basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

SENIOR CERTIFICATE EXAMINATIONS/ NATIONAL SENIOR CERTIFICATE EXAMINATIONS

AGRICULTURAL MANAGEMENT PRACTICES

MAY/JUNE 2024

MARKING GUIDELINES

MARKS: 200

These marking guidelines consist of 13 pages.

SECTION A

QUESTION 1

1.1 Multiple-choice Questions

1.1.1 C ✓✓

1.1.2 D ✓✓

1.1.3 A ✓✓

1.1.4 D ✓✓

1.1.5 C ✓✓

1.1.6 D ✓✓

1.1.7 D ✓✓

1.1.8 B ✓✓

1.1.9 A ✓✓

1.1.10 C ✓✓ (10 x 2) (20)

1.2 Matching items

1.2.1 J ✓✓

1.2.2 F ✓✓

1.2.3 A ✓✓

1.2.4 H ✓✓

1.2.5 L ✓✓

1.2.6 C ✓✓

1.2.7 K ✓✓

1.2.8 E ✓✓

1.2.9 D ✓✓

1.2.10 B ✓✓ (10 x 2) (20)

1.3 **Agricultural terms**

1.3.1 Whole farm budget ✓

1.3.2 Supply ✓

1.3.3 Crop rotation ✓

1.3.4 Marketing chain ✓

1.3.5 Vacuum packaging ✓ (5 x 1) (5)

1.4 **Underlined words**

1.4.1 Financial ✓

1.4.2 Gypsum / Calcium carbonate / $CaSO_4$ ✓

1.4.3 Hydroponics/Aquaponics ✓

1.4.4 Sustainability ✓

1.4.5 Semi-intensive ✓ (5 x 1) (5)

TOTAL SECTION A: 50

SECTION B

QUESTION 2: PHYSICAL FARM PLANNING

2.1 **Name FOUR factors that contribute to shallow soils**

- High clay content ✓
- Waterlogged areas ✓
- Substrata/unweather rocks in the subsoil ✓
- Compressed layers ✓
- Too much acid/alkaline conditions in the subsoil ✓
- Too many stones/rocky layers ✓ (Any 4) (4)

2.2 **Soil structure**

2.2.1 **Briefly discuss granular and platy structure**

(a) **Water infiltration**
Granular structure – high/rapid infiltration ✓
Platy structure – slow/limited infiltration ✓ (2)

(b) **Root development**
Granular structure – good root development ✓
Platy structure – poor root development ✓ (2)

2.2.2 **Give reason for QUESTION 2.2.1 (a) for platy structure**

- The soil particles are compacted/closely packed to each other✓
- High clay content ✓
- Not enough pore spaces ✓ (Any 1)

(1)

2.3 **Suggest measures to prevent soil degradation**

- Implement good farming practices ✓
- Prevention of deforestation ✓
- Put measurements in place to prevent soil erosion ✓
- Prevent pollution and waste dumping ✓
- Good veld management ✓
- Plan for events from climate change e.g. droughts, floods, veld fires ✓

(Any 4) (4)

2.4 **Temperature in greenhouse**

2.4.1 **Give the effects of different temperatures on crop growth**

(a) **Minimum temperature**

- Little/no growth occurs below this temperature ✓
- Too cold for plant growth ✓ (Any 1) (1)

(b) **Optimum temperature**

- Maximum plant growth occurs ✓
- Best temperature for plant growth ✓ (Any 1) (1)

(c) **Maximum temperature**

- Little/no growth above this temperature ✓
- Too hot for plant growth ✓ (Any 1) (1)

2.4.2 **Name ways to control high temperatures in greenhouse**

- Opening of the sides/door ✓
- Add extra covering ✓
- Misting ✓
- Blowers or fans ✓
- Air conditioners ✓
- Painting the cover material ✓ (Any 3) (3)

2.5 **Indicate the effects of relative humidity**

PROCESSES	HIGH RELATIVE HUMIDITY	LOW RELATIVE HUMIDITY
Evaporation	(a) low ✓	(b) high ✓
Wilting	(c) low/slow ✓	(d) high/quick ✓

(table not necessary) (4)

2.6 **Veld/grazing for animals**

2.6.1 **Describe the implications for FARMER A**

- Lead to overgrazing/bare patches ✓
- There will be insufficient veld/food for animals to graze ✓
- Resulting to a decrease in animal production/growth ✓ (3)

2.6.2 **Give the principles for grazing system of FARMER B**

- Veld types with the same potential and palatability should be fenced together ✓
- Small portions of less palatable veld should be fenced with larger portions ✓
- Certain portions such as watercourses and areas which tend to erode more easily should be fenced off separately ✓
- Drinking water must be available in each camp ✓
- Enough camps for different groups of animals ✓
- Ensure effective pasture rotation for each group of animals ✓
- The group sizes must be according to the camp size/Size of camps must be big enough for each group of animals✓

(Any 3) (3)

2.6.3 **Name the benefits of grazing system for FARMER B**

- Reduce the risk of overgrazing ✓
- Reduce need for farmer buying feed ✓
- Increase livestock productivity ✓
- Cost effective feeding for animals ✓
- Nutritious feed is available for livestock ✓
- It may result in an increase of income for farmer ✓
- Better veld ✓
- Plant succession will be improved ✓ (Any 4) (4)

2.7 **Name FOUR main aspects that influence the application of precision farming**

- Management ✓
- Allies ✓
- Economy ✓
- Environment ✓
- Climatic change ✓ (Any 4) (4)

2.8 **Technologies used in precision farming**

2.8.1 Harvester monitor ✓ (1)

2.8.2 Harvester's grain tank flow sensor ✓ (1)

2.8.3 Tensiometer ✓ (1)

2.8.4 Drone ✓ (1)

2.9 **Implements**

2.9.1 **Name the type of capital**
Medium term/movable capital ✓
Reason
The expected lifespan of capital is 2 to 10 years ✓ (2)

2.9.2 **Give TWO reasons why implement B rather than A**

- Is used to work in areas:
  - where large amounts of crop residues are present ✓
  - with very hard soils ✓
  - where tree stumps and obstructions are present ✓

(Any 2) (2)

2.9.3 **Give the disadvantages of using animal traction**

- It requires daily care and supervision ✓
- It is slow ✓
- It may be difficult to work in very large farms/large scale farms✓
- Cannot use heavy implements ✓
- Animals might get hurt ✓
- Animals require more labour ✓ (Any 3)

(3)

2.10 **Give reasons for insurance in agritourism by entrepreneurs**

- Insurance against injuries that might be sustained by tourists ✓
- Insurance for tour guides ✓
- Insurance to use for repairs when property is damaged ✓ (Any 2) (2)

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

3.1 **Name and describe THREE factors for price determination**

- The length of the marketing chain ✓ – the longer the chain, the higher the price and vice versa ✓
- Market research ✓ – determine the need for the product ✓
- Competition ✓ – direct and indirect competition must be considered ✓
- Supply and demand ✓ – the effect of each separately or combination on the price ✓ (Any 3 x 2) (6)

3.2 **Briefly describe variables of marketing elements**

3.2.1 **Product**

- Sell the product in bulk or packed ✓
- The different sizes in which the product will be available ✓
- The quality of the product ✓
- How many of the product one wants to sell ✓
- The possibility of processing the product ✓ (Any 2) (2)

3.2.2 **Promotion**

- Method of advertising the product ✓
- Promotional (tasting) actions for the product ✓
- How to inform consumers of your product/making your product known to the consumers ✓ (Any 2) (2)

3.3 **Match the principles of management**

3.3.1 Organizing ✓ (1)

3.3.2 Controlling ✓ (1)

3.3.3 Planning ✓ (1)

3.3.4 Coordinating ✓ (1)

3.4 **Distinguish strengths and weaknesses**

	STRENGTHS	**WEAKNESSES**
Credit	No credit ✓ Credit at low interest rate✓ (Any 1)	Outstanding credit ✓ High interest rate on credit ✓ (Any 1)
Brand name	Strong/good brand name✓ Well established brand name ✓ (Any 1)	Weak/poor brand name ✓ Brand name not yet established ✓ (Any 1)
Management skills	Good management skill ✓	Poor management skill ✓

(6)

3.5 **Give reasons for taking risk when starting a farming enterprise**

- Want/need to work for oneself ✓
- Prefer to take all the business decisions ✓
- Profit they make is theirs to keep ✓
- They can try out their own ideas and innovations ✓ (4)

3.6 **Describe FOUR aspects to consider to develop a plan of action for a working day**

- Work must fit workers individual skills ✓
- Know the abilities of every worker for the task ✓
- Priority of farm activities must be from the most to the least important ✓
- The weather conditions determine the type of work ✓
- Resource availability (tools/machinery) ✓ (Any 4) (4)

3.7 **Describe marketing**

- Process to determine:
  - What products the consumer wants ✓
  - How the consumer wants these products ✓
  - Where the consumer wants the products ✓
  - How to get the consumer to buy the product ✓
  - How to make sure the consumer returns for more ✓ (5)

3.8 **Give FOUR reasons why planning and re-planning is important**

- Changes in the pattern of resources ✓
- Changes in technological and biological relationships ✓
- Changes in prices ✓
- Risks and uncertainties ✓
- Climate changes ✓
- Pest and disease outbreaks ✓ (Any 4) (4)

3.9 **Describe how risk of biosecurity can be reduced in farm gate marketing**

- Preventing contamination on the farm ✓
- Disinfecting of vehicles ✓
- Sanitation and disinfecting of people shoes/make use of a footbath ✓
- Restrict visitors to certain areas ✓
- Only one specific selling point for products ✓
- Restrict buyers in handling of products not bought ✓ (Any 4) (4)

3.10 **Describe contract marketing**

- Farmers sign a contract with large chain stores, food processors or co-op ✓
- To deliver certain amount of produce ✓
- At an agreed price ✓ (Any 2) (2)

3.11 **Name role of product organisations**

- Business information service ✓
- Market development ✓
- Product promotion ✓
- Product research ✓ (Any 3) (3)

3.12 **Give examples of printed media for advertising**

- Newspaper ✓
- Magazines ✓
- Flyers/pamphlets ✓
- Posters ✓
- Billboards ✓
- Notes ✓ (Any 4) (4)

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

4.1 Budget

4.1.1 Gross farm income ✓ (1)

4.1.2 Miscellaneous income ✓ (1)

4.1.3 Total gross production value ✓ (1)

4.1.4 Net profit ✓ (1)

4.1.5 Investment ✓ (1)

4.2 BalanceSheet

4.2.1 **State aims of the Balance Sheet**

- To determine the liquidity of the farm ✓
- To determine the financial health of the business ✓
- Determine the net worth of the farm ✓ (Any 2) (2)

4.2.2 **Give TWO example of a fixed asset item**

- Land ✓
- Buildings ✓
- Fence ✓
- Borehole ✓
- Windmill ✓
- Handling facilities ✓
- Water tank/Reservoir for water ✓ (Any 2) (2)

4.2.3 **Total assets**

Total assets = R803 000 ✓

OR

Total assets = R630 000 + R75 000 + R98 000 = R803 000 ✓ (1)

4.2.4 **Total liabilities**

Total liabilities = R630 000 ✓

OR

Total liabilities = R500 000 + R45 000 + R85 000 = R630 000 ✓ (1)

4.2.5 **Calculate Net Worth**

Net worth = Total assets – Total liabilities
= R803 000 ✓(CA) – R630 000 ✓(CA)
= R173 000 ✓(CA) (3)

4.3 Technological advancement

4.3.1 Name measures to protect banking information

- Do not share pin code (OTP)/password with anyone ✓
- Select a strong pin code/password that nobody can guess ✓
- Do not use browser facility to save your password ✓
- Make sure there is security software/firewall/antivirus installed✓
- Remember to logoff after banking activity has been completed✓
- Do not write down banking pin code/password in a place that is easy to access ✓ (Any 3) (3)

4.3.2 Explain why it is better to use computers

- Large amount of data can be stored ✓
- Information is quickly available to the farmer ✓
- Information is securely stored for a long time ✓
- It saves a lot of time ✓
- Timeliness on decision making is promoted ✓
- It offers timeliness alternative application possibilities ✓
- Calculations can be done easier ✓
- Work becomes neater ✓ (Any 4) (4)

4.4 Calculate depreciation of this tractor

Salvage value = R 350 000 x 5% ✓ = R 17 500 ✓

$$\text{Depreciation} = \frac{\text{Cost price} - \text{Salvage value}}{\text{Expected lifespan}}$$

$$= \frac{\text{R } 350\,000 - \text{R } 17\,500 \text{ (CA)}}{10} \checkmark$$

= R 33 250 ✓ (CA)

OR

$$\text{Depreciation} = \frac{\text{Cost price} - \text{Salvage value}}{\text{Expected lifespan}}$$

$$= \frac{\text{R } 350\,000 - (350\,000 \times 5\%) \checkmark\checkmark}{10} \checkmark$$

= R 33 250 ✓ (CA) (4)

4.5 **Comparison between hand picking and mechanical harvesting**

	HAND PICKING	**MECHANICAL HARVESTING**
Maintenance of harvesting equipment	easy ✓	difficult ✓
Number of labourers	many ✓	few ✓
Damage to produce	bruising ✓	crushing ✓

(6)

4.6 **Processing**

4.6.1 **Give the aspects that become affected during sterilization**

- Colour ✓
- Smell ✓
- Taste ✓
- Structure ✓
- Nutritional value ✓ (Any 3) (3)

4.6.2 **State factors to consider before processing**

- Socio-economic conditions ✓
- Level of business skills among people ✓
- Availability and cost of infrastructure ✓
- Government policies and regulations ✓
- Financial support from financial institutions ✓
- Access to appropriate technology ✓
- Market development ✓
- Trading value ✓ (Any 3) (3)

4.6.3 **List the conversion processes**

- Fermentation ✓
- Extraction ✓
- Extrusion ✓
- Aggregation/Grinding ✓
- Combination ✓
- Use of micro-organisms ✓ (Any 3) (3)

4.7 **Give reasons for packaging**

- To prevent product from getting easily spoiled/To protect the product ✓
- Convey information to consumers ✓
- To lure consumers to purchase the product ✓
- To facilitate easy handling of produce ✓
- Identify the product ✓ (Any 2) (2)

4.8 **Classify hazards**

BIOLOGICAL HAZARDS	CHEMICAL HAZARDS	PHYSICAL HAZARDS
Bacteria ✓	Lubricants ✓ Herbicides ✓	Stones ✓ Plastic ✓

(5)

4.9 **Storage methods**

4.9.1 **Wine**

- Tanks ✓
- Barrels ✓
- Bottle ✓ (Any 1) (1)

4.9.2 **Grain**

- Airtight storage ✓
- Silos ✓
- Underground structures ✓
- Grain sock ✓
- Plastic bags ✓
- Paper bags ✓ (Any 1) (1)

4.9.3 **Silage**

- Plastic bags/coverings/sock ✓
- Bunkers ✓ (Any 1) (1)

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TOTAL SECTION B: 150
GRAND TOTAL: 200