



# **basic education**

Department:  
Basic Education  
**REPUBLIC OF SOUTH AFRICA**

## **SENIOR CERTIFICATE EXAMINATIONS/ NATIONAL SENIOR CERTIFICATE EXAMINATIONS**

**AGRICULTURAL MANAGEMENT PRACTICES**

**2023**

**MARKING GUIDELINES**

**MARKS: 200**

**These marking guidelines consist of 14 pages.**

**SECTION A****QUESTION 1****1.1 Multiple choice**

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

(10 x 2) (20)

**1.2 Matching items**

- 1.2.1 B ✓✓
- 1.2.2 F ✓✓
- 1.2.3 G ✓✓
- 1.2.4 K ✓✓
- 1.2.5 L ✓✓
- 1.2.6 C ✓✓
- 1.2.7 J ✓✓
- 1.2.8 H ✓✓
- 1.2.9 A ✓✓
- 1.2.10 E ✓✓

(10 x 2) (20)

**1.3 Agricultural terms**

- 1.3.1 Soil erosion ✓
- 1.3.2 Soil pH / soil reaction ✓
- 1.3.3 Auction ✓
- 1.3.4 Packaging ✓
- 1.3.5 Source documents ✓

(5 x 1) (5)

**1.4 Underlined words**

- 1.4.1 Climax /Subclimax✓
- 1.4.2 Anemometer ✓
- 1.4.3 Secondary ✓
- 1.4.4 Ingredients ✓
- 1.4.5 Sugaring ✓

(5 x 1) (5)

**TOTAL SECTION A: 50**

## QUESTION 2: PHYSICAL FARM PLANNING

### 2.1 Land is a valuable asset

#### 2.1.1 Explain if value of farm land increases

- Invest in land ✓ by adding fixed assets on the farm ✓
- Land is made more productive due to correct:
  - cultivation ✓
  - grazing ✓
  - water use ✓
- Condition of veld/soil improved (increases) ✓ with good management ✓
- Net worth of the farm increases ✓ due to increase in assets ✓
- Land appreciates with time ✓ due to economic characteristic of land ✓

(Any 1 x 2) (2)

#### 2.1.2 Explain if value of farm land decreases

- Land is made less productive due to incorrect:
  - cultivation ✓
  - grazing ✓
  - water use ✓
- Condition of veld/soil deteriorates(decreases) ✓with poor management ✓
- Assets of farm decrease ✓ due to a lack of maintenance ✓
- Net worth of the farm decreases ✓ due to decrease in assets ✓(Any 1 x 2)

(2)

### 2.2 Workers absenteeism

#### 2.2.1 Explain productive workers

Workers are productive when they quickly ✓ turn inputs into outputs ✓

**OR**

Productivity = (Output ÷ Input) ✓ in a specific time period ✓

(2)

#### 2.2.2 Describe possible reasons why absenteeism leads to decrease in productivity

- If worker is absent for a long period of time an extra worker must be employed, ✓ training a new worker is time consuming ✓
- When a worker is absent other workers must work overtime ✓ that can lead to tiredness/negativity that can lead to a decrease in productivity ✓

(Any 1 x 2) (2)

#### 2.2.3 Discuss how farmer helps to keep workers healthy

- Regularly take workers to a medical facility ✓
- Ensure a healthy working environment ✓
- Educate workers on:
  - Diseases (HIV and AIDS, TB, COVID) ✓
  - Healthy lifestyle (healthy eating / regular exercise) ✓
  - Good personal hygiene ✓
- Ensure that workers adhere to safety regulations (OHS Act) ✓ (Any 3) (3)

**2.3 Describe principles of a grazing camp for animal production**

- The camps need shade and shelter, e.g. trees for animals ✓
- Clean and fresh drinking water must always be available ✓
- The source of water should be as close as possible to the centre of the camp ✓
- Ensure suitable grazing capacity ✓ / Correct stocking density ✓
- Enough tasty feed ✓
- Topography must be considered ✓
- Suitable grazing for the type of animal ✓
- Suitable fences for the type of animal ✓
- Camping off dangerous areas (wet areas / poisonous plants) ✓ (Any 3) (3)

**2.4 Soil cultivation****2.4.1 THREE disadvantages of a plough pan (sole)**

- There are not enough pores or spaces in compacted soil ✓
- Swallow root development ✓
- Waterlogging ✓
- Slow water drainage ✓
- Poor air circulation ✓
- The restricted roots are often unable to take up sufficient water or nutrients from the soil ✓
- Less plant growth and lower yields ✓
- Plants are less drought resistant ✓ (Any 3) (3)

**2.4.2 Describe how to solve problem of a plough sole (sole)**

- Solve the problem by breaking the plough pan (sole) layer with a primary cultivation ✓ implement e.g. a ripper
  - Varying the ploughing depth ✓
  - Use crop rotation:
    - with crops that requires cultivation at different depths ✓
    - with crops that has root systems that develops to different depths ✓
- (Any 2) (2)

**2.5 Describe advantages of no soil cultivation and permanent soil coverage**

- Nearly no wind and water erosion ✓
- Increased water infiltration in the soil ✓
- Groundwater more readily available ✓
- Organic material content of soil is maintained or improved ✓
- Carbon is isolated in the soil, which increases soil quality and reduces global warming ✓
- Soil quality improvement (chemical, physical and biological) ✓
- Increased crop productivity ✓
- Reduced fertilisation and production costs ✓
- Even more sustainable and profitable crop production (ensures survival of the family farm) ✓
- Basic needs are satisfied / improved rural living standards and quality of life / increased and diversified productivity / increased profit ✓ (Any 3)

**2.6 Different farming methods**

	<b>INTENSIVE FARMING</b>	<b>EXTENSIVE FARMING</b>
INPUT: Labour: without mechanisation	more/high ✓	less/low ✓
INPUT: Land: amount per animal	low/small/less ✓	high/big/more ✓
OUTPUT: amount per unit area	large/big/high ✓	small/little/low ✓

(3)

(6)

**2.7 Explain concepts within precision farming****2.7.1 GPS**

- Global Positioning System gives the exact location ✓ of the receiver on the surface of the earth ✓
- A satellite system ✓ that provides farmer with positioning, navigation, and timing services ✓
- Establish a guided grid system ✓ for soil sampling and optimize the use of chemicals (fertilizers; pesticides; etc.) ✓
- Can use coordinates to calculate the surface ✓ of a chosen area ✓

(Any 1 x 2)

(2)

**2.7.2 GIS**

- Geographical Information System processes inputs ✓ in a computer system and display it on a map ✓
- Is a computer system that analyses ✓ and displays geographically referenced information ✓
- Inputs are processed by a computer database to store, analyse and retrieve information ✓ and to view geographical information in map form ✓

(Any 1 x 2)

(2)

**2.7.3 VRT**

- Variable Rate Technology uses implements (planters, fertilizer applicators) ✓ that can exert precision control over crop inputs ✓
  - It allows fertiliser, chemicals, lime, gypsum, irrigation water and other farm inputs to be applied at different rates ✓ across a field, without manually changing rate settings on equipment or having to make multiple passes over an area ✓
- (Any 1 x 2) (2)

**2.8 Agricultural implements****2.8.1 Distinguish between primary and secondary implements****Primary implements**

- Implements are big and heavy ✓
  - Usually do heavy duty cultivation ✓
  - Deeper cultivation ✓
- (Any 1) (1)

**Secondary implements**

- Implements are lighter and finer ✓
  - Usually used after primary tillage ✓
  - Shallow cultivation ✓
- (Any 1) (1)

**2.8.2 Classify implements**

- IMPLEMENT A = Secondary ✓
  - IMPLEMENT B = Primary ✓
  - IMPLEMENT C = Primary ✓
- (3)

**2.8.3 Name THREE disadvantages in the use of implements**

- Implements are expensive ✓
  - Use of implements requires a more skilled worker ✓
  - Use of implements can destroy certain properties of soils ✓
  - Depreciation / The value of implements decreases ✓
  - The implement may be damaged ✓
  - It can lead to unemployment / Less labour needed ✓
  - Costs of fuel is high ✓
  - Cost of servicing is high ✓
- (Any 4) (4)

- 2.9 **Name FOUR aspects when purchasing implements and equipment**
- Cost of purchasing the implement ✓
  - Quality of the implement ✓
  - Choose customisable equipment ✓
  - Implement must be the correct size and capacity for the circumstances ✓
  - Possible expansion must be kept in mind ✓
  - Choice of technological advancement must be made ✓
  - Training required and what it costs ✓
  - Calculate the running cost of the implement ✓
  - Maintenance and services available ✓
  - Do research on product's effectiveness ✓
  - Choose between automated or hand-driven model ✓
  - Decide what type of accessories or extras are required ✓
- (Any 4) (4)
- 2.10 **Explain how agritourism reduces risks in commercial farming**
- Cash flow benefits for the farmer ✓
  - Optimal use of all resources e.g. mountains / rivers ✓
  - Value of farm increases – additional facilities have been set up ✓
  - Great marketing value for farmer's products ✓
  - Protect farmer from:
    - Climate patterns ✓
    - Value of the Rand ✓
- (Any 4) (4)  
[50]

**QUESTION 3: BUSINESS PLANNING, ENTREPRENEURSHIP, MARKETING, PRICE DETERMINATION AND THE MANAGEMENT PROCESS****3.1 Marketing channels****3.1.1 State THREE problems with selling of livestock at auctions**

- Auction fees can be costly ✓
- Market price is not always favourable (reserve price) ✓
- Risks of disease outbreaks/quarantine areas ✓
- Poorly organised auctions ✓

(Any 3) (3)

**3.1.2 Describe free-market system**

- The producer can sell the products where ✓ they want, when ✓ they want and at highest possible price ✓

(Any 2) (2)

**3.1.3 State the advantages of fresh produce markets**

- Farmers can benefit from higher prices in times when there are shortages ✓
- The market can sell large quantities of the farmer's produce ✓
- The farmer can use an agent to market the produce ✓
- Money is available immediately after sales ✓

(Any 2) (2)

**3.2 Farm planning****3.2.1 Discuss financial plan**

- To estimate farm profit ✓ from possible income and expenses ✓
- To determine the source of income ✓ for each production branch ✓
- To determine cash flow ✓, enough money available when needed ✓
- To estimate monthly income from sales ✓ of products from different branches ✓
- To determine if the capital is enough ✓ for production in different branches ✓

(Any 1 x 2) (2)

**3.2.2 Discuss marketing plan**

- To check the existence of the potential customers ✓ for each product produced ✓
- To focus on customer satisfaction ✓ for each product produced ✓
- To know marketing trends ✓ to know when to sell produce produced ✓
- To recognise the opportunities in the market ✓ that will increase sales/advertising ✓

(Any 1 x 2) (2)

**3.3 Name elements of organisation**

- Identification of tasks ✓
  - Grouping of the related tasks ✓
  - Delegation of certain task aspects ✓
  - Supervisors or managers takes responsibility on executed tasks ✓
  - Co-ordination of the different tasks ✓
- (Any 2) (2)

**3.4 Indicate the aspects of decision making**

- The accuracy of the decisions ✓
  - The speed in which decisions are made ✓
  - The acceptability of the decisions by the persons involved ✓
- (3)

**3.5 Name advantages of coordination**

- It increases the efficiency of the operation ✓
  - Duplication is eliminated ✓
  - Resources are utilised optimally within the different operational tasks ✓
  - Better cooperation between workers ✓
  - Organisation in the workplace becomes easier and more functional ✓
  - Better communication in the workplace ✓
- (Any 3) (3)

**3.6 Give reasons for employment contract**

- It protects the rights of both parties ✓
  - It is a legal requirement ✓
  - It is a legal agreement between employee and employer ✓
  - It can be referred to if disputes arise ✓
  - It defines what is expected of the employee ✓
- (Any 3) (3)

**3.7 Name and explain the pillars of farm sustainability**

- Productivity ✓ to maintain and improve productivity ✓
  - Risk management ✓ to ensure the production security ✓
  - Conservation ✓ to protect the potential of natural resources ✓
  - Economic viability ✓ to determine the profitability of the farm ✓
  - Social acceptance ✓ to develop the community/environment ✓
- (Any 2 name and explain) (4)

### 3.8 SWOT analysis from scenario

#### 3.8.1 THREE strengths

- Availability of land ✓
- Capital is available ✓
- Business skills ✓
- Water from the river is available ✓
- Good veld ✓

(Any 3) (3)

#### 3.8.2 ONE weakness

- a) Lack of farming skills ✓
- b) Lack of farming knowledge ✓
- c) Not very fertile sandy soils ✓

(Any 1) (1)

#### 3.8.3 ONE opportunity

- Agritourism / attract tourists to come and fish ✓
- Horse breeding market ✓

(Any 1) (1)

#### 3.8.4 TWO threats

- Rainfall availability / drought / river can run dry ✓
- Conflict among the group members ✓
- Outbreak of diseases ✓
- Changes in the market ✓
- Erosion (wind / water) ✓

(Any 2) (2)

#### 3.8.5 Actions to correct the weaknesses

- a) Employ a farm manager that has the skills ✓
- b) Employ a farm manager that has the knowledge ✓
- c) Improve quality of the soil / adding organic material to the soil / plant crops that prefer sandy soils ✓

(Any 1 that link with QUESTION 3.8.2) (1)

### 3.9 Break-even-point

#### 3.9.1 Calculate cost per unit

- Cost per product = cost ÷ number of units  
= R50 000 ÷ 20 000 ✓  
= R2,50 per unit ✓
- (2)

#### 3.9.2 Distinguish between variable costs and fixed costs

VARIABLE COSTS	FIXED COSTS
Change per unit produced ✓	Unchangeable in the short term ✓
Can be controlled/avoided depending on number of units produced ✓	Cannot be controlled/avoided ✓

(No table needed) (4)

### 3.10 Explain demand and supply

#### 3.10.1 Concept of demand and price

- The lower the price the higher the demand ✓✓
- The higher the price the lower the demand ✓✓

OR

- The higher the demand the higher the price ✓✓
- The lower the demand the lower the price ✓✓

(Any 1) (2)

#### 3.10.2 Concept of supply and price

- The higher the price the higher the supply ✓✓
- The lower the price the lower the supply ✓✓

OR

- The higher the supply the lower the price ✓✓
- The lower the supply the higher the price ✓✓

(Any 1) (2)

### 3.11 Identify aspects of a business plan

#### 3.11.1 Cover page / Front page ✓

(1)

#### 3.11.2 SWOT analysis ✓

(1)

#### 3.11.3 Addendum/Annexure ✓

(1)

#### 3.11.4 Human resource plan ✓

(1)

#### 3.11.5 Financial resource plan ✓

(1)

#### 3.11.6 Infrastructure ✓

(1)

[50]

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

**4.1 Budgets from list**

**4.1.1 Examples of production budgets**

- Feed budget ✓
- Maintenance budget ✓
- Labour budget ✓

(3)

**4.1.2 Describe primary aims of a budget**

- To set limits on the amounts to be used for farming activities ✓
- To obtain credit on time ✓
- To coordinate resources and money spent as planned ✓
- To help determine whether to expand the business or not ✓
- To do a needs analysis and exercise control ✓
- To determine relative profitability of an alternative ✓
- To test the time-use and feasibility of a decision ✓
- To quantify long-term strategy and goals ✓

(Any 4) (4)

**4.1.3 Give examples of 'parameters' used in budgeting**

- Prices ✓
- Yields / returns ✓
- Application of inputs ✓
- Time of inputs or outputs ✓
- Progeny / weaning percentage ✓

(Any 2) (2)

**4.2 Financial aspects**

**4.2.1 Calculate gross margins for the two production enterprises**

**Production enterprise A**

- GM = Returns – Variable costs  
= R39 011,00 – R32 102,24 ✓  
= R6 908,76 ✓

**Production enterprise B**

- GM = Returns – Variable costs  
= R37 361,00 – R28 532,27 ✓  
= R8 828,73 ✓

(4)

**4.2.2 Calculate net income**

- Net income = Total farm income – Total farm expenses  
= R76 372,00 – R60 634,51 ✓  
= R15 737,49 ✓

**OR**

- Net income = GM (A) + GM (B)  
= R6 908,76 + R8 828,73 ✓ (CA)  
= R15 737,49 ✓

(2)

**4.2.3 Most profitable production enterprise**

- Production enterprise A ✓ (1)
- Because it has more returns per hectare than enterprise B ✓
- *correct calculations also valid* (Any 1) (1)

**4.3 Income Statement**

EXPENDITURE			INCOME		
DATE	DESCRIPTION	VALUE (R)	DATE	DESCRIPTION	VALUE (R)
	Production cost	87 000.00	15/03/22	Sale of product	38 600.00
	Marketing cost	2 500.00	10/04/22	Sale of product	69 450.00
			20/05/22	Sale of product	61 500.00
	<b>TOTAL</b>	89 500.00		<b>TOTAL</b>	169 550.00

**RUBRIC**

- Headings: INCOME and EXPENDITURE ✓
  - Each correct entry INCOME side ✓✓ (max 2)
  - Each correct entry EXPENDITURE side ✓✓ (max 2)
  - Both totals correct ✓ (one mark)
- (Income and expenditure can be underneath each other) (6)

**4.4 Explain the steps to be followed when an inventory is developed  
(Order is important)**

- Step 1: Make a physical count of all available assets in the farm business✓
- Step 2: Evaluate all the assets at the current market value ✓
- Step 3: Make a closing inventory at the end of the year ✓ (3)

**4.5 Source documents**

**4.5.1 Describe TWO instances when the farming enterprise issue a receipt**

- Any transaction whereby money/goods are received ✓
- When contributions or donations are received/sponsorship ✓
- When farmer is receiving payment for selling produce ✓
- When payment from a debtor is received ✓ (Any 2) (2)

**4.5.2 Name data that should be reflected on source document**

- Amount ✓
- Date of transaction ✓
- Description of transaction ✓
- Company name – receiving the document ✓
- Company name – issuing the document ✓
- Payment detail ✓ (Any 4) (4)

**4.6 Storage**

**4.6.1 Structure used by large-scale farmers for grain storage**

- Silo ✓

(1)

**4.6.2 Reason why the poles are fitted with inverted cones**

- To prevent rodents from entering the crib ✓

(1)

**4.6.3 FOUR climate aspects factors protected by the crib**

- Temperature ✓
- Precipitation (rainfall, frost, snow, dew) ✓
- Wind ✓
- Light ✓

(4)

**4.7 Name physical or visible characteristics for grading of harvested farm products**

- Colour of the product ✓
- Size of the product ✓
- Shape / form of the product ✓
- Conformation of the product ✓
- Damages on the product ✓
- Freshness of the product ✓
- Cleanliness of the product ✓

(Any 4) (4)

**4.8 Processing**

**4.8.1 State THREE food preservation methods used to kill or eliminate micro-organisms**

- Heating ✓
- Filtration ✓
- UV radiation ✓
- Freezing ✓

(Any 3) (3)

**4.8.2 Explain value adding contribution to financial sustainability**

- The farmer identifies a gap in the market ✓ and through processing value is added to a raw product ✓
- The new value-added product can generate an income ✓ which may contribute to the financial viability of the farm ✓
- Excess products can be utilised ✓ to create an extra income ✓ (Any 1 x 2) (2)

**4.9 Discuss legal requirements of the information on the label on nutritional value**

- A table ✓ with the nutritional values ✓
- Values of mass or percentage of RDA ✓
- Arrange the nutrients in order, from the highest values to the lowest ✓

(3)

[50]

**TOTAL SECTION B:** 150  
**GRAND TOTAL:** 200