



basic education

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✓

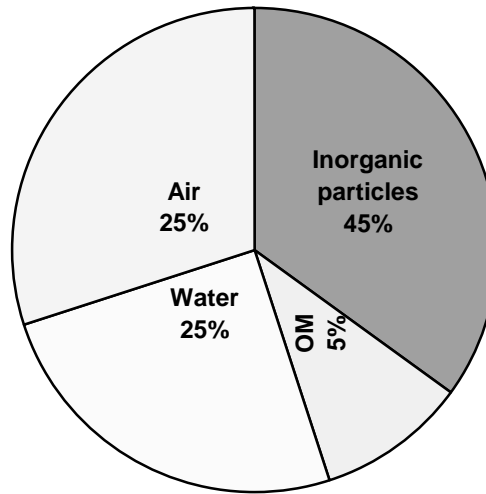
(Any 5)

(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 optionPerennial/Permanent crop ✓

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

ORAnnual 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

ELEMENT OF BUDGET	DESCRIPTION	EXAMPLE
Resources	Available resources that will be used for the farming enterprise ✓	Land, capital, water, labour, vegetation. ✓ (Any 1)
Inputs	All the expenditures of the farming enterprise ✓	Labour, mechanisation, material, biological inputs, financial inputs.✓ (Any 1)
Parameters	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✓			
TOTAL		169 550 ✓	TOTAL		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

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