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## basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

# NATIONAL SENIOR CERTIFICATE

**GRADE 12** 

AGRICULTURAL MANAGEMENT PRACTICES

**NOVEMBER 2013** 

**MEMORANDUM** 

**MARKS: 200** 

This memorandum consists of 12 pages.

### **SECTION A**

### **QUESTION 1**

1.1 1.1.1 B ✓ ✓

1.1.2 C ✓ ✓

1.1.3 B ✓ ✓

1.1.4 A ✓ ✓

1.1.5 D ✓ ✓

1.1.6 B ✓ ✓

1.1.7 B ✓ ✓

1.1.8 A ✓✓

1.1.9 B ✓ ✓

1.1.10 C ✓✓

1.2 1.2.1 B ✓ ✓

1.2.2 I ✓ ✓

1.2.3 J ✓ ✓

1.2.4 D ✓✓

1.2.5 H ✓ ✓

1.2.6 G ✓ ✓

1.2.7 A ✓ ✓

1.2.8 L ✓ ✓

1.2.9 K ✓ ✓

1.2.10 F ✓✓

 $(10 \times 2)$  (20)

(10 x 2) (20)

**TOTAL SECTION A:** 

50

1.3	1.3.1	Resources ✓	
	1.3.2	Precision farming ✓	
	1.3.3	Optimum/ideal temperature ✓	
	1.3.4	Cheque ✓	
	1.3.5	Budget ✓	
	1.3.6	Source document ✓	
	1.3.7	Seasonal labourer ✓	
	1.3.8	Marketing ✓	
	1.3.9	Coordination/organising/planning ✓	
	1.3.10	Producer/commodity organisation/cooperative/banks/agricultural companies ✓ (10 x 1)	

### **SECTION B**

### QUESTION 2: ANIMAL AND CROP PRODUCTION

#### 2.1 2.1.1 Methods for reducing negative impact on veld

- Stick to/stock below the carrying capacity of the region ✓
- Leaving patches of natural vegetation where wild plants and animals can continue to grow alongside cultivated land √
- Follow a good rotational grazing program/erecting camps ✓
- Apply good veld/pasture management practises ✓
- Exterminate foreign/invasive plants/weeds/trees
- Control soil erosion ✓ (4) (Any 4)

### 2.1.2 Three factors influencing veld management programme

- Stocking rate will determine the number of animals ✓
- The rainfall will determine the period of stay/absence/resting in the camp during the different seasons ✓
- Stock intensity will determine the period of stay ✓
- Herd composition will influence the number of camps ✓
- Supplementary feeding will change the effect on natural grazing ✓
- Natural disasters√
- Veld type identification√
- Condition of veld√
- Choice of veld programme√
- Camp outlay/number of camp√
- Different type of animals (type of grazers) ✓
- Capital/Economic implication√
- Topography√
- Climate ✓ (Any 3) (3)

#### 2.2 2.2.1 Two causes of soil degradation

- Soil erosion√
- Salination ✓
- Acidification ✓
- Water logging ✓
- Pollution√
- Compacting of soils ✓
- Poor farming practices √
- Loss of soil fertility/organic material ✓ (Any 2) (2)

### 2.2.2 Two methods of rehabilitate soil

- Planting of vegetation ✓
- Correct carrying capacity of veld ✓
- Covering of soils ✓
- Adding agricultural lime/gypsum ✓
- Draining of salty soils ✓
- Soil contours ✓
- Minimum/No tillage ✓

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Adding of organic material ✓ (Any 2) Please turn over

### 2.2.3 Legislation on resource management The National Water Act ✓ The National Veld and Forest Fire Act ✓ Conservation of Agricultural Resources Act (CARA) ✓ The Sustainable Utilisation Of Agricultural Resource Bill < (Any 2) (2)Soil texture 2.3 2.3.1 The texture of the soil at a certain place (location) ✓ is a given/cannot be change/one cannot change sandy soil into clay soil ✓ (2) 2.3.2 Soil depth Soil has a certain depth√ (2)in a specific area ✓ that cannot be changed 2.3.3 Slope Slope is fixed√ (2)on a specific land/veld ✓ that cannot be changed 2.4 2.4.1 Sources of capital and their explanation Credit/Production loan√√ (4)Money borrowed from the bank/financial institution ✓✓ 2.4.2 Three problems of capital as production factor Capital is scarce ✓ Capital is expensive/high interest ✓ High risk ✓ Over capitalisation ✓ Under capitalisation ✓ Enough collateral/security for the loan ✓ Additional expenditure for capital redemption and interest ✓ (Any 3) (3)2.5 2.5.1 Benefits of precision farming Cost of producing the crop can be reduced/It increases the profit margin√ Risks of environmental pollution from agrochemicals decreases √ Improves the crop yield ✓ Provides information to make better management decision ✓ Provides more accurate farm records ✓ More accurate yield prediction√ Soil production potential can be determent ✓ Improved resource management ✓ (3)(Any 3)

	<ul> <li>Data collection ✓</li> <li>Data evaluation ✓</li> <li>Machine application/ Data capturing ✓</li> <li>Data capturing /Machine application ✓</li> </ul>	(4)
2.6 2.6.1	<ul> <li>The specific type worker</li> <li>A = Casual/contract worker/labourer ✓</li> <li>B = Permanent/Full time worker/labourer ✓</li> <li>C = Seasonal worker/labourer ✓</li> <li>D = Permanent/Full time worker/labourer ✓</li> </ul>	(4)
2.6.2	Worker with least job security  • A/Casual worker ✓  • C/seasonal worker ✓ (Any 1)	(1)
2.6.3	Difference between worker A and C Worker A  ■ Does only a specific work on the farm ✓  ■ And then leaves the farm ✓	
	<ul> <li>Worker C</li> <li>Works on the farm every season/do seasonally work ✓</li> <li>The same time every year on the farm ✓</li> </ul>	(4)
2.7 2.7.1	<ul> <li>Water for seedlings</li> <li>Yes/Rainfall is adequate/There is enough water available √</li> </ul>	(1)
2.7.2	<ul> <li>Water during ripening</li> <li>No/Rainfall is inadequate/There is not enough water available during ripening of the plant √</li> </ul>	(1)
2.7.3	<ul> <li>Possible solutions</li> <li>Irrigate/give water to plants ✓</li> <li>Cover soil with artificial/natural covering ✓</li> </ul>	(2)
2.7.4	<ul> <li>List problems of high rainfall</li> <li>Difficult to harvest product/Can't harvest the product√</li> <li>Harvesting is delayed/late on market</li> <li>Delayed preparation for next crop √</li> <li>Lower quality of product produced √</li> <li>Lower/lack of income√</li> <li>Increase possibility of diseases/rotting √ (Any 4)</li> </ul>	(4) <b>[50]</b>

## QUESTION 3: RECORDING, FINANCIAL STATEMENTS AND ENTREPRENEURSHIP

3.1	<ul><li>The</li><li>The</li><li>The</li></ul>	aformation on source document  date ✓ amount (mass/volume)✓ description of the transaction ✓ ne of company ✓ (Any 2)	(2)
3.2	<ul><li>It is</li></ul>	on of petty cash the cash/money ✓ t the farmer can use to pay for small expenses ✓	(2)
			(-)
3.3	3.3.1	<ul> <li>Definition of balance sheet</li> <li>Financial document that indicates the financial status/assets and liabilities of a farm ✓</li> <li>At a specific point in time/particular date ✓</li> </ul>	(2)
	3.3.2	<ul> <li>Net value</li> <li>The difference between the assets and liabilities/assets minus liabilities/It is the money remaining when all the debt is deducted from the total assets on the farm ✓</li> <li>At a specific time ✓</li> </ul>	(2)
	3.3.3	<ul> <li>(a) Long-term credit</li> <li>Used over 10–20 years ✓</li> <li>To buy fixed assets ✓</li> <li>For example land, buildings, fences, boreholes ✓</li> </ul>	(3)
		<ul> <li>(b) Medium-term credit</li> <li>Have a lifespan of 2 to 10 years ✓</li> <li>Used to buy movable assets ✓</li> <li>Such as tractor, implements, livestock ✓</li> </ul>	(3)

(c) Short-term creditUsed within 2 y

Used within 2 year period √

Used for trade expenses √

• Such as fertilizers, seeds, fuel ✓ (3)

3.4	3.4.1	<ul> <li>Four characteristics for an entrepreneur</li> <li>Knowledge of the enterprise ✓</li> <li>Have experience ✓</li> <li>Planning skills ✓</li> <li>Skilled labour/trained labourer ✓</li> <li>Business skills ✓</li> <li>Adapt to changing circumstances ✓</li> <li>Good personal/human relationships ✓</li> <li>Good organiser ✓</li> <li>Responsible ✓</li> <li>Communication skills ✓</li> <li>Risk taker ✓</li> <li>Reliable ✓</li> <li>(Any 4)</li> </ul>	(4)
	3.4.2	Three reasons for taking a risk  They want to work for themselves instead of others ✓ They prefer to take all business decisions themselves ✓ They want to keep the profit of their business ✓ They want to try out their own ideas ✓ (Any 3)	(3)
3.5	3.5.1	<ul> <li>Business description</li> <li>Vision and mission statement ✓</li> <li>Nature of the business ✓</li> </ul>	(2)
	3.5.2	Market analysis/overview  ■ Growth potential ✓	(1)
	3.5.3	Operational plan  • Facility plan ✓  • Administrative plan ✓	(2)
	3.5.4	Risk analysis  • Foreign exchange risk√  • Price and other risks√	(2)
	3.5.5	Financial plan  • Assumptions and definitions ✓	(1)

(4)

(2)

### 3.6 3.6.1 Calculations

(a) Total income

• R80 600,00 + R15 420,00 + R400,00 
$$\checkmark$$
  
= R96 420,00  $\checkmark$  (Only answer  $\checkmark$   $\checkmark$ ) (2)

(b) Total expenses

• R600,00 + R250,00 + R5 925,00 + R310,00 + R1 155,00 + R1 150,00 + R2 200,00 + R720,00 
$$\checkmark$$
 R12 310,00  $\checkmark$  (Only answer  $\checkmark\checkmark$ ) (2)

### 3.6.2 Evaluate this table for profit/loss

- The section worked at a profit ✓
- Profit/loss = total income total expenses
   = R96 420,00 R12 310,00√
- = R84 110.00√
- Because income is more than expenses√

### 3.7 Calculations

- 3.7.1 (a) 600 864 ✓
  - (b) 523 252 √
  - (c) 430 516 ✓
  - (d) 454 408 ✓
  - (e) 417 574 √

### 3.7.2 Month of loss and reason

- December√
- The total payments/expenditure are more than the total receipts/income for the month√

### 3.7.3 Two reasons for farm budget

- To determine the capital need ✓
- For control purposes√
- To determine the practicability of a decision√
- To determine the relative profitability of the alternatives/probable income and expenditure √

## QUESTION 4: HARVESTING, VALUE-ADDING, MARKETING, AGRITOURISM AND INDUSTRY

### 4.1 Advantages of processing for the consumer

- To increase the shelf/storage life of the product √
- To meet consumer taste √
- Consumer friendly ✓
- Out of season availability of products /food security ✓
- Increase the nutritional value √
- Easier packaging/handling of product ✓
- To shorten preparing/cooking time of the product ✓ (Any 4)

## 4.2 Disadvantages of storing agricultural products in small quantities

- Damaging of products is easier
- Handling of product more often/Increased labour costs/ labour intensive√
- Packaging material is more expensive in the long run ✓
- Pests can cause great damages √
- Difficult to move/transport greater volumes ✓
- Theft √
- Marketing is more difficult ✓

(Any 4) (4)

### 4.3 4.3.1 **Disadvantages of harvesting by hand**

- Very slow/takes a long time ✓
- Products not so clean ✓
- Only small areas can be harvested ✓
- Dependant on weather conditions ✓
- Theft √
- Labour intensive ✓
- Labour related issues ✓ (Any 4)

### 4.3.2 Problems labourer experienced

- Harsh weather conditions √
- Sunburn √
- Injuries √
- Long hours √
- Long walking distances ✓
- Little carrying capacity ✓
- Hard physical work ✓
- Poor working conditions √
- Disabilities √ (Any 4)

### 4.3.3 Improvement of working conditions

- Correct equipment to do the work better ✓
- Supply protective clothing to protect against harsh conditions√
- Apply mechanization to ease the work of labourers ✓
- Supply clean water to drink during working hours ✓
- Supply sunscreen to protect exposed skin areas ✓
- Supply shade if possible ✓
- Provide ablution facilities/housing ✓
- Transport ✓
- Training ✓
- Appropriate time management/time management ✓ (Any 5)

### 4.4 Differences between marketing channels

### √ for table with labels

Aspect	Fresh produce market	Contract marketing
Pricing	Great fluctuation in prices ✓	Smaller fluctuations in prices ✓
Product sold	<ul> <li>Not sure how many products will be sold√</li> </ul>	Contracted products     will be sold ✓
Income stability	<ul> <li>Income of farmer is instable √</li> </ul>	<ul> <li>Income of farmer is more stable √</li> </ul>
<ul> <li>Packaging</li> </ul>	<ul> <li>Cheaper √</li> </ul>	<ul> <li>More expensive ✓</li> </ul>
Quality control	Less strict quality controls ✓	More strict quality controls ✓

(Any 3 aspects) (7)

### 4.5 Methods of adding value meat

- Cut into the different cuts of meat ✓
- Smoking √
- Change into processed meat ✓
- Drying √
- Salting √
- Cooling √
- Precooking √
- Marinating of meat ✓
- Packaging √
- Aging of meat √ (Any 4)

4.6	4.6.1	Product information
4.D	4.D. I	Product Information

- Name/type of product ✓
- Mass/volume of product ✓
- Ingredients of the product √
- Nutritional values ✓
- Storage information ✓

(Any 3) (3)

(3)

### 4.6.2 Nutritional value

- Table ✓ with the nutritional value
- Value as mass/percentage of RDA ✓
- Arrange from highest to lowest order ✓

### 4.6.3 **Allergies**

- Any allergies that can be caused by the product must be indicated √
- That is not related to the product itself /that is added √ (2)

### 4.7 4.7.1 Reasons for changing farms into agritourism

- Livestock theft ✓
- Fluctuating meat prices ✓
- Higher income/more stable income/ earn foreign currency√
- To venture into agritourism/to attract tourists √
- Increased farm value √
- Diversification ✓
- Marketing/promotion/advertising of product/Niche market√ (3)

### 4.7.2 Reason for game farm to be tourist attraction

- Game is more attracting than farm animals ✓
- Most game farms have accommodation ✓
- Game farms are more natural than ordinary farms ✓
- Exotic game species √
- Hunting /Recreation ✓ (Any 2)

### 4.8 Evaluations and recommendations

- The income from stud animals is increasing in contrast to the income of the commercial animals that is declining √
- Put more emphasis on stud farming ✓
- There are too many animals on the farm/overgrazing occurs ✓
- Reduce the number of animals √
- Start a feedlot to reduce the number of animals on grazing√
- Find alternative markets for the commercial animals√
- Feed animals/supplementary feeding to increase the weekly mass gain√

(Any 5) (5) **[50]** 

ION D. 150

TOTAL SECTION B: 150 GRAND TOTAL: 200