



basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

NATIONAL SENIOR CERTIFICATE

GRADE 12

AGRICULTURAL MANAGEMENT PRACTICES

NOVEMBER 2012

MEMORANDUM

MARKS: 200

This memorandum consists of 13 pages.

SECTION A

QUESTION 1

QUESTION 1.1

1.1.1	A ✓✓	B	C	D
1.1.2	A	B ✓✓	C	D
1.1.3	A	B ✓✓	C	D
1.1.4	A	B	C ✓✓	D
1.1.5	A	B	C ✓✓	D
1.1.6	A	B	C	D ✓✓
1.1.7	A	B	C ✓✓	D
1.1.8	A	B	C	D ✓✓
1.1.9	A ✓✓	B	C	D
1.1.10	A	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	J ✓✓
1.2.5	A ✓✓
1.2.6	D ✓✓
1.2.7	I ✓✓
1.2.8	K ✓✓
1.2.9	F ✓✓
1.2.10	L ✓✓

(10 x 2) (20)

QUESTION 1.3

- 1.3.1 Wind / temperature ✓
- 1.3.2 Environment friendly/non-toxic/non-hazardous/safe/selected ✓
- 1.3.3 Precision ✓
- 1.3.4 Planning ✓
- 1.3.5 Safety/non-risky/Correct ✓
- 1.3.6 Pooling /cooperative ✓
- 1.3.7 Consumer ✓
- 1.3.8 Whole /entire ✓
- 1.3.9 Readiness/ripeness ✓
- 1.3.10 Pasteurisation ✓

(10 x 1) (10)



TOTAL SECTION A: 50

SECTION B**QUESTION 2: ANIMAL AND CROP PRODUCTION****2.1.1 Four main resources**

- Soil/Any soil factor ✓
- Water/water resources ✓
- Climate/any climate factor ✓
- Vegetation ✓

(Any 4) (4)

2.1.2 Three factors of rainfall

- Rainfall intensity/how hard is the rainfall/amount of rainfall at a certain time ✓
 - High intensity can wash plants away ✓
 - High intensity can lead to erosion ✓
 - Leaching of minerals ✓
- Rainfall distribution/pattern throughout the year/season/frequency ✓
 - Any dry periods within the raining season ✓
 - How often it rains in a period/season/year ✓
- Annual rainfall / Amount of rainfall ✓
 - Yearly rainfall must be in the optimum value of water needed for the plant to grow well ✓
- Humidity during the rainfall season ✓
 - Humidity dictates the precipitation ✓
 - and therefore the water needed ✓
 - High humidity may cause diseases ✓
- Rainfall season ✓
 - Certain crops produce optimally during a particular rainfall season ✓
 - The combination of rainfall and temperature determine a crop's performance ✓

(Any 3 aspects and the relevant description) (6)

2.2.1 Classify land

- High production land ✓

(1)

2.2.2 Four soil factors for tillability

- Soil texture ✓
- Soil structure ✓
- Bulk density ✓
- Rockiness/physical composition ✓
- Soil depth ✓
- Water content/retention ability /water capacity ✓
- Organic content ✓

(Any 4) (4)

2.3.1 Grazing system

- Rotational grazing ✓

(1)

2.3.2 Criteria for camps

- Biotic composition/botanical composition ✓
 - Grazing volumes/number of animals in a herd ✓
 - Grazing capacity/ Grazing values ✓
 - Regrowth potential of grasses ✓
 - Nutrient value ✓
 - Palatability/veld type ✓
 - Similar soil types ✓
 - Similar veld types ✓
 - Topography/slope ✓
 - Type of animal ✓
 - Dominant plant species ✓
 - Badly eroded(erosion) /overgrazed areas ✓
 - Unwanted/poisonous plant species ✓
 - Access to water sources/ water availability ✓
- (Any 4) (4)

2.3.3 Natural resources

- (a) **Soil depth**
- Deeper soils retain more water thus better/faster re-growth ✓
 - Deeper soils leads to a deeper/better plant roots system and better regrowth ✓
 - Shallow soils leads to a poor plant roots system and poorer regrowth ✓
 - Shallow soils retain less water thus slower/poorer re-growth ✓
- (Any 2) (2)
- (b) **Distribution of rainfall**
- Poor distribution of rainfall leads to less soil water and therefore slower re-growth ✓
 - Better rainfall distribution leads to more soil water and therefore better re-growth ✓
 - Rainfall is needed for regrowth in the beginning of the growth season ✓
- (Any 2) (2)

2.4.1 Problems related to labour

- Lack of experienced / untrained labourers ✓
 - Difficult to find labourers / Scarcity of labours ✓ Recruiting potential of workers for a farming enterprise is low ✓
 - Harsh weather conditions /Conditions under which workers are working in the farm, e.g. unattractive, ✓
 - Secondary industries offer better salaries / Competition between city live/mines/industries and farm lives ✓
 - Seasonal fluctuation of workload in most of the farms /seasonal labours ✓
- (Any 4) (4)

2.4.2 **Four ways to improve working conditions**

- Better clothing ✓
 - Correct equipment ✓
 - Safe working conditions ✓
 - Good quality meals/ Balanced diet/nutritious meals ✓
 - Remuneration ✓
 - Certificates of appreciation/ Acknowledgement of good labour practices ✓ (4)
- (Any 4)

2.5 **Type of farmer and farming systems**

	FARMER A	FARMER B
Aim of farming enterprise	Crop production/export marketing ✓	Produce for household/ livestock farmer ✓
Reason	Supplies export markets/designated for European market ✓	Supplies only the household/provide for the family ✓
Farming system	Semi-intensive / Commercial ✓	Intensive system/ Subsistence ✓
Reason	Depends partly on irrigation ✓	Totally fed in kraal/supply household ✓

(8)

2.6 **Distinguish farming systems and example**
Specialised farming

- Farming with only one production enterprise ✓✓
- All attention/resources allocated to is one enterprise ✓✓ (Any 1) (2)

AND

- Any single farming enterprise indicated with one crop or breed (maize farmer/broiler farmer/stud farmer) ✓ (1)

Diversified farming

- Farming with more than one (two and more) production enterprise ✓✓
- Resources/attention divided between the respective enterprises ✓✓ (Any 1) (2)

AND

- Any two or more farming enterprises indicated ✓
More than one crop/breed indicated ✓ (Any 1) (1)

2.7 Two methods to overcome erosion

- Contour ploughing/farming ✓
 - Ploughing is done across the slope rather than along the slope ✓
- Stable outlets ✓
 - Stable outlet for surface water on contoured field ✓
- Vegetation strips ✓
 - Growing of crops between grass strips ✓
- Contour banks/Stone banks ✓
 - Stone bank is built along the contour to reduce water flow ✓
 - Making ditches with the bank of the soil on the down slope side to stop the rain water from carrying soil away ✓
- Terraces ✓
 - Making of steps into the slope and you grow crops on the flat part of the step and support the soil on the upright of the step with grass and trees, or with stones if the slope is stony ✓
- Mulching ✓
 - Cover soil to minimize water flow ✓
- Good pasture/veld management ✓
 - Good plant coverage reduce water flow ✓
- Correct cultivation methods ✓
 - Create soil surface that is resistant to erosion ✓

(Any 2) (4)
[50]**QUESTION 3: RECORDING, FINANCIAL STATEMENTS AND ENTREPRENEURSHIP****3.1.1 Kinds of business activity for receipt**

- When the farmer is receiving payment for sales/selling produce ✓
- When payment is received for services rendered by the farmer/farm ✓
- When payment from a debtor is received ✓
- When contributions or donations are received ✓
- Renting of equipment/tractor/harvester ✓
- Any transaction whereby money/goods are received ✓

(Any 4) (4)

3.1.2 Two periods and reasons for high cash sales:

- October to December ✓
- April to June ✓

(2)

3.1.3 Factors influencing demand

- Price of the product /price expectation of the product ✓
- Buying power of the consumer /income of consumers/bonuses ✓
- Price of competitive/related/ substitute products ✓
- Consumer preferences/taste /fashion preferences ✓
- Variety of products available ✓
- Festive periods/holidays/festive season ✓
- Breeding season/weaning season ✓
- Complimented products ✓
- Size of the market/number of consumers ✓

(Any 3) (3)

- 3.2.1 **Two human resources**
- Labour ✓
 - Management ✓
- (2)
- 3.2.2 **Identify resource that depreciates**
- Machinery ✓
- (1)
- 3.2.3 **Two resources that appreciate**
- Buildings ✓
 - Land ✓
- (2)
- AND**
- Land value increase with time ✓
 - Higher demand for land and buildings ✓
 - Decreasing availability (supply) of land ✓
- (Any 1) (1)
- 3.2.4 **Source suitable for working capital**
- Own savings ✓
- (1)
- 3.3.1 **Farm records and information kept in each:**
- Performance records**
- Information on amount ✓
 - Exhibition/show records ✓
 - And quality of product that is produced by an animal in a given period ✓
 - Calving/lambing percentage/rate ✓
 - Growth records ✓
- (Any 1)
- Sales records**
- Quantities of items sold ✓
 - The buyer ✓
 - Date ✓
 - Time ✓
 - Price ✓
 - VAT ✓
- (Any 1)
- Mortality records**
- Cause of death ✓
 - Age of animal ✓
 - Time and date died ✓
 - Number of animals that died ✓
 - Observable signs/observations ✓
- (Any 1)
- Feeding information**
- Type of feed/pasture ✓
 - Composition of feed ✓
 - Consumption rate ✓
 - Storage period ✓
 - Wastages ✓
 - Costs of feed
 - Effect on performance of animal ✓
- (Any 1) (4)

3.3.2 Information important in management of diseases

- Deaths and mortalities records ✓
 - Medication records ✓
 - Performance records ✓
 - Feed information ✓
- (Any 1) (1)

3.4.1 Credit items:

- Farm house ✓
 - Farm car/ vehicle ✓
 - Farm produce ✓
- (3)

3.4.2 Total value of credit:

- R28 000,00 + R9 000,00 + R5 372,00 ✓ = R42 372,00 ✓
- (2)

3.4.3 Net Profit:

- R462 575,00 – R372 123,00 ✓ = R90 452,00 ✓
- (2)

3.5.1 Gross Margin for Enterprise A:

- GM = Returns – Variable Costs
- GM = R39 011,00 – (R8 034,66 + R19 151,13 + R4 916,45) ✓
- = R39 011,00 – R32 102,24 ✓
- = R6 908,76 ✓

OR

- Variable Costs = R8 034,66 + R19 151,13 + R4 916,45
 - = R32 102,24 ✓
 - GM = R39 011,00 – R32 102,24 ✓
 - = R6 908,76 ✓
- (3)

Gross Margin for Enterprise B:

- GM = Returns – Variable Costs
- GM = R37 361,00 – (R22 304,00 + R6 228,27) ✓
- = R37 361,00 – R28 532,27 ✓
- = R8 828,73 ✓

OR

- Variable costs = R22 304,00 + R6 228,27
 - = R28 532,27 ✓
 - GM = R37 361,00 – R28 532,27 ✓
 - = R8 828,73 ✓
- (3)

3.5.2 Most profitable per hectare

- Enterprise A
 - $\frac{\text{Profit}}{\text{ha}} = \frac{6\,908,67}{10} \checkmark$
 - = R690,87 ✓
 - Enterprise B
 - $\frac{\text{Profit}}{\text{ha}} = \frac{8\,828,73}{15} \checkmark$
 - = R588,58 ✓
 - Most profitable enterprise per hectare is Enterprise A ✓
- (5)

3.6 **Cash flow budget:**

- Budget for the daily flow of cash into or out of the account ✓✓ (2)

Maintenance budget:

- Budget done for the maintenance of assets/equipment/structure ✓✓ (2)

3.7.1 **SOLOMON BALANCE SHEET AT 31 MARCH 2009**

ASSETS ITEMS	VALUE	LIABILITIES ITEMS	VALUE
Harvested crops	R146 000,00	Owed to NPK fertiliser company	R78 032,00
Farm tractor owned	R186 000,00	Due to be paid to farm chemicals company	R33 702,00
Crop processing machinery	R725 000,00	Debt on machinery repairs	R12 691,00
Balance at bank	R109 004,00	Cooperative account	R250 000,00
Livestock on the farm	R400 950,00	Veterinary account	R28 000,00
	✓		✓
		SUBTOTAL	402425,00✓
		NET CAPITAL	1164529,00✓
TOTAL	<u>R1566 954,00</u> ✓	TOTAL	<u>R1566 954,00</u> ✓

Balance sheet**Score sheet:**

- Calculating Net Capital = 1
 - Correct entering of assets in column = 1
 - Correct calculating of assets = 1
 - Correct entering of liabilities in column = 1
 - Correct calculating of liabilities = 1
 - Balanced values of assets and liabilities (balanced sheet) = 1
- (6)

3.7.2 **Item whose value may drop if it is not stored or processed well:**

- Harvested crops ✓ (1)
- [50]**

QUESTION 4: HARVESTING, VALUE-ADDING, MARKETING, AGRI-TOURISM AND INDUSTRY**4.1.1 Three advantages of bulk storage facilities**

- Cheaper per unit ✓
- Less labour/automated ✓
- Better control of pests ✓
- Faster to handle ✓
- Lower risks ✓
- Mechanised ✓

(Any 3) (3)

4.1.2 Two methods of harvesting

- By means of hands/manually/handpicking. ✓
- By machinery/mechanically. ✓

(2)

4.1.3 Three purposes for which harvested crops can be used

- Feeding human beings ✓
- Feeding livestock ✓
- For marketing/Selling/Income ✓
- To be used as raw materials/To make a new product ✓
- For processing ✓
- Decoration ✓
- Clothing ✓

(Any 3) (3)

4.2.1 Important reasons of doing market research

- To know and understand your market ✓
- To know and understand your competition/competitors ✓
- To know and understand your consumer trends ✓
- To be able to project potential sales volume ✓
- To predict the profitability/income the enterprise/budgeting purposes ✓
- To be able to predict the price ✓

(Any 4) (4)

4.2.2 One type of competition

- Pure/ perfect/competitive ✓
- Monopolistic ✓
- Oligopoly ✓
- Monopoly ✓

(Any 1) (1)

4.3.1 Condition of the product after harvesting.

- The product should not be contaminated/Free of foreign objects ✓
- It should be of high quality ✓
- Kept under ideal conditions ✓
- Must be at the correct ripeness/readiness/maturity /correct moisture ✓
- Comply with the market requirements ✓

(Any 3) (3)

4.3.2 Handling of machinery and hygiene

- Machine does not contaminated the produce✓
- Machine does not damage the produce ✓
- Calibration of the machine/correct handling of machine✓
- Clean the machine✓

(Any 2) (2)

4.3.3 O.H.S Act in processing plant

- Wear protective clothing✓
- Provide first aid kit✓
- Train staff on handling of machinery✓
- Explain/train staff on safety rules applicable in the processing unit✓
- Teach staff on own responsibility for safety✓
- Clean place regularly✓
- Identify/indicate hazardous areas✓
- Tidy place/No objects lying around✓

(Any 3) (3)

4.4.1 Roles of wholesaler

- To transfer goods from producers to retailers✓
- To buy produce/product from farmers✓

(Any 1) (1)

4.4.2 Role of cooperatives

- To provide different services to the farmer✓
- To be an agent/sell/market produce/product for farmers✓
- Provide production commodities ✓
- To provide information to farmers✓

(Any 1) (1)

4.4.3 Role of processors

- To transform the commodities either partly or completely into value added form/process agricultural product/Add value to agricultural product ✓

(1)

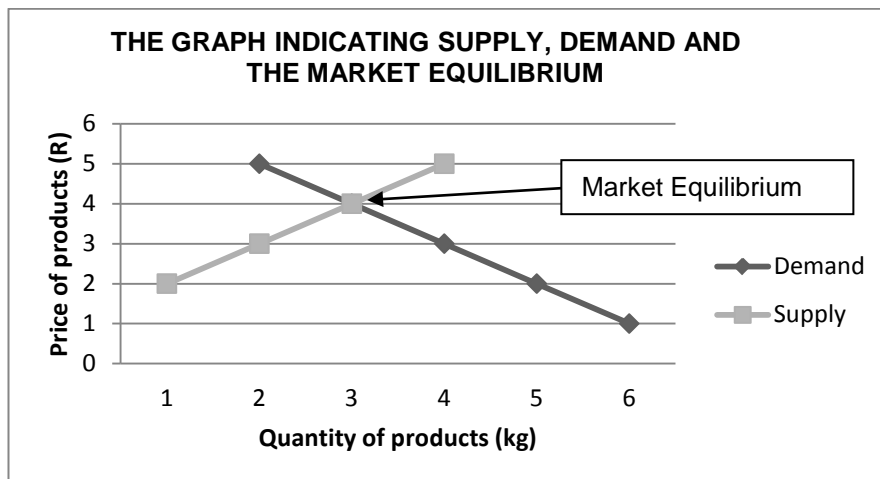
4.4.4 Role of retailers

- Present the commodity to the consumer in the manner that the consumer desires and will pay for it. ✓
- Sell agricultural products to consumers✓

(Any 1) (1)

4.5 **Supply and demand**

4.5.1

**RUBRIC**

Correct demand graph✓

Correct supply graph✓

Labelling of graphs✓

Market equilibrium label✓

(4)

4.5.2 **Effect of price on marketing strategy**

- The higher the price the more product one will want to sell✓
- The lower the price the less product one wants to sell✓
- Lower price will tend to keep product on farm/from market to sell when price is higher✓
- Low price leads to search for different markets/opportunities ✓ (Any 2) (2)

4.6.1 **Arrange to form a market chain**

- Farm shed ✓ → Local packaging house✓ → Municipality open market✓ → School kitchen✓ (4)

4.6.2 **Aspects to consider for best possible condition**

- Transport as soon as possible after harvesting✓
- Correct storage✓
- Keep produce cool during transport✓
- Pack in the correct container/ensure no damaging of produce✓
- Transport overnight✓
- Make use of faster transport like airfreight✓
- Prevent contamination✓ (Any 4) (4)

4.7.1 **The concept explained by the case study**

- Agri - tourism✓ (1)

4.7.2 **Names of and differentiation between the two types of tourists who were present at the agri-expo.**

- International tourists✓ – foreigners from other countries who are visiting the country for their interest's sake. ✓
- Domestic tourists✓ – people within the country visiting other part of the country for the sake of their interest. ✓ (4)

4.7.3 Four benefits of an agricultural EXPO

- Introduce agricultural products to the public✓
- Awareness of the different type of products to the consumer✓
- Set high standards/ Show-off of your animals/✓
- Different stud competitions to give direction to breeding plans ✓
- Marketing of products ✓
- Enhance Agri-tourism/Attract tourists✓
- Generate capital✓
- Job opportunities✓
- Establish good relationships between producers and consumers ✓(Any 4) (4)

4.8 TWO management functions

- Planning ✓
 - Organising✓
 - Coordination ✓
 - Decision making ✓
 - Motivation ✓
 - Leadership ✓
 - Control ✓
- (Any 2) (2)
[50]

TOTAL SECTION B: 150
GRAND TOTAL: 200