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# SENIOR CERTIFICATE EXAMINATIONS/ NATIONAL SENIOR CERTIFICATE EXAMINATIONS

# AGRICULTURAL MANAGEMENT PRACTICES MAY/JUNE 2024 MARKING GUIDELINES

**MARKS: 200** 

These marking guidelines consist of 13 pages.

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#### **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  $\checkmark\checkmark$  (10 x 2)

(20)

Agricultural Management Practices DBE/May/June 2024 SC/NSC – Marking guidelines **Agricultural terms** 1.3 1.3.1 Whole farm budget ✓ 1.3.2 Supply ✓ Crop rotation ✓ 1.3.3 Marketing chain ✓ 1.3.4 1.3.5 Vacuum packaging ✓  $(5 \times 1)$ (5) **Underlined words** 1.4 Financial ✓ 1.4.1 Gypsum / Calcium carbonate / CaSO₄ ✓ 1.4.2 Hydroponics/Aquaponics ✓ 1.4.3 1.4.4 Sustainability ✓ 1.4.5 Semi-intensive ✓  $(5 \times 1)$ (5) **TOTAL SECTION A:** 50

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#### **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)

(1)

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 ✓

(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)

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)

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#### 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 ✓

## 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)

(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)

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

- Management ✓
- Allies ✓
- Economy ✓
- Environment ✓
- Climatic change ✓ (Any 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:
    - o where large amounts of crop residues are present ✓
    - o with very hard soils ✓
    - o 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)

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)

[50]

(3)

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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)

#### 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)

#### 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 ✓	Outstanding credit ✓	
	Credit at low interest	High interest rate on	
	rate√	credit ✓	
	(Any 1)	(Any 1)	
Brand name	Strong/good brand	Weak/poor brand	
	name√	name ✓	
	Well established brand	Brand name not yet	
	name ✓ (Any 1)	established ✓ (Any 1)	
Management skills	Good management	Poor management	
	skill ✓	skill ✓	

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(6)

Agricultural Management Practices DBE/May/June 2024 SC/NSC – Marking guidelines 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 ✓ o 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 ✓ (4) Pest and disease outbreaks ✓ (Any 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)

Agricultural Management Practices DBE/May/June 2024 SC/NSC – Marking guidelines 3.11 Name role of product organisations Business information service ✓ Market development ✓ Product promotion ✓ Product research ✓ (Any 3) (3) Give examples of printed media for advertising 3.12 Newspaper ✓ Magazines ✓ Flyers/pamphlets ✓ Posters ✓ Billboards ✓ (4) Notes ✓ (Any 4) [50]

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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)

#### 4.2.3 Total assets

Total assets = R803 000 ✓

OR

Total assets =  $R630\ 000 + R75\ 000 + R98\ 000 = R803\ 000 \checkmark$  (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  $\checkmark$  (CA) – R630 000  $\checkmark$  (CA) = R173 000  $\checkmark$  (CA) (3)

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(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)

#### 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 Calculate depreciation of this tractor

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

Depreciation = 
$$\frac{\text{Cost price} - \text{Salvage value}}{\text{Expected lifespan}}$$
$$= \frac{\text{R 350 000} - \text{R 17 500 (CA)}}{10} \checkmark$$
$$= \text{R 33 250} \checkmark \text{(CA)}$$

OR

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

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

$$= \text{R 33 250} \checkmark \text{(CA)}$$
(4)

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#### 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)

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#### 4.8 **Classify hazards**

BIOLOGICAL	CHEMICAL	PHYSICAL	
HAZARDS	HAZARDS	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 ✓ (1) (Any 1)

[50]

**TOTAL SECTION B:** 150

**GRAND TOTAL:** 200