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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)

(3)

2.6 Different farming methods

	INTENSIVE FARMING	EXTENSIVE FARMING
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 ✓

(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 manger that has the skills ✓
- b) Employ a farm manger 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**

- $GM = \text{Returns} - \text{Variable costs}$
 $= R39\ 011,00 - R32\ 102,24$ ✓
 $= R6\ 908,76$ ✓

Production enterprise B

- $GM = \text{Returns} - \text{Variable costs}$
 $= R37\ 361,00 - R28\ 532,27$ ✓
 $= R8\ 828,73$ ✓

(4)

4.2.2 Calculate net income

- $\text{Net income} = \text{Total farm income} - \text{Total farm expenses}$
 $= R76\ 372,00 - R60\ 634,51$ ✓
 $= R15\ 737,49$ ✓

OR

- $\text{Net income} = GM(A) + GM(B)$
 $= R6\ 908,76 + R8\ 828,73$ ✓ (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	DESCRIP-TION	VALUE (R)	DATE	DESCRIP-TION	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
	TOTAL	89 500.00		TOTAL	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