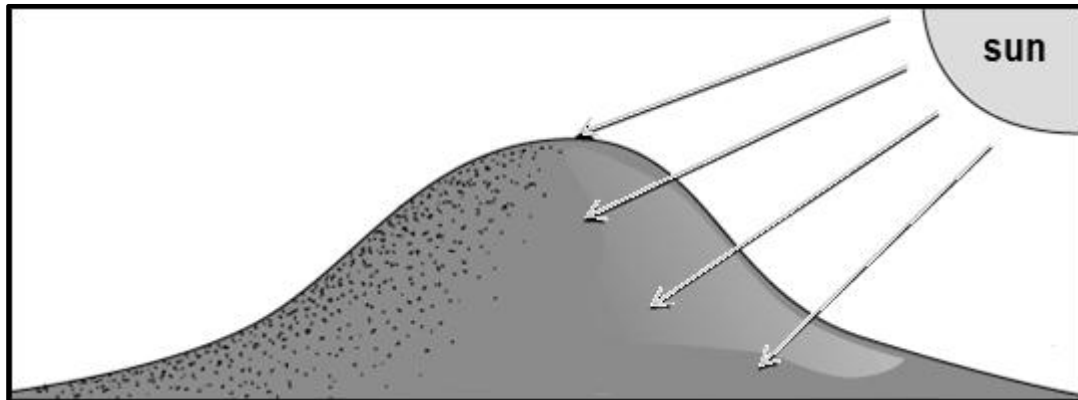
- 1.3 Give the CORRECT agricultural term for each of the following descriptions. Write only the term next to the question numbers (1.3.1 to 1.3.5) in the ANSWER BOOK, e.g. 1.3.6 Recording.
- 1.3.1 The type of soil structure preferred by most crop farmers
- 1.3.2 Lines on a map that run across a slope (hill) in such a way that the lines remain at the same height and not uphill or downhill
- 1.3.3 The type of production method that prohibits the use of chemical inputs and has a less harmful effect on the environment
- 1.3.4 A food-processing method that removes any substances that cause suspensions in liquids
- 1.3.5 Devices used to easily record input, processing and output of data that can then be sent to relevant institutions (5 x 1) (5)
- 1.4 Change the underlined word(s) to make the following statements CORRECT. Write your answer next to the question numbers (1.4.1 to 1.4.5) in the ANSWER BOOK, e.g. 1.4.6 Fixed capital.
- 1.4.1 The law of diminishing returns states that an additional factor of production results in larger increase in output.
- 1.4.2 One of the main purposes of motivation in marketing is to inform people about new products and services.
- 1.4.3 Storage is the marketing function responsible for the distribution of products from the farm to the consumer.
- 1.4.4 A farmer has to complete a cash slip when money is deposited into the farmer's bank account.
- 1.4.5 The total cost components (fixed cost and variable cost) that are not assigned to any branch in farming are packaging costs. (5 x 1) (5)

TOTAL SECTION A: 50

SECTION B**QUESTION 2: PHYSICAL FARM PLANNING**

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

- 2.1 State the functions of soil in the production process. (4)
- 2.2 Study the illustration below.



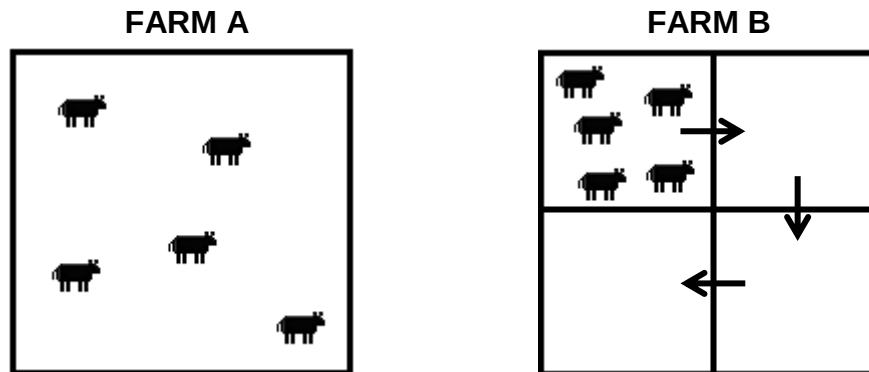
Explain the difference between the soil characteristics with regard to the southern and northern slope (in the Southern Hemisphere) under the following headings:

- 2.2.1 Temperature of the soil (2)
- 2.2.2 Organisms in the soil (soil fauna) (2)
- 2.3 Distinguish between the different soil texture classes by copying and completing the table below in the ANSWER BOOK.

CHARACTERISTICS	SAND	CLAY
Water holding capacity		
Soil fertility		

- 2.4 Discuss the importance of soil surveys to farmers. (4)

2.5 The illustrations below show grazing systems.



2.5.1 Briefly discuss the grazing systems as illustrated above.

(a) FARM A (2)

(b) FARM B (2)

2.5.2 State the disadvantages of the grazing system used on FARM B. (2)

2.5.3 Describe the advantages of resting a camp for a long period of time (one year). (3)

2.6 Choose the labour laws from the list below that match the descriptions. Write only the letter (A–E) next to the question numbers (2.6.1 to 2.6.4) in the ANSWER BOOK.

A	Employment Equity Act, 1998 (Act 55 of 1998)
B	Compensation for Occupational Injuries and Diseases Act, 1993 (Act 130 of 1993)
C	Basic Conditions of Employment Act, 1997 (Act 75 of 1997)
D	Unemployment Insurance Act, 2001 (Act 63 of 2001)
E	Occupational Health and Safety Act, 1993 (Act 85 of 1993)

2.6.1 Provides for employees who are accidentally hurt or fell ill at the workplace (1)

2.6.2 Protects employees who lost their jobs due to mechanisation and stipulates the benefits they receive in that case (1)

2.6.3 Provides for workers and job seekers to be protected from unfair discrimination (1)

2.6.4 Regulates working hours, leave, termination of employment and all other matters relating to employment (1)

2.7 Read the scenario below and answer the questions that follow.

FARMER A:

Farmer A has a feedlot with 15 473 cattle. The cattle feed rations are calculated using a computer system. The farmer feeds the animals for a specific time and then sells them to a nearby abattoir. The farmer has an agreement with the abattoir to send all the hides back to the farm. In the farmers' leather branch, the hides are used to produce shoes, belts and handbags.

FARMER B:

Farmer B owns four cattle that roam around the village during the day and which the farmer milks every morning. The milk that the farmer does not use is sold to the people in the village. The farmer also plants vegetables and maize for household use. This farmer lives very far from the market and finds it very difficult to sell excess produce for a profit at the market.

2.7.1 Identify the farming system used by:

(a) FARMER A (1)

(b) FARMER B (1)

2.7.2 Describe the level or intensity at which FARMER A uses the land. (2)

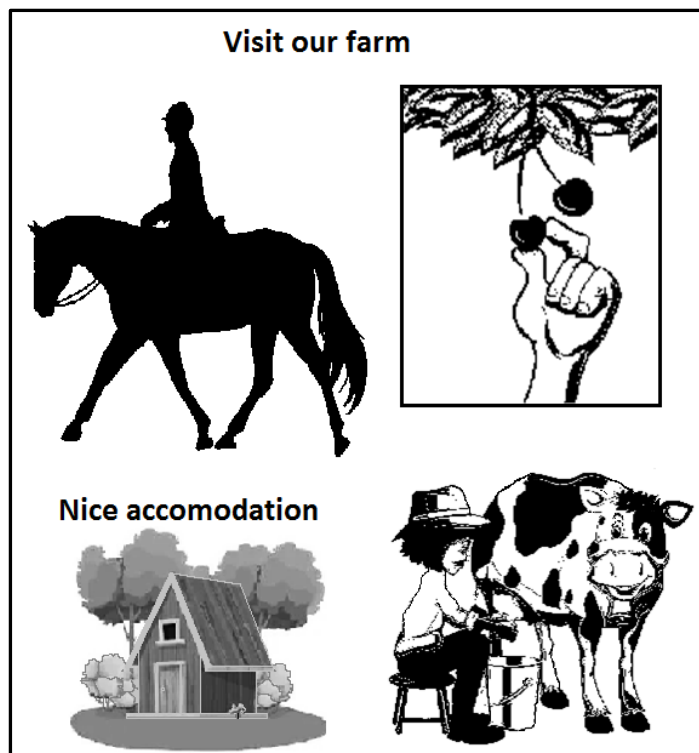
2.7.3 Deduce if FARMER A's leather branch can be classified as a niche market. Motivate your answer. (3)

2.7.4 Comment on possible reasons why FARMER B finds it difficult to sell excess produce for a profit at the market. (3)

2.8 Describe the importance of precision farming. (3)

- 2.9 A fruit farmer starts an agritourism branch on the farm in order to diversify the source of farm income and to reduce risks.

The farmer places the following advertisement in the local newspaper:



- 2.9.1 Name the activities that can attract visitors to the farm. (3)
- 2.9.2 Identify other important information missing in the advertisement. (2)
- 2.9.3 Indicate how you would improve the advertisement further. (3)
- [50]

QUESTION 3: BUSINESS PLANNING, ENTREPRENEURSHIP, MARKETING, PRICE DETERMINATION AND THE MANAGEMENT PROCESS

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

3.1 The table below shows the export of meat from 2019 to 2022 in tons.

EXPORT OF MEAT FROM 2019 TO 2022				
MEAT TYPE	2019 (tons)	2020 (tons)	2021 (tons)	2022 (tons)
Beef	2 916	2 222	4 250	3 250
Mutton	438	247	250	320
Pork	1 800	1 100	1 500	3 800
Chicken			1 850	6 900
Ostrich			1 600	1 535

3.1.1 Draw a bar graph to illustrate the export of pork from 2019 to 2022. (5)

3.1.2 Give a reason why there was a reduction in export in 2020. (2)

3.2 Name and describe factors that a farmer must consider when developing a product marketing strategy. (4)

3.3 ABC Cooperative imports farm equipment and irrigation equipment. They purchase farm inputs such as fertilisers and pesticides from suppliers and sell them to make a profit.

3.3.1 Identify the type of agricultural sector described in the scenario above. Motivate your answer. (2)

3.3.2 Give reasons why the sector identified in QUESTION 3.3.1 is important. (3)

3.4 Choose the principle of management from the list below that must be applied to each of the given tasks in QUESTIONS 3.4.1 to 3.4.3. Write only the word next to the question numbers (3.4.1 to 3.4.3) in the ANSWER BOOK.

planning; organisation; motivation; control; coordination

3.4.1 Workers are divided into work groups according to the tasks that must be done on the farm. (1)

3.4.2 Workers sign in and out each day when they come to work. (1)

3.4.3 Workers are trained regularly to increase their productivity and work satisfaction. (1)

3.5 State the financial impact on an enterprise when:

3.5.1 Sales are lower than the break-even point (1)

3.5.2 Sales are higher than the break-even point (1)

3.6

FARM A:

Farm A sells 500 chickens using farm gate marketing. The farm sells the chickens at R80/chicken. The farmer has the following costs:

- Feed = R20/chicken
- Vaccination = R5/chicken
- Electricity = R5/chicken
- Labour = R20/chicken

FARM B:

Farm B sells 500 chickens using contract marketing. The farm sells the chickens at R90/chicken. The farmer has the following costs:

- Feed = R20/chicken
- Vaccination = R5/chicken
- Electricity = R8/chicken
- Labour = R15/chicken
- Processing = R5/chicken
- Transport = R10/chicken

3.6.1 Calculate the costs associated with the production of ONE chicken on:

(a) FARM A (2)

(b) FARM B (2)

3.6.2 State possible methods that FARM A and FARM B can use to determine their prices. (3)

3.6.3 Identify TWO marketing functions of FARM B in the scenario above. (2)

3.7 State ways in which producer organisations assist farmers in South Africa. (3)

- 3.8 Choose the roles and responsibilities from the list below that match the different personnel on the farm.

Complete the following table by writing only the letter (A–F) next to the question numbers (3.8.1 to 3.8.6) in the ANSWER BOOK, e.g. 3.8.7 G.

A	Helps to resolve employee issues in the field where harvesting is done
B	Evaluates financial statements and makes budget proposals
C	Performs artificial insemination
D	Disinfects production areas to prevent diseases
E	Monitors and assists in the repair of machines
F	Sprays weeds in the field

MANAGER	SUPERVISOR	WORKER	
		CROP PRODUCTION	ANIMAL PRODUCTION
3.8.1	3.8.2 3.8.3	3.8.4	3.8.5 3.8.6

(6 x 1)

(6)

- 3.9 State problems experienced by farmers with regard to labour. (4)
- 3.10 Describe the importance of market research as part of the business plan. (2)
- 3.11 State the disadvantages of enterprise specialisation. (2)
- 3.12 A farmer plans to introduce an additional branch that will increase the profitability of the farm.

Formulate THREE questions on aspects that the farmer should consider when determining the most suitable branch.

(3)
[50]

**QUESTION 4: FINANCIAL PLANNING, RECORDING, HARVESTING,
VALUE ADDING AND PACKAGING**

Start this question on a NEW page.

4.1 Name the aspects to consider when compiling a budget for crop production. (4)

4.2 The list below indicates characteristics of different types of budgets.

- A Measures only possible returns and expenses that result from an adjustment in the farm plan
- B Uses the previous year's financial statements
- C Developed on a per-hectare or per-head basis to allow for comparisons among alternative production lines
- D Is a summary of expected income, expenses and profit for the entire farm
- E Helps the farmer to decide whether to buy or hire machinery for harvesting
- F Is used in comparing the profitability of several farm plans, determining income potential and debt repayment capacity
- G Provides base information to construct the whole farm budget

4.2.1 From the list above, choose TWO characteristics of a whole farm budget. Write only the letters (A–G) next to the question number. (2)

4.2.2 From the list above, choose TWO characteristics of a branch budget. Write only the letters (A–G) next to the question number. (2)

4.3 Differentiate between the following financial documents:

4.3.1 Invoice (2)

4.3.2 Income Statement (2)

- 4.4 The Balance Sheet is a measure of an enterprise's net worth. A farmer had the following balances on 30 November 2022:

Cash	R2 000
Owner's equity	R1 115 000
Land and buildings	R1 150 000
Bank overdraft	R15 000
Stock	R20 000
Debtors	R13 000
Mortgage loan	R120 000
Implements	R25 000
Second-hand tractor	R50 000
Creditors	R10 000

Use the data in the financial record above to fill in the missing information, labelled **(a)–(f)**, in the Balance Sheet below. Write only the answers next to the letters (a) to (f) in the ANSWER BOOK.

BALANCE SHEET	RAND (R)
ASSETS	
• Fixed assets:	
(a)	(a)
• Movable assets:	
Implements	25 000
(b)	(b)
• Current assets:	
Stocks	20 000
(c)	(c)
(d)	(d)
TOTAL ASSETS:	1 260 000
LIABILITIES	
• Long-term liabilities:	
Mortgage loan	120 000
• Current liabilities:	
(e)	(e)
Bank overdraft	15 000
TOTAL LIABILITIES:	145 000
OWNER'S EQUITY	1 115 000
TOTAL EQUITY AND LIABILITIES:	(f)

(6 x 1) (6)

4.5 Most small-scale farmers do not pay attention to the importance of recordkeeping in their farming operations. This is caused in most cases by a lack of knowledge on recordkeeping. The farmers claim they have too much work and not enough time for this important task.

What the farmers do not realise is that most decisions are not better if not based on records kept. They talk of profit and loss, not based on facts and data derived from recordkeeping, but from guessing or intuition. This situation is characterised by poor recordkeeping and inadequate management information systems.

4.5.1 State the importance of accurate recordkeeping by small-scale farmers. (4)

4.5.2 Identify the main challenges leading to poor recordkeeping in farming. (3)

4.5.3 Name an information management system that farmers can adopt to improve management. (1)

4.6 Choose the example of a source document from the list below to match a description in QUESTIONS 4.6.1 to 4.6.4. Write only the word/term next to the question numbers (4.6.1 to 4.6.4) in the ANSWER BOOK.

pay slip; receipt; invoice; bank statement;
deposit slip; sales tax return

4.6.1 Proof that the farm owes someone money or still has to pay (1)

4.6.2 Written proof that the farmer paid a wage or salary to a worker or manager (1)

4.6.3 Proof that the producer received the money when the buyer paid in cash for produce (1)

4.6.4 A document that indicates the money that has entered and left a bank account during a specific period (1)

4.7 State the factors used to determine the quality of fresh products at harvesting. (4)

4.8 Storage facilities eliminate the need to market the products immediately after harvesting. Such facilities range from simple structures to buildings with special equipment for cooling.

Recommend guidelines that a farmer must consider when constructing a storage facility for agricultural produce. (4)

- 4.9 Processing is the changing of a raw product into a more useful product.
- 4.9.1 State the advantages of the drying of agricultural products. (3)
- 4.9.2 Justify the statement:
- Processing in agriculture is valuable to job creation. (2)
- 4.10 Packaging food means wrapping or containing it in some form of material that will protect it during storage, transportation and distribution.
- 4.10.1 Discuss the benefits of glass bottles and jars for packaging agricultural products. (4)
- 4.10.2 State the disadvantages of using plastic as packaging material for agricultural products. (3)
- [50]**
- TOTAL SECTION B: 150**
- GRAND TOTAL: 200**