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

**NATIONAL  
SENIOR CERTIFICATE**

**GRADE 12**

**AGRICULTURAL MANAGEMENT PRACTICES**

**FEBRUARY/MARCH 2011**

**MEMORANDUM**

**MARKS: 200**

**This memorandum consists of 12 pages.**

**SECTION A****QUESTION 1.1**

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

(10 x 2) (20)

**QUESTION 1.2**

1.2.1	E✓✓
1.2.2	G✓✓
1.2.3	H✓✓
1.2.4	A✓✓
1.2.5	I✓✓
1.2.6	F✓✓
1.2.7	K✓✓
1.2.8	B✓✓
1.2.9	D✓✓
1.2.10	C✓✓

(10 x 2) (20)

**QUESTION 1.3**

- 1.3.1 Crumb structure✓  
 1.3.2 Extensive farming✓  
 1.3.3 Entrepreneur✓  
 1.3.4 Health records ✓  
 1.3.5 Capital ✓  
 1.3.6 Turnover✓  
 1.3.7 Balance sheet✓  
 1.3.8 Cash slip/receipt✓  
 1.3.9 Marketing✓  
 1.3.10 Agri SA/NAFU/Transvaal Landbou-unie SA✓

(10 x 1) (10)

**TOTAL SECTION A: 50**

**SECTION B****QUESTION 2: ANIMAL AND CROP PRODUCTION****2.1 THREE types of farming methods**

- A = Commercial farming✓
  - B = Precision farming✓
  - C = Subsistence farming✓
- (3)

**2.2 2.2.1 The aims of irrigation scheduling**

- Determining when to irrigate.✓
  - And how much water to apply.✓
- (2)

**2.2.2 THREE inputs for irrigation program**

- Soil depth✓
  - Soil structure✓
  - Soil form✓
  - Organic-material content✓
  - Soil barriers✓
  - Soil texture✓
  - Type of crop✓
  - Cultivar ✓
  - Environmental factors (temperature, rainfall, evaporation, evapo-transpiration, humidity, wind)✓
- (Any 3) (3)

**2.2.3 Instrument to determine soil moisture**

- Potentiometer/Tensiometer✓
  - Neutron moisture meter✓
  - Evaporation pan✓
  - Carbon carbide bomb✓
- (Any 1) (1)

**2.3 2.3.1 Ways to increase the productivity of labour**

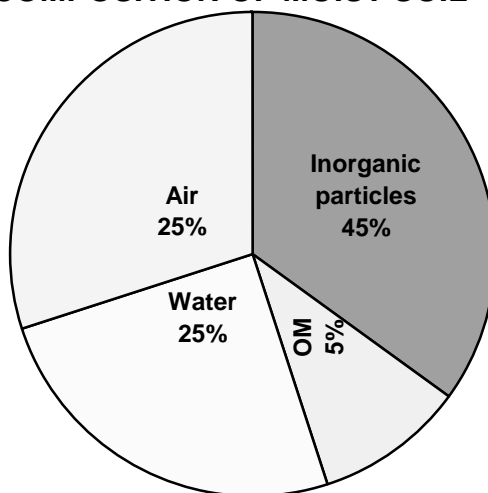
- Economic planning of the farm activity✓
  - Physical planning of the farm activity✓
  - Planning of the production process✓
  - Daily planning✓
  - Supervision/Shared supervision✓
  - Efficient mechanisation✓
  - Adequate living condition✓
  - Training/skills development✓
  - Better working conditions ✓
  - Giving more responsibilities ✓
  - Making them shareholders/joint ventures✓
  - Increase their motivation✓
  - Expose them to recreational facilities✓
  - Increase their remuneration✓
- (Any 5) (5)

- 2.3.2      **FOUR problems related to labour as a production factor**
- Scarcity of labourers. ✓
  - Competition from industries. ✓
  - Lack of training. ✓
  - Poor labour management. ✓
  - Union activities. ✓
  - Literacy levels. ✓
  - Unskilled labourers. ✓
- (Any 4)      (4)
- 2.4      2.4.1      **Soil texture**
- Clay soil. ✓
- (1)
- 2.4.2      **Identify FIVE possible restrictions**
- Too high pH for normal/optimum crop production. ✓
  - Poor drainage. ✓
  - Poor aeration. ✓
  - Poor water infiltration. ✓
  - Poor tillage/difficult to till. ✓
  - Very high salt content. ✓
  - Low organic matter. ✓
  - Cold especially in winter. ✓
- (Any 5)      (5)
- 2.4.3      **THREE measures to improve the production potential of the soil**
- Add organic material/plough in organic material. ✓
  - Add acid containing fertilizers. ✓
  - Add gypsum. ✓
  - Reduce the soil pH. / Over-irrigate ✓
  - Till/cultivate the soil. ✓
  - Use special implements to cultivate. (disc plough) ✓
  - Drainage of soil/drainage system ✓
  - Plant special crops to recover soil. ✓
- (Any 3)      (3)
- 2.5      2.5.1      **Explain biological control**
- Use the pest enemy ✓
  - To inhibit reproduction of pest. ✓
  - Lower appearance of pests in animals/plants. ✓
- (3)
- 2.5.2      **THREE advantages of biological control**
- No pollution. ✓
  - Environmentally friendly. ✓
  - Reduction in the use of herbicides/pesticides. ✓
  - Lowering input costs. ✓
  - Does not disturb the soil. ✓
  - Does not create large empty areas for invaders. ✓
  - Permanent/self-sustaining. ✓
- (Any 3)      (3)

- 2.5.3 **A precaution when using biological control**
- Be careful not to introduce new parasite or pest ✓
  - Avoid possibility of inbreeding to form hybrids. ✓
  - Study full environmental effect.
  - Do not use chemical control/restricted chemical control ✓
- (Any 1) (1)
- 2.6.1 **THREE criteria for dividing of pastures into camps**
- The botanical composition of the grazing/uniformity of the grazing ✓
  - The grazing capacity of the area ✓
  - Damaged grazing area/eroded area ✓
  - The size of the farm ✓
  - The type of farm animal ✓
  - The type of terrain/slope/topography ✓
  - The number of animals on the farm ✓
- (Any 3) (3)
- 2.6.2 **Describe the position of such a contour**
- Follow the contour lines of the slope area/perpendicular to the slope direction. ✓
- (1)
- 2.7 2.7.1 **The process to determine the potential of soil**
- Soil surveying ✓
- (1)
- 2.7.2 **Identify a section utilised for types of farming and give a reason**
- (a) A ✓ – mostly/dominantly low-potential land ✓ (2)
- (b) B ✓ – mostly/dominantly high-potential land ✓ (2)
- 2.7.3 **Indicate the computer program or system**  
GIS system (Geographical information system)/satellite programs/soil-surveying program ✓ (1)

2.8 2.8.1

**COMPOSITION OF MOIST SOIL**



OM = Organic matter

- Heading of the chart ✓
- Correct structure ✓
- Correct % distribution ✓
- Correct labelling ✓

(4)

2.8.2

**Choose option**

Perennial/Permanent crop ✓

- Good water – air ratio/high organic matter content ✓

**OR**

Annual crop production ✓

- Good water – air ratio/high organic matter content ✓

(2)  
**[50]**

**QUESTION 3: RECORDING, FINANCIAL STATEMENTS AND ENTREPRENEURSHIP**3.1 3.1.1 **FOUR alternative methods of payment**

- Cash✓
- Debit card✓
- Credit card✓
- Postal orders✓
- Electronic transfers✓
- Direct deposits✓
- Battering✓

(Any 4) (4)

3.1.2 **Data that should be reflected on source documents**

- Amount ✓
- Date ✓
- Description of article/purchase ✓
- Company ✓
- Payment method ✓

(Any 4) (4)

3.2 **SIX reasons for keeping farm records**

- Evidence for the receiver of revenue.✓
- To assist in financial management decisions.✓
- To control labour.✓
- To assist in resource management decisions.✓
- To assist in physical farm management decisions.✓
- Provide as collateral for a loan at a bank. ✓
- Determine the value of the assets. ✓
- Physical planning of the farm. ✓
- Monitor progress in the enterprise. ✓

(Any 6) (6)

3.3 **Tabulate elements of a budget**

<b>ELEMENT OF BUDGET</b>	<b>DESCRIPTION</b>	<b>EXAMPLE</b>
<b>Resources</b>	Available resources that will be used for the farming enterprise ✓	Land, capital, water, labour, vegetation. ✓ (Any 1)
<b>Inputs</b>	All the expenditures of the farming enterprise ✓	Labour, mechanisation, material, biological inputs, financial inputs.✓ (Any 1)
<b>Parameters</b>	All the unknowns of the production process ✓	Prices, application of inputs, yields, time of inputs or outputs. ✓ (Any 1)

(6)



- 3.4 3.4.1 **The meaning of cash flow**
- The movement of funds through the business during a specific period ✓
  - And is represented by receipts and payments. ✓ (2)
- 3.4.2 **The factors for negative cash flow**
- Unforeseen expenses/accidents ✓
  - Lower production ✓
  - Lower market prices than anticipated ✓
  - Natural disaster/Drought on farm ✓
  - Non-payments ✓ (Any 2) (2)
- 3.5 3.5.1 **Example of a fixed asset**
- Land ✓
  - Buildings ✓
  - Fence ✓
  - Borehole ✓ (Any 1) (1)
- 3.5.2 **The main aim**
- To determine the financial health/standing of the business. ✓ ✓ (2)
- 3.5.3 **Define the net worth**
- Total farm assets **minus** total farm liabilities. ✓ ✓ (2)
- 3.5.4 **Calculation of the net worth**
- $R793\ 000 ✓ - R620\ 000 ✓ = R173\ 000 ✓$  (3)
- 3.5.5 **Current assets**
- Assets that are used within a single production year/season and are used for trade expenses. ✓
  - Fertilizers, seeds, etc. ✓ (2)

3.6 **Income expenditure Statement**

DATE	INCOME	VALUE (R)	DATE	EXPENDITURE	VALUE (R)
28/12/09	sale of produce	38 600 ✓		Production	87 000 ✓
10/02/10	sale of produce	69 450 ✓		Marketing	2 500 ✓
10/05/10	sale of produce	61 500 ✓			
<b>TOTAL</b>		169 550 ✓	<b>TOTAL</b>		89 500 ✓
GROSS PROFIT = $R169\ 550 - R89\ 500 = R80\ 050 ✓$					

(8)

**3.7 THREE characteristics of an entrepreneur**

- Starting business on his own ✓
- Visionary/Creative ✓
- Successful ✓
- Able to recognise a business opportunity ✓
- Good management skills ✓
- Investigative ✓

(Any 3) (3)

**3.8 3.8.1 Contact details**

- Name of responsible person/farm ✓
- Address of the farm (postal/fax/e-mail/street) ✓
- Contact numbers ✓

(Any 2) (2)

**3.8.2 Type of enterprise**

- Sole ownership ✓
- Shared ownership/partners/cooperative ✓

(Any 1) (1)

**3.8.3 Financial plan**

- Income ✓
- Expenditure ✓
- Profit ✓
- Description of items ✓

(Any 2) (2)  
**[50]**

**QUESTION 4: HARVESTING, VALUE-ADDING, MARKETING, AGRITOURISM AND INDUSTRY****4.1 FIVE reasons for the packaging**

- Protection against microbiological contamination, dirt, insects, light, moisture, migration of odour, colours, etc.✓
- Facilitates handling of the food.✓
- Conveys information.✓
- Identifies the product.✓
- Advertising.✓

(5)

**4.2 4.2.1 TWO negative effects of a high temperature on a stored product**

- Encourages grain to rot ✓
- Some products may start to germinate/moulding may occur ✓
- Breeding of some pests e.g. grain weevil✓
- Deterioration in quality/shelf life/nutritional value ✓

(Any 2) (2)

**4.2.2 Explain the main reason**

- Market price of the product will be higher at certain times of the year/market the product during periods of high demand ✓
- Higher income/profit ✓

(2)

**4.2.3 Example of a huge storage facility**

- Silo ✓
- Fruit shed ✓
- Meat freezers ✓
- Wool shed ✓ etc.

(Any 1) (1)

**4.3 Comparison**

<b>FEATURES</b>	<b>LABOUR INTENSIVE METHODS</b>	<b>MECHANISED OR HIGH-TECH METHODS</b>
Time spent on task	Long✓	Short✓
Initial cost	Low✓	High✓
Running costs	Low✓	High✓
Quality of harvested produce	High✓	Low✓
Volume/quantity of product harvested	Low✓	High✓

(10)

- 4.4 4.4.1 **TWO main advantages of processing**
- Increase the value of the product/add economic value to the product ✓
  - Longer shelf life/preservation ✓
  - More marketable/consumer friendly ✓
  - Cost effective to transport ✓
- (Any 2) (2)
- 4.4.2 **TWO possible facilities or pieces of equipment when drying a fresh agricultural product**
- Dryer ✓
  - Heater ✓
  - Blower ✓
  - Large area for light and air-drying ✓
- (Any 2) (2)
- 4.4.3 **Possible way to preserve a processed agricultural product**
- Cooling/freezing ✓
  - Preservatives ✓
  - Vacuum packaging ✓
  - Type of packaging/container ✓
- (Any 1)
- 4.5 **THREE main advantages of producer organisation**
- Advertising of the product ✓
  - Promotion of the product ✓
  - Serve the interests of the producer/industry ✓
  - Technical support for the farmer ✓
  - Research on the product ✓
  - World-wide trends in the industry ✓
- (Any 3) (3)
- 4.6 4.6.1 **Short report**
- Biggest challenge = waste ✓
  - Solution = generate electricity from waste ✓
  - Benefit to the farm of this solution = saving on electricity bill/ Less waste to get rid off ✓
- (3)
- 4.6.2 **Deduce the effect on the carbon footprint**  
Lower carbon footprint ✓
- (1)
- 4.7 4.7.1 **Schematic representation of a market chain**  
Farmer/producer ✓ → any TWO applicable channels ✓ ✓ → consumer ✓
- (4)

4.7.2	<p><b>ONE example of formal and informal marketing channels</b></p> <ul style="list-style-type: none"> <li>• <b>Formal</b> <ul style="list-style-type: none"> <li>○ Retailers ✓</li> <li>○ Cooperatives ✓</li> <li>○ Fresh produce markets ✓</li> <li>○ Export markets ✓</li> </ul> </li> <li>• <b>Informal</b> <ul style="list-style-type: none"> <li>○ Vendors/hawkers ✓</li> <li>○ Farm stalls ✓</li> <li>○ Spaza shops ✓</li> <li>○ Flea markets ✓</li> </ul> </li> </ul>	(Any 1)	
		(Any 1)	(2)
4.8.1	<p><b>Identify the possible motivation</b></p> <p>(a) A/D ✓</p> <p>(b) B ✓</p> <p>(c) C ✓</p>		(1) (1) (1)
4.8.2	<p><b>TWO basic facilities and infrastructure to start business on a farm</b></p> <ul style="list-style-type: none"> <li>• Sanitation ✓</li> <li>• Recreation/accommodation/restaurant/tearoom</li> <li>• Road/electricity/television/satellite TV ✓</li> <li>• Water ✓</li> </ul>	(Any 2)	(2)
4.9.1	<p><b>Identify the types of marketing curves</b></p> <p>A – Demand curve ✓</p> <p>B – Supply curve ✓</p>		(2)
4.9.2	<p><b>Deduce from the graph</b></p> <p>R15,00 ✓✓ <b>OR</b> (R14 – R16) ✓✓</p>		(2)
4.9.3	<p><b>Name and explain the market state</b></p> <p>Market equilibrium/price of product. ✓</p> <p>The point where market demand is equal to market supply/ Point where the demand and supply curves meet. ✓✓</p>		(3) <b>[50]</b>
	<b>TOTAL SECTION B:</b>		<b>150</b>
	<b>GRAND TOTAL:</b>		<b>200</b>