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# basic education

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

NATIONAL SENIOR CERTIFICATE

**GRADE 12** 

AGRICULTURAL MANAGEMENT PRACTICES

-----

**FEBRUARY/MARCH 2016** 

**MEMORANDUM** 

**MARKS: 200** 

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# **SECTION A**

# **QUESTION 1**

$\begin{array}{c} \checkmark \checkmark \\ \checkmark \checkmark \end{array}$	(20)
	(20)
lective grazing $\checkmark$ tensive system $\checkmark$ hd $\checkmark$ erilising $\checkmark$ chanisation $\checkmark$ ort-term credit $\checkmark$ dget $\checkmark$ pply and demand $\checkmark$ inning $\checkmark$ operative $\checkmark$ (10 x 1)	(10) <b>50</b>
	$V \downarrow V \downarrow$

# SECTION B

QUEST	TION 2: PHYSICAL AND FINANCIAL PLANNING	
2.1.1	<ul> <li>FOUR effects of ill health on productivity</li> <li>Absenteeism from work ✓</li> <li>Loss of productive time during medical treatments ✓</li> <li>Work overload on healthy workers ✓</li> <li>Loss of experience ✓</li> <li>Increase in medical costs for the business ✓</li> <li>Lower profit margins ✓</li> </ul>	(4)
2.1.2	<ul> <li>The Unemployment Insurance Act, 2001 (Act 63 of 2001)</li> <li>It makes provision for the security of farm workers ✓</li> <li>When they become unemployed through illness, resignation, dismissal or retrenchment ✓</li> </ul>	(2)
2.2	<ul> <li>Items that must be included in a service contract</li> <li>The full name and address of the employer √</li> <li>The name and occupation of the employee √</li> <li>The date of commencement of services √</li> <li>Working day and working hours √</li> <li>Remuneration and overtime remuneration √</li> <li>Leave conditions √ (Any 5)</li> </ul>	(5)
2.3	<ul> <li>Functions of soil as a resource in agricultural production</li> <li>Medium for plant growth/provides anchorage to plants √</li> <li>Supplies mineral/elements to the plants √</li> <li>Keeps and supplies moisture to the plants √</li> <li>Habitat for beneficial and non- beneficial micro- organisms √</li> <li>It plays a recycling function for polluted water and air √ (Any 4)</li> </ul>	(4)
2.4.1	<ul> <li>Best methods of disposing chemical containers</li> <li>Incineration √</li> <li>Bury containers deep into the soil √</li> <li>Sending the containers back to the manufacturing company for reusing/ recycle√ (Any 2)</li> </ul>	(2)
2.4.2	<ul> <li>Effects of incorrect application of chemicals on soil and environment</li> <li>Soil degradation ✓</li> <li>Environmental pollution ✓</li> <li>Kills soil organisms ✓</li> <li>Underground water pollution ✓</li> <li>Surface water pollution ✓</li> <li>Drastic change in the soil reaction ✓ (Any 4)</li> </ul>	(4)

<ul> <li>Soil quality</li> <li>Fertility√</li> <li>Water holding capacity √</li> <li>Physical activity √</li> <li>Ability to erode √</li> </ul>	(4 my 3)	(2)
	(Ally 3)	(3)
- By shortening the slope length the rate and quantity of water flow reduced $\checkmark$	w will be	
<ul> <li>Changes the angle of running water to be slower ✓</li> </ul>		(2)
<ul> <li>Advantages of using GPS in farm operations</li> <li>Saving of inputs ✓</li> <li>Application of input where it is required ✓</li> <li>Saving money ✓</li> </ul>		
<ul> <li>Optimal resource utilisation ✓</li> </ul>	(Any 3)	(3)
<ul> <li>The abbreviation GPS in full</li> <li>Global Positioning System ✓</li> </ul>		(1)
Farming system that utilises GPS Precision farming ✓		(1)
<ul> <li>Definition of the term grid cell</li> <li>Is the division of an agricultural field into small units√</li> <li>For the purposes of soil sampling and soil analysis √</li> </ul>		(2)
<ul> <li>Type of data that can be obtained from grid cell</li> <li>pH status ✓</li> <li>nutrient status of the soil ✓</li> <li>Soil form/series √</li> </ul>		
<ul> <li>Soil type ✓</li> </ul>	(Any 2)	(2)
<ul> <li>Always wear appropriate protective clothing √</li> <li>Never touch a moving part of a machine √</li> <li>Make sure people are safe when coupling implements √</li> <li>Make sure gears, pulleys are protected by a safety guard √</li> <li>Only one person should be allowed on the tractor/implement √</li> </ul>	·	(4)
	<ul> <li>Fertility√</li> <li>Water holding capacity √</li> <li>Physical activity √</li> <li>Ability to erode√</li> <li>Functions of contours in relation to control of soil erosion</li> <li>By shortening the slope length the rate and quantity of water flor reduced √</li> <li>Changes the angle of running water to be slower √</li> <li>Advantages of using GPS in farm operations</li> <li>Saving of inputs √</li> <li>Application of input where it is required √</li> <li>Saving money √</li> <li>Optimal resource utilisation √</li> <li>The abbreviation GPS in full</li> <li>Global Positioning System √</li> <li>Farming system that utilises GPS</li> <li>Precision farming √</li> <li>Definition of the term grid cell</li> <li>Is the division of an agricultural field into small units √</li> <li>For the purposes of soil sampling and soil analysis √</li> <li>Type of data that can be obtained from grid cell</li> <li>pH status √</li> <li>nutrient status of the soil √</li> <li>Soil form/series √</li> <li>Soil type √</li> <li>Precautions to adhere to when using farm implements and macl</li> <li>Always wear appropriate protective clothing √</li> <li>Never touch a moving part of a machine √</li> <li>Make sure people are safe when coupling implements √</li> <li>Make sure gears, pulleys are protected by a safety guard √</li> </ul>	<ul> <li>Fertility<sup>2</sup></li> <li>Water holding capacity <sup>2</sup></li> <li>Physical activity <sup>3</sup></li> <li>Ability to erode<sup>3</sup> (Any 3)</li> <li>Functions of contours in relation to control of soil erosion</li> <li>By shortening the slope length the rate and quantity of water flow will be reduced <sup>3</sup></li> <li>Changes the angle of running water to be slower <sup>3</sup></li> <li>Advantages of using GPS in farm operations</li> <li>Saving of inputs <sup>3</sup></li> <li>Application of input where it is required <sup>3</sup></li> <li>Saving money <sup>3</sup></li> <li>Optimal resource utilisation <sup>3</sup> (Any 3)</li> <li>The abbreviation GPS in full</li> <li>Global Positioning System <sup>3</sup></li> <li>Farming system that utilises GPS</li> <li>Precision farming <sup>3</sup></li> <li>Definition of the term grid cell</li> <li>Is the division of an agricultural field into small units<sup>3</sup></li> <li>For the purposes of soil sampling and soil analysis <sup>3</sup></li> <li>Type of data that can be obtained from grid cell</li> <li>pH status <sup>3</sup></li> <li>Soil form/series <sup>3</sup></li> <li>Soil form/series <sup>3</sup></li> <li>Soil type <sup>3</sup> (Any 2)</li> <li>Precautions to adhere to when using farm implements and machinery</li> <li>Always wear appropriate protective clothing <sup>3</sup></li> <li>Never touch a moving part of a machine <sup>3</sup></li> <li>Make sure geens, pulleys are protected by a safety guard <sup>3</sup></li> <li>Only one person should be allowed on the tractor/implement <sup>4</sup></li> </ul>

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2.9.1	<ul> <li>THREE primary aims of a budget for a farm business</li> <li>To set limits on the amounts to be used for farming activities ✓</li> <li>To obtain credit on time ✓</li> <li>To coordinate resources and money spent as planned ✓</li> <li>To help determine whether to expand the business or not ✓</li> </ul>	(Any 3)	(3)
2.9.2	<ul> <li>Advantages of a cash flow budget</li> <li>Provides a guideline for farming expenses ✓</li> <li>Informs the source of money ✓</li> <li>Prevents impulsive purchases by the farmer ✓</li> <li>Informs how much money is available each week or month ✓</li> </ul>		(4)
2.10	<ul> <li>Sources of information available to the farmer</li> <li>Websites ✓</li> <li>Publications from commodity associations ✓</li> <li>Agricultural extension services ✓</li> <li>Farmers' information days ✓</li> <li>Publications from financial institutions ✓</li> <li>News media (newspapers, radio or television) ✓</li> </ul>	(Any 4)	(4) <b>[50]</b>
QUEST	ION 3: ENTREPRENEURSHIP, RECORDING, MARKETING AND PLANNING	BUSINESS	
3.1.1	<ul> <li>THREE reasons for developing a business plan</li> <li>To test the feasibility and economic viability of the business idea</li> <li>To determine your financial needs √</li> <li>To guide daily operations √</li> <li>To ensure effective business management √</li> <li>To allow you to foresee problems √</li> </ul>	$\checkmark$	

	<ul> <li>To test the leasibility and economic viability of the busiless idea √</li> <li>To determine your financial needs √</li> <li>To guide daily operations √</li> <li>To ensure effective business management √</li> <li>To allow you to foresee problems √</li> <li>To gain knowledge about marketing opportunities √</li> <li>To reposition the business √ (Any 3)</li> </ul>	(3)
3.1.2	<ul> <li>TWO internal factors and TWO external factors from the SWOT analysis <ul> <li>(a) Internal factors</li> <li>Strengths √</li> <li>Weaknesses √</li> </ul> </li> </ul>	(2)
	<ul> <li>(b) External factors</li> <li>Opportunities ✓</li> <li>Threats ✓</li> </ul>	(2)
3.2.1	<ul> <li>Definition of entrepreneurship</li> <li>It is the process of discovering, evaluating and exploiting opportunities √</li> <li>To start and grow a new business √</li> </ul>	(2)

To start and grow a new business  $\checkmark$ •

3.2.2	<ul> <li>THREE characteristics of entrepreneurs</li> <li>Strong self- belief/confidence ✓</li> <li>Takes risks ✓</li> <li>Initiates things/self- starter ✓</li> <li>Good people skills ✓</li> <li>Handle responsibilities ✓</li> <li>Hard worker ✓</li> <li>Visionary ✓</li> <li>See opportunities ✓</li> <li>Decision maker ✓</li> <li>Reliable ✓</li> <li>Energetic ✓</li> </ul>	(3)
	<ul> <li>Management skills √ (Any 3)</li> </ul>	(3)
3.3.1	<ul> <li>Primary business</li> <li>Producing an agricultural raw product √</li> </ul>	(1)
3.3.2	<ul> <li>Secondary business</li> <li>Processing of the agricultural raw product on the farm into another product √</li> <li>Processing the raw product to make it more acceptable for the consumer√ (Any 1)</li> </ul>	(1)
3.3.3	<ul> <li>Tertiary business</li> <li>Service delivery to tourists/customers visiting the farm ✓</li> </ul>	(1)
3.4	<ul> <li>Aim of keeping records by a farmer</li> <li>Setting objectives for the enterprises ✓</li> <li>Planning and implementing farming activities ✓</li> <li>Planning for the future ✓</li> <li>Creating a data base (history) for the farm ✓ (Any 2)</li> </ul>	(2)
3.5	Table of advantages and disadvantages of using computersAdvantagesDisadvantages	
	<ul> <li>Easier access to information ✓</li> <li>Calculations more accurately done ✓</li> <li>More information can be stored in less space ✓</li> <li>Comparisons can be made easier ✓</li> <li>Can make use of trusted and tested</li> <li>The farmer must be computer literate ✓</li> <li>In the case of electricity outage, records are not accessible ✓</li> <li>It is expensive to buy</li> </ul>	

programs for production, financial and

Transfer of information is easier ✓

physical records ✓

•

(Any 2)

(4)

computers ✓

on a regular basis √

•

(Any 2) |•

Technology must be updated

It takes time to update data  $\checkmark$ 

3.6	<ul> <li>Information about each farm worker</li> <li>The farm worker's name and ID number √</li> <li>Personal information √</li> <li>Date of employment √</li> <li>Presence/Absence from work √</li> <li>Annual/Sick leave √</li> <li>Working hours and over- time √</li> <li>Contract of employment √</li> </ul>	
	<ul> <li>In Natura' payment √ (Any 3)</li> </ul>	(3)
3.7	<ul> <li>Aspects in a log book for all farm machinery and implements</li> <li>Date of purchase √</li> <li>Price of the item purchased √</li> <li>Annual depreciation on items bought √</li> <li>Quantity of each item bought, lost, replaced, and stock √ (Any 2)</li> </ul>	(2)
3.8.1	<ul> <li>An inventory</li> <li>An inventory form is used to provide the farmer with a complete list of all assets belonging to the farming enterprise √</li> </ul>	(1)
3.8.2	<ul> <li>A cheque</li> <li>A cheque is used to withdraw cash from the bank or it can be used to pay for services/goods rendered √</li> </ul>	(1)
3.8.3	<ul> <li>An invoice</li> <li>An invoice is used to document the sale of goods √</li> </ul>	(1)

# 3.9 TRIAL BALANCE OF VEGETABLE FARMING COOPERATIVE ON 31 OCTOBER 2014

		Debit		Credit		
3.9.1	Capital			250 000	<u>00</u> √	(1)
3.9.2	Cash withdrawals	45 000	<u>00</u> √			(1)
	Vehicles	88 000	00			
	Trading stock	176 000	00			
	Debit orders	69 000	00			
	Sales			890 000	00	
3.9.3	Rent income			36 000	<u>00</u> √	(1)
	Interest on income			7 000	00	
	Cost of sales	550 000	00			
	Salaries	225 000	00			
3.9.4	Bank charges	2 000	<u>00</u> √			(1)
	Stationery	13 500	00			
	Interest on loan	4 000	00			
	Water and electricity	7 000	00			
	Advertising	2 000	00			
3.9.5	TOTAL	<u>1 183 000</u>	<u>00</u> √	<u>1 183 000</u>	<u>00</u> √	(2)

3.10	<ul> <li>Factors which determine the economic viability of a farm</li> <li>Output per season √</li> <li>Price obtained per unit √</li> <li>Costs of inputs √</li> </ul>	(Any 2)	(2)
3.11	<ul> <li>Wholesalers and commission agents</li> <li>Wholesalers transfer goods from producers to retailers by quantities of product as large as possible at lower prices ✓</li> <li>Commission agents operate on behalf of wholesalers/product certain percentage as commission ✓</li> </ul>	-	(2)
3.12.1	<ul> <li>Marketing system</li> <li>Free marketing ✓</li> </ul>		(1)
3.12.2	<ul> <li>Marketing aspect</li> <li>C ✓</li> <li>Reasons</li> <li>The most intermediaries are used ✓</li> <li>The product has been value added ✓</li> </ul>		(3)
3.12.3	<ul> <li>Marketing channel</li> <li>Farm stall marketing √</li> </ul>		(1)
3.13	<ul> <li>Methods of setting prices</li> <li>Cost/Pricing plus % profit √</li> <li>Competition oriented/going rate pricing/Market oriented pricing √</li> <li>Cost plus two times labour/labour plus two times cost √</li> <li>Supply and demand √</li> <li>Break – even – point</li> </ul>	(Any 2)	(2)
3.14.1	<ul> <li>Calculate gross income</li> <li>Gross income = 4 ton x 10 ha x R3 000/ton √ = R120 000 √</li> </ul>		(2)
3.14.2	• Yield break even point = $\frac{(FC+VC)}{SP}$ • Yield break even point = $\frac{(R4\ 000+R2\ 000)}{R3\ 000} \checkmark$ = 2 ton/ha $\checkmark$		(2) <b>[50]</b>

## QUESTION 4: HARVESTING, PROCESSING, AGRITOURISM AND MANAGEMENT

## 4.1 Importance moisture content at harvesting

- Moisture contributes to mass according to which payment is done  $\checkmark$
- High moisture content cause produce to be susceptible to fungal attack  $\checkmark$
- High moisture content promotes rotting  $\checkmark$  (Any 2) (2)

## 4.2. Tabulate advantages and disadvantages of storing perishable crops

	Advantages of storing perishable cropsDisadvantages of perishable crops				oring	
4.2.1	Products keep longer √	4.2.1	It is expensive √			
4.2.2	Quality will keep for a	4.2.2	Very expensive √			
	longer time √		Change in taste ✓	(Any 1)	(4)	

## 4.3.1 **Meaning of the term value adding**

Means taking a raw material and processing it ✓

OR

Adding something to it to change raw material into a saleable item that would be purchased by a specific group of customers √ (2)

#### 4.3.2 Advantages of value adding in agribusiness

- Increase the prize you get for your raw material/higher income ✓
- Available throughout the year ✓
- Longer shelf life ✓
- You are master of your own destiny/determine the income ✓
- Creates goodwill value ✓
- Job creation ✓

## 4.3.3 Financial sustainability of a value added farming enterprise

- The farmer identifies a gap in the market and through processing value is added to a raw product  $\checkmark$
- The new value added product can generate an income which may contribute to the financial viability of the farm √ (2)

## 4.4.1 Conditions under which microbes will not survive

- Environment which is dry  $\checkmark$
- Where temperatures are low (cold) ✓
- Where temperatures are very high (heat) ✓
- Where there is no oxygen ✓
- Where chemicals are present  $\checkmark$  (Any 4)

## 4.4.2 Food products from fermentation

- Yeast products like bread/wine/beer√
- Vinegar√
- Cheese√
- Yogurt

(Any 2)

(2)

(4)

(2)

(Any 2)

(1)

## 4.5.1 Exporting

 When products from one country is moved/sold to other countries for consumption or use. ✓

# 4.5.2 Liability on export products

- Latent defects√
- Faulty descriptions√
- Manufacturing defects√
- Faulty shipments√
- Inappropriateness of the article for the purpose  $\checkmark$  (Any 2) (2)

## 4.6 **Rules and regulations to be followed during the transport of animals**

- A non-slip floor (of truck or trailer) ✓ to prevent animals from falling and hurting themselves ✓
- Adequate sidewalls of truck or trailer  $\checkmark$  to prevent animals from falling from vehicle  $\checkmark$
- Height between decks in multi-tier vehicles should be adequate ✓ to enable larger animals to stand fully erect and to allow free flow of air ✓
- Vehicle must be spacious ✓ to ensure the safety of the animals during transportation ✓ (8)

## 4.7 Role of local communities in agritourism

## 4.7.1 **Empowerment of community**

- Community develops its own eco-attraction and provides employment for the whole community  $\checkmark$
- Money spent by tourists filter through to the whole community  $\checkmark$

## 4.7.2 Involvement by community members:

- Community members must work hand in hand with agritourism operators√
- They must conserve the environment by creating an area which is safe and attractive to tourists √

## 4.7.3 Awareness of agritourism

- Individuals become environmentally sensitive and try to preserve indigenous plants  $\checkmark$
- Work towards development of land for agritourism, selling of local craft to tourists and make the area a friendly one ✓

## 4.8.1 **Steps a farmer has to implement for efficient control**

- Setting standards ✓
- Measuring and evaluating achievements ✓
- Measurements plus review of variances ✓
- Correction to achieve standards  $\checkmark$

(4)

(2)

(2)

(2)

4.8.2	<ul> <li>Advantages to the farmer through the application of control measures</li> <li>Deviation from planned activity brought to the attention of the manager √</li> <li>Time and money are saved through speedy intervention √</li> <li>Any problem which occur can be attended to in due time √</li> </ul>			
	<ul> <li>Production process is not interrupted ✓</li> </ul>	(Any 3)	(3)	
4.9	<ul> <li>Reasons for re-planning an enterprise in the farm business</li> <li>Changes in technological and biological relationships √</li> <li>Changes in the pattern of resources √</li> <li>Labourers resign √</li> <li>New inputs in the market √</li> <li>Changes in prices √</li> <li>Prices of certain inputs rise, e.g. fertiliser √</li> <li>Risks and uncertainties √</li> <li>Changes in weather patterns √</li> </ul>	(Any 5)	(5)	
4.10	<ul> <li>Ways that farm business promote well-being of workers</li> <li>By being involved in social community programmes ✓</li> <li>By implementing skills development programmes in the work</li> <li>Promoting safety in the workplace ✓</li> <li>Providing learnerships for employees ✓</li> <li>Giving bursaries to children of their employees ✓</li> </ul>		(3) <b>[50]</b>	
	TOTAL	SECTION B:	150	

# GRAND TOTAL: 200