basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

NATIONAL SENIOR CERTIFICATE

GRADE 12

AGRICULTURAL MANAGEMENT PRACTICES

NOVEMBER 2017

MARKING GUIDELINES

MARKS: 200

These marking guidelines consist of 12 pages.

SECTION A

QUESTION 1

1.1 Multiple Choice

1.1.1 C ✓✓
1.1.2 B ✓✓
1.1.3 A ✓✓
1.1.4 A ✓✓
1.1.5 D ✓✓
1.1.6 D ✓✓
1.1.7 C ✓✓
1.1.8 B ✓✓
1.1.9 C ✓✓
1.1.10 C ✓✓ (10 x 2) (20)

1.2 Matching items

1.2.1 D ✓✓
1.2.2 H ✓✓
1.2.3 G ✓✓
1.2.4 E ✓✓
1.2.5 J ✓✓
1.2.6 C ✓✓
1.2.7 A ✓✓
1.2.8 B ✓✓
1.2.9 K ✓✓
1.2.10 F ✓✓ (10 x 2) (20)

1.3 Correct agricultural terms

1.3.1 Fixed capital ✓
1.3.2 Calibration /Calibrate ✓
1.3.3 Enterprise budget /Branch budget /Micro budget ✓
1.3.4 Sweet veld ✓
1.3.5 Entrepreneurship ✓
1.3.6 Time register/Time sheet ✓
1.3.7 Expiry date / sell by date / best before date / Expiring ✓
1.3.8 Planning ✓
1.3.9 Standardisation ✓
1.3.10 Invoice ✓ (10 x 1) (10)

TOTAL SECTION A: 50

SECTION B

QUESTION 2: PHYSICAL AND FINANCIAL PLANNING

2.1 Irrigation

2.1.1 THREE basic requirements of soil for irrigation purposes

- Adequate infiltration/absorption ✓
- Internal drainage/soil depth ✓
- Incline/slope/topography ✓
- Water holding capacity ✓ (Any 3) (3)

2.1.2 THREE methods to control water runoff

- Develop stable waterways ✓
- Apply contour ploughing ✓
- Develop contour ridges/terracing ✓
- Improve the plant coverage on the soils ✓
- Improve surface infiltration ✓ (Any 3) (3)

2.2 Physical effects of addition organic matter to soil

PHYSICAL ASPECT	ORGANICALLY RICH SOILS	ORGANICALLY POOR SOILS
Soil temperature	More constant temperature/small effect on temperature ✓	Fluctuating temperature will tend to become more stable ✓
Soil erosion	Less soil erosion/the effect will be small ✓	Soil erosion will decrease drastically with addition of organic material ✓

(4)

2.3 Natural pastures

2.3.1 FOUR reasons for a camp system

- To make rotational grazing possible ✓
- To make regrowth possible during resting period ✓
- To divide livestock in different herds/separate different type of animals ✓
- To prevent overgrazing due to moving animals between camps ✓
- Different veld types with the same properties can be grouped together making it easier to manage ✓
- To adhere to the veld carrying capacity ✓
- Herd health management ✓
- To manage breeding systems easier ✓ (Any 4) (4)

2.3.2 **FOUR practices that lead to deterioration of veld**

- Over grazing ✓
- Incorrect burning of veld ✓
- Poor veld management/ ploughing of veld ✓
- Too many vehicle movement ✓
- Poor parasite(termite) control ✓
- Allowing invader species ✓
- Ill-considered use of herbicides ✓ (Any 4) (4)

2.4 **Define between the sources of capital**

2.4.1 **Own capital:**

- Money that the farmer has saved or from the farmers' investments ✓
- Money obtained from inheritance, grants, sponsorships ✓ (Any 1) (1)

2.4.2 **Credit:**

- Money borrowed/loan obtained from a financial institution and paid back with interest ✓
- Account opened at different agricultural service suppliers or agricultural organisations ✓ (Any 1) (1)

2.4.3 **Production capital:**

- Money obtained from the selling of produced agricultural products ✓ (1)

2.5 **Graph on law of diminishing return**

2.5.1 **The economic characteristic of soil shown in the graph**

- Law of diminishing returns ✓ (1)

2.5.2 **Reason for the graph not starting at a yield of 0 ton/ha**

- Even if no fertiliser is added to the soil ✓
- The crop will still produce a yield ✓
- From the nutrients that is naturally in soils ✓ (3)

2.6 **FOUR methods to increase productivity and sustainable production on a specific land**

- Adapt production to scientific methods ✓
- Make use of technology ✓
- Irrigate the land ✓
- Increase nutrient level of the land ✓
- Choose the type of farming that suits the nature of the soil ✓
- Obtain information on effective production methods ✓
- Improve the physical characteristics of the soil✓ (Any 4) (4)

2.7 **Labour**

2.7.1 **THREE functions of a hired employee**

- Physical labour functions ✓
- Supervisory functions ✓
- Management functions ✓ (3)

2.7.2 **FOUR methods of improving the conditions of health and safety**

- Workplace must be free of dangerous substances ✓
- Workplace must be organised in such a manner to prevent injuries ✓
- All dangerous zone must be indicated or marked ✓
- Provide training to the workers on the correct methods and use of equipment ✓
- Cover all dangerous moving parts on equipment ✓
- Indicate where safety equipment is situated ✓
- Provide a fully equipped first aid kit ✓
- Train workers on basic first aid ✓
- Provide contact number in case of emergency ✓ (Any 4) (4)

2.8 **Effect of incorrect calibration on degradation**

- Pollution of soil and water sources increases with too high concentration ✓
- Too high concentration can kill the natural enemies or beneficial insects ✓
- Too low concentration can increase competition amongst plants and weeds ✓
- Too high concentration destroys soil microbial population ✓
- Too high concentration can affect plant growth ✓ (Any 3) (3)

2.9 **Budget**

2.9.1 **Identify the type of budget**

- Whole farm budget/animal and crop enterprise budget ✓

Motivation

- It incorporates the budget of all enterprises on the farm/incorporates the budget for livestock and crops ✓ (2)

2.9.2 **TWO reasons for compiling a budget for a farm enterprise**

- Predict the expenses and revenues/predict the possible profit or loss ✓
- As a financial control measure/prevent over or under spending ✓
- To indicate areas/time of cost constrains ✓
- To determine credit needs ✓
- Use as an aid in management ✓ (Any 2) (2)

2.9.3 **Calculate of items from the data given in the budget**

(a) **Total costs of livestock enterprise**

- Total costs = R553 000 ✓ (1)

(b) **Total returns of livestock**

- Total returns = R1 016 000 ✓ (1)

(c) **Total costs for the crops enterprise**

- Total costs = R128 000 ✓ (1)

(d) **Total returns for crop enterprise**

- Total returns = R167 000 ✓ (1)

2.9.4 **Net profit or loss**

- Profit/loss = total income – total expenditure
  = R1 016 000 + R167 000 – R553 000 – R128 000 ✓/
  or (R1 016 000 + R167 000) – (R553 000 + R128 000)
  = R502 000 ✓
- It is a profit ✓

OR

- Returns = R1 016 000 + R167 000
  = R1 183 000

- Costs = R553 000 + R128 000
  = R681 000

- Profit/loss = total income – total expenditure
  = R1 183 000 – R681000 ✓
  = R502 000 ✓
- It is a profit ✓

(NB: - Use values of 2.9.3 (a) – (d) for calculation of profit or loss
- If cost or return is calculated wrongly only marks for profit or loss if calculated according to cost and return. (3)

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QUESTION 3: ENTREPRENEURSHIP, RECORDING, MARKETING, BUSINESS PLANNING AND ORGANISED AGRICULTURE

3.1 Entrepreneur

3.1.1 Definition of an entrepreneur

- A person who see an opportunity in the market ✓
- Take the risk in starting a new business ✓
- Using the resources available ✓
- To deliver a product or service ✓ (4)

3.1.2 FOUR criteria that should be considered

- The time it takes for the product to be ready for consumers. ✓
- The value of the product✓
- The risk involved✓
- The uniqueness of the product✓
- Whether the business venture matches the personal skills and goals of the entrepreneur ✓
- Available resources ✓
- Markets available ✓
- The profits and returns to be made ✓ (Any 4) (4)

3.2 SWOT analyses and an example

Components	Description
Strengths ✓	Describe the strengths of a business using an example. ✓
Weaknesses ✓	Describe the weakness of a business using an example. ✓
Opportunities ✓	Describe the opportunities of a business using an example. ✓
Threats ✓	Describe the threats of a business using an example. ✓

(8)

3.3 **Product of choice - All activities should relate to product of choice**
Rearrange activities with reason (e.g. Milk)

- Harvesting ✓ and appropriate reason e.g. Cows being milked ✓
- Storage ✓ and appropriate reason e.g. Milk is stored in cooling tank✓
- Grading ✓ and appropriate reason e.g. Sample is taken for grading✓
- Specialised transport ✓ appropriate reason e.g. Cooling truck transport milk to processor✓
- Processing✓ appropriate reason e.g. Milk processed into various products ✓
- Packaging ✓ and appropriate reason e.g. After processing milk is bagged, bottled etc. ✓

(Any 5 in correct order for mentioned product)

Note –

- The first activity is harvesting
- Mark according to the product
- Reason must link to the product
- Storage position is the most likely to change
- Specialised transport indicates bulk, cold storage or specialised most likely to change (10)

3.4 **TWO pricing objectives which are guiding the pricing decisions**

- To make profit ✓
- To have more stable prices✓
- To maintaining sale volumes ✓
- To increase the market share ✓ (Any 2) (2)

3.5 **Scenario on marketing costs**

3.5.1 **TWO main factors determining price**

- Demand ✓
- Supply ✓ (2)

3.5.2 **Calculate profit at Market A**

- $\text{Produce} = \text{total} \times \text{risk}$
  $= 2\,000 \times 70\%$ ✓
  $= 1\,400$ ✓
- $\text{Profit} = \text{income} - \text{expenditure}$
  $= 1\,400 \times \text{R}40$✓ $- 50\ \text{km} \times \text{R}12{,}50 \times 2$✓
  $= \text{R}56\,000 - \text{R}1\,250{,}00$
  $= \text{R}54\,750$✓

OR (profit calculation)

- $\text{Income} = 1\,400 \times \text{R}40$
  $= \text{R}56\,000$ ✓
- $\text{Expenditure} = 50\ \text{km} \times \text{R}12{,}50 \times 2$
  $= \text{R}1\,250$ ✓
- $\text{Profit} = \text{income} - \text{expenditure}$
  $= \text{R}56\,000 - \text{R}1\,250{,}00$
  $= \text{R}54\,750$✓ (5)

3.5.3 **Calculate profit at Market B**

- $\text{Profit} = \text{income} - \text{expenditure}$
  $= 2\,000 \times \text{R}30$✓ $- 70\ \text{km} \times \text{R}12{,}50 \times 2$ ✓
  $= \text{R}60\,000 - \text{R}1\,750{,}00$
  $= \text{R}58\,250$ ✓

OR

- $\text{Income} = 2\,000 \times \text{R}30$
  $= \text{R}60\,000$ ✓
- $\text{Expenditure} = 70\ \text{km} \times 2 \times \text{R}12{,}50$
  $= \text{R}1\,750{,}00$✓
- $\text{Profit} = \text{income} - \text{expenditure}$
  $= \text{R}60\,000 - \text{R}1\,750{,}00$
  $= \text{R}58\,250$✓ (3)

3.5.4 **Recommendation to farmer**

- Sell produce of week 3 at Market B if not stored/highly perishable ✓
- If possible store the produce of week 3 to week 4 ✓
- Sell produce of week 4 and stored produce at Market B to obtain the highest profit ✓

OR

- Sell produce of week 3 at Market B if not stored/highly perishable ✓
- Harvest everything in week 4 for a higher profit ✓✓ (3)

3.6 **Balance sheet**

3.6.1 **ITEMS**

Current asset	Non-current assets	Current liabilities	Non-current liabilities
Inventory✓	Property ✓	Creditors ✓	Mortgage bond ✓
Debtors✓	Plants and equipment ✓		

(6)

3.6.2 **Type of a farm record prepared from assets and liabilities**

- Balance sheet✓ (1)

3.6.3 **Net worth**

- Net worth = Total value of assets – Total value of liabilities
  = R 2 900 000,00 – R 1 200 000,00✓
  = R 1 700 000,00✓ (2)

[50]

QUESTION 4: HARVESTING, PROCESSING, MANAGEMENT AND AGRITOURISM

4.1 Food legislation

4.1.1 FIVE specifications regarding labelling regulations

- Trade mark ✓
- Description of the product content ✓
- Pictorial representation of the contents or serving suggestions ✓
- Contact details of the manufacturer of the product ✓
- List of ingredients ✓
- The nutritional information ✓
- Quantity of produce ✓
- Possible allergies not related to product ✓ (Any 5) (5)

4.1.2 FOUR important aspects of the National Health Act, 2003 (Act 61 of 2003)

- Minimum requirements for processing premises ✓
- Transportation and handling of food ✓
- Control and prevention of notifiable diseases (food poisoning) ✓
- Regulations concerning inspections and investigations ✓ (4)

4.2 Distinguish between fermentation and decomposition

4.2.1 Fermentation

- A process facilitated by man to produce value added products ✓
- Good microbes are activated/added ✓ (2)

4.2.2 Decomposition

- A process of food spoilage (food decay) ✓
- Unwanted microbes activated ✓ (2)

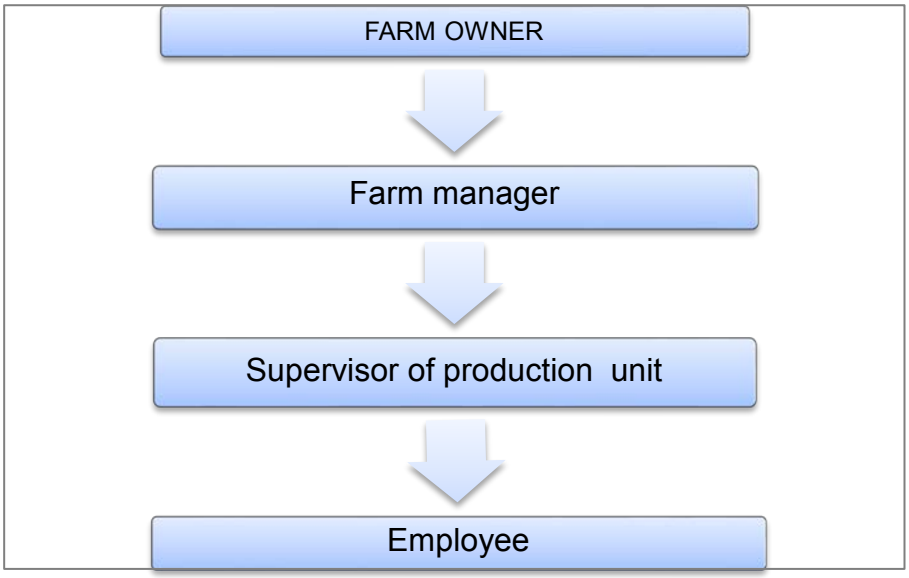
4.3 THREE examples of food processed through filtration

- Wine ✓
- Beer ✓
- Fruit juices ✓
- Gelatine ✓
- Vinegar ✓
- Oils ✓ (Any 3) (3)

4.4 Name and describe THREE factors influencing processing

- Perishability (shelf life)✓– the more perishable the product the quicker processing must take place ✓
- Mass or raw products✓– higher masses need more sophisticated equipment for processing ✓
- Distance from markets✓– the longer distance products must travel, the more preserved the product must be ✓
- Infrastructure✓– infrastructure on the farm will determine possibility of processing and/or type of processing ✓
- Cost of processing facilities✓– capital available for processing unit or credit needed to supplement available capital ✓
- Cost of processing method✓– additional costs and the corresponding profit to the higher input ✓ (Any 3 x 2) (6)

4.5 **A typical agricultural organogram structure**



Rubric
- If all four is mentioned in the correct order – 2 marks ✓✓
- All four mentioned in the correct order, directions and levels clearly visible with blocks but without line or arrows – 3 marks ✓✓✓
- Correct organogram/ correct order, direction and levels with arrows/lines – 4 marks ✓✓✓✓ (4)

4.6 **Control as a managerial principle**

4.6.1 **Definition**
- Supervision of activities✓ according to present schedule/planning✓ (2)

4.6.2 **Method**
- Regular inspections ✓
- To make sure activities are being undertaken as planned ✓ (2)

4.6.3 **Quality assurance**
- Compare to a set of standards ✓ (1)

4.7 **FOUR reasons for planning**
- Important in decision making ✓
- Important to quantify future risks and uncertainties such as changes in:
  - patterns the resources ✓
  - technological and biological relationship ✓
  - prices of inputs ✓
- Risks and uncertainties ✓ (Any 4) (4)

4.8 **THREE factors of decision making**

- The speed with which the decisions are made ✓
- The degree of accuracy with which the decisions are taken ✓
- The acceptability of the decisions for those who are affected by them ✓ (3)

4.9 **Name and describe TWO aspects of organisation**

- Organising the business ✓
  - Management activities like administration and financial aspects ✓
- Organising the farming activities ✓
  - Correct combination (mix) ✓
  - and application of resources ✓ (5)

4.10 **FIVE activities of agritourism**

- Place of interest for agricultural exposure ✓
- An agricultural or association enterprise farm ✓
- Point of sale of products /self-harvesting of products✓
- Working holiday✓
- Farm accommodation ✓
- Game drives/off road routes ✓
- Product routes ✓
- Hunting / Fishing/ Bird watching ✓
- Hiking trials ✓ (Any 5) (5)

4.11 **TWO roles of a farmer in agritourism.**

- To promote the enterprise and its product ✓
- To motivate youth and women not to abandon country side ✓
- Preserving nature ✓ (Any 2) (2)

[50]

TOTAL SECTION B: 150
GRAND TOTAL: 200