



basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

SENIOR CERTIFICATE EXAMINATIONS/ NATIONAL SENIOR CERTIFICATE EXAMINATIONS

AGRICULTURAL MANAGEMENT PRACTICES

2022

MARKS: 200

TIME: 3 hours

This question paper consists of 14 pages.

INSTRUCTIONS AND INFORMATION

1. This 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. Start EACH question on a NEW page.
7. 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 The loss of water from soil and plants to the atmosphere that takes place during the day:

- A Photosynthesis
- B Transpiration
- C Evapotranspiration
- D Evaporation

1.1.2 A problem experienced with the use of human labour on farms:

- A Too many skilled workers in the farming industry
- B Labour costs are low due to mechanisation
- C All tasks are centralised at one point on a farm
- D Migration of farm workers to cities

1.1.3 The source of capital obtained from selling farm produce:

- A Personal capital
- B Production capital
- C Credit
- D Grants

1.1.4 The growth stage of grasses during the winter:

- A Initial growth
- B Active growth
- C Storage of reserves
- D Dormant/Resting

1.1.5 The type of soil map that indicates the groundwater content of soils:

- A Infrared map
- B Ultraviolet map
- C GPS map
- D NDVI map

- 1.1.6 The condition that will NOT favour the growth of most micro-organisms that cause food to spoil:
- A Oxygen-free
 - B Enough sources (products)
 - C Suitable pH
 - D Suitable temperature
- 1.1.7 The farmer receives this source document when he/she buys goods on credit:
- A Credit note
 - B Credit purchase invoice
 - C Credit sales invoice
 - D Cash slip
- 1.1.8 A strategic planning tool that can help to evaluate a farm business is known as a ...
- A business plan.
 - B strategic management plan.
 - C SWOT analysis.
 - D future plan.
- 1.1.9 The resource that includes people in management, workers and service providers:
- A Financial resource
 - B Human resource
 - C Technical resource
 - D Climate resource
- 1.10 The management principle that a farmer must apply before starting an enterprise:
- A Planning
 - B Organising
 - C Motivation
 - D Control
- (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 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	Database	A	analysis and refinement of a plan
1.2.2	Preservation	B	governs composition and quality of processed agricultural products
1.2.3	Bureau system	C	ensures that scales are inspected and calibrated regularly
1.2.4	Consumer taste/preference	D	to eliminate undesirable behaviour and to create a feeling of solidarity in a business
1.2.5	Weights and Measures Act, 1958 (Act 13 of 1958)	E	part of the marketing plan that will increase sales
1.2.6	Discipline	F	an organised collection of data stored and accessed electronically on a computer system
1.2.7	Evaluation	G	the result of soil damage caused by climatic changes
1.2.8	Soil degradation	H	the process of treating and handling food that slows down spoilage to a great extent
1.2.9	Quarantine	I	indicates the management process of the business
1.2.10	Ownership	J	part of the business plan that would describe the form of business you want to register
		K	data processing for a number of customers takes place centrally, away from the farms
		L	the restriction enforced on the movement of animals due to a contagious disease

(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 amount of work done by a farm worker per time unit

1.3.2 The method that sterilises the surfaces of food, food containers and the air

1.3.3 A strategy where the farmer spreads the risk by investing in several enterprises

1.3.4 The climatic factor that is changed into chemical energy for plants to grow

1.3.5 A process that causes change in the economic system through innovation by individuals who respond to opportunities in the market (5 x 1)

(5)

1.4 Change the UNDERLINED WORD(S) to make the statements CORRECT. Write the 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 Seasonal fluctuation is a problem related to the marketing of agricultural produce as it is exposed to spoilage and rotting.

1.4.2 Coordination is the grouping of activities on a farm into management activities and farming activities.

1.4.3 Labour records keep track of the rainfall, temperature and wind speed during specific periods.

1.4.4 Market equilibrium is the number of products that must be sold to cover the total cost of production.

1.4.5 Inbound agricultural tourists are people from South Africa who travel in South Africa to visit different agricultural activities. (5 x 1)

(5)

TOTAL SECTION A: 50

SECTION B

QUESTION 2: PHYSICAL FARM PLANNING

Start this question on a NEW page.

2.1 Veld management is very important to a livestock farmer. The farmer should study the plant growth patterns of the farm to obtain the optimal growth for the region. Knowledge about pastures will result in reduced costs if the farmer is able to manage them properly.

2.1.1 Briefly explain the importance of knowledge of optimal plant growth. (2)

2.1.2 Discuss TWO ways in which the planning and dividing of grazing fields into camps will assist a farmer. (4)

2.1.3 State TWO advantages of good pasture management for the farmer. (2)

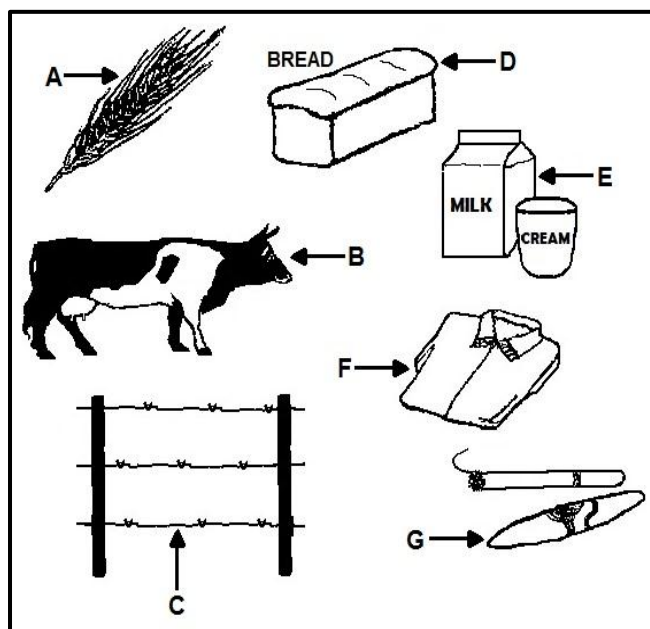
2.2 Describe how the following factors will influence grazing:

2.2.1 Palatability (2)

2.2.2 Topography (2)

2.2.3 Erosion (2)

2.3 The diagram below represents products and capital items in agriculture.

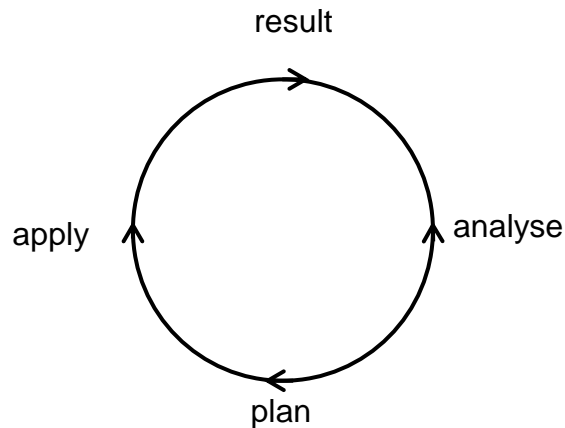


2.3.1 Identify the capital item (A–G) in the diagram above that represents a fixed capital item. (1)

2.3.2 Identify the capital item (A–G) in the diagram above that represents movable capital. (1)

2.3.3 Give TWO reasons why risk is possibly reduced by producing item B and items A or E on the same farm. (2)

- 2.4 The soil structure will have an influence on the cultivation of soils.
- 2.4.1 Define *soil structure*. (2)
- 2.4.2 Describe how the cultivation of structured soils and non-structured soils differ. (2)
- 2.5 State TWO advantages of organic farming. (2)
- 2.6 The cycle of precision farming:



Copy and complete the table below in the ANSWER BOOK by matching the action with the correct main element in the precision-farming cycle.

ACTION	MAIN ELEMENTS			
	PLAN	APPLY	RESULT	ANALYSE
E.g. Land inspection		✓		
Irrigation/Spraying				
Data processing				
Precision mapping				
Harvesting				
Fertilisation				

- 2.7 The following is a list of inputs, processes and outputs obtained from a farming system: (5)
- Profit
 - Soil
 - Fertilisers
 - Precipitation
 - Sun
 - Animal feeds
 - Location
 - Drainage
 - Irrigation
 - Rearing

Identify FIVE physical inputs in the list above that determine a farming system. (5)

- 2.8 Mechanisation has become a necessity for prosperous commercial farming.
- 2.8.1 State the influence on labour if a farmer increases the level of mechanisation on a farm. (2)
- 2.8.2 Briefly explain the negative social impact of high levels of farm mechanisation. (1)
- 2.9 Explain the effect if wastage is reduced when pesticide is applied in precision farming. (4)
- 2.10 Briefly explain the goal of the following types of agritourism:
- 2.10.1 Educational tourists (2)
- 2.10.2 Product route tourists (2)
- 2.11 State FIVE disadvantages of agritourism. (5)
- [50]**

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

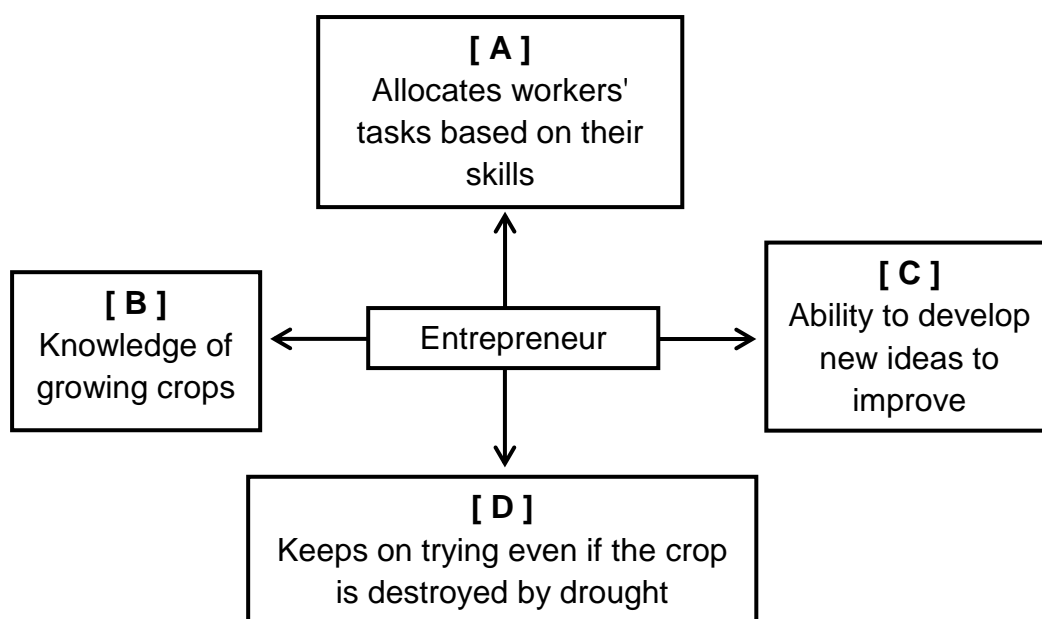
Start this question on a NEW page.

3.1 Preparing a business plan is important for a new farmer.

3.1.1 Give FIVE reasons for developing a business plan. (5)

3.1.2 State FIVE financial strategies as part of the marketing plan. (5)

3.2 The diagram below shows some of the characteristics of an entrepreneur who wants to have a successful farming enterprise.



3.2.1 Identify the entrepreneurial characteristics as indicated by **A**, **B**, **C** and **D**. (4)

3.2.2 State THREE resources that an entrepreneur requires when starting a farming enterprise. (3)

3.3 Businesses in agriculture can be divided into three sectors, namely the primary agriculture sector, the secondary agriculture sector and the tertiary agriculture sector.

Distinguish *primary* from *secondary* and *tertiary* agricultural sectors. (3)

3.4 The following are marketing laws applicable to the marketing of agricultural products:

- A: Marketing of Agricultural Products Act, 1996 (Act 47 of 1996)
- B: Perishable Products Export Control Act, 1983 (Act 9 of 1983)
- C: Meat Safety Act, 2000 (Act 40 of 2000)
- D: Agricultural Produce Agents Act, 1992 (Act 12 of 1992)
- E: Consumer Protection Act, 2008 (Act 68 of 2008)

Match the marketing laws (A–E) with the descriptions (3.4.1 to 3.4.4) below. Write only the letter (A–E) next to the question numbers (3.4.1 to 3.4.4). Each letter can be used only ONCE.

- 3.4.1 Establishes and maintains national standards at abattoirs and butcheries (1)
- 3.4.2 Aims to increase market access for all participants and promotes the viability of the agricultural sector (1)
- 3.4.3 Controls the marketing of products sold in other countries (1)
- 3.4.4 Aims to promote a fair, accessible and sustainable market place for consumer products and services (1)
- 3.5 Farm gate marketing is one of the most common marketing channels used by farmers, especially small-scale farmers.
 - 3.5.1 State THREE advantages of farm gate marketing. (3)
 - 3.5.2 State THREE disadvantages of farm gate marketing. (3)
- 3.6 Use a table and distinguish between *internet marketing* and *contract marketing*. (6)
- 3.7 State THREE functions of producer organisations in the agriculture industry. (3)
- 3.8 Name THREE advantages of marketing produce on fresh-produce markets. (3)
- 3.9 Evaluation is an essential part of various production aspects. Name FOUR advantages of evaluation. (4)
- 3.10 List FOUR advantages of proper management regarding the application of labour. (4)

[50]

QUESTION 4: FINANCIAL PLANNING, RECORDKEEPING, HARVESTING, VALUE ADDING, AND PACKAGING

Start this question on a NEW page.

4.1 Explain the following statement:

A budget has both a planning function and a control function. (4)

4.2 The basic elements of a budget for a crop production enterprise include inputs, output and resources among other things.

4.2.1 Inputs and outputs should be budgeted for.

(a) Give TWO examples of inputs that must be budgeted for. (2)

(b) Give an example of an output that must be budgeted for. (1)

4.2.2 Indicate what must be budgeted for in terms of resources for a crop production enterprise. (3)

4.3

INCOME STATEMENT	
Farm receipts	R942 700,00
Farm expenses	R780 900,00
GROSS PROFIT:	4.3.1
Interest costs	R21 700,00
Depreciation	R72 300,00
Family living costs and income tax	R52 300,00
NET PROFIT:	4.3.2

4.3.1 Calculate the GROSS PROFIT. Show the formula and ALL calculations. (3)

4.3.2 Calculate the NET PROFIT. Show the formula and ALL calculations. (3)

4.4 Distinguish between *seasonal workers* and *occasional workers* used in agriculture. (2)

4.5 State THREE requirements of good record-keeping. (3)

4.6 A product must be harvested at the right stage of readiness so that the product reaches the consumer in a good condition.

Describe the condition of a fresh raw product that makes it acceptable to the consumer. (4)

4.7 Compare *mechanical harvesting* and *harvesting by hand*. Copy and complete the table below in the ANSWER BOOK.

	MECHANICAL HARVESTING	HAND HARVESTING
Influence of weather conditions		
Theft of the produce		

(4)

4.8 When produce is handled, management must ensure that labourers adhere to the correct personal health and hygiene practices.

Name THREE of these practices when labourers handle fresh produce.

(3)

4.9 State TWO main factors that determine the method of storage of a raw agricultural product.

(2)

4.10 The conversion of primary agricultural products into edible products involves various actions and processes.

Choose ONE word from the list below that explains EACH of the following conversion processes (4.10.1 to 4.10.5).

extraction; combination; sterilisation; freezing; filtration; pasteurisation; fermentation; extrusion
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4.10.1 A process during which food is treated with mild heat to eliminate pathogens and extend shelf life

(1)

4.10.2 A process during which one or more components are separated selectively from a liquid or solid mixture by means of a liquid immiscible solvent

(1)

4.10.3 The process of converting carbohydrates to alcohol or organic acids using micro-organisms, such as yeasts or bacteria

(1)

4.10.4 A controlled heating process used to completely eliminate all living micro-organisms

(1)

4.10.5 During this process soft mixed ingredients are forced through an opening in a perforated plate to produce the required shape at a high temperature. It is then cut to a specific size with blades.

(1)

4.11 Give ONE reason for using EACH of the following packaging methods for agricultural products:

4.11.1 Vacuum packaging (2)

4.11.2 Non-vacuum packaging (2)

4.12

Farmer: I am relocating from a farm in the Free State to a farm in Limpopo, and I am taking my animals with me. I plan to use a truck and trailer to transport the small and large livestock. I am very worried about the stress levels of the animals during the long journey.

4.12.1 Give the farmer advice on the requirements regarding the truck and the trailer that will be used to transport the animals. (3)

4.12.2 State TWO items required by the animals during the trip, which must also be available before and after the journey. (2)

4.12.3 Explain why the farmer is concerned about the stress levels of the animals. (2)
[50]

TOTAL SECTION B: 150
GRAND TOTAL: 200