



basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

**NATIONAL
SENIOR CERTIFICATE**

GRADE 12

AGRICULTURAL MANAGEMENT PRACTICES

NOVEMBER 2015 (R)

MARKS: 200

TIME: 3 hours

This question paper consists of 14 pages.

INSTRUCTIONS AND INFORMATION

1. This question paper consists of TWO sections.
2. Answer ALL the questions in the ANSWER BOOK.
3. Read the questions carefully and answer only what is asked.
4. Number the answers correctly according to the numbering system used in this question paper.
5. You may use a non-programmable calculator.
6. Round off ALL calculations to TWO decimal places, unless stated otherwise.
7. Write neatly and legibly.

SECTION A**QUESTION 1**

- 1.1 Various options are provided as possible answers to the following questions. Choose the answer and write only the letter (A–D) next to the question number (1.1.1–1.1.10) in the ANSWER BOOK, for example 1.1.11 A.
- 1.1.1 The intensity of rainfall will primarily have an influence on soil ...
- A degradation.
 - B fertility.
 - C texture.
 - D slope.
- 1.1.2 The planting of different types of crops one after the other in the same field:
- A Monoculture
 - B Crop rotation
 - C Horticulture
 - D Mixed cropping
- 1.1.3 Ploughing across the slope rather than along the slope is called ...
- A forming contour banks.
 - B unsustainable ploughing.
 - C ploughing that leads to soil erosion.
 - D contour ploughing.
- 1.1.4 The law of demand for products states that the ...
- A higher the price, the more products will be supplied.
 - B lower the price, the more products will be supplied.
 - C higher the price, the more products will be bought.
 - D lower the price, the more products will be bought.
- 1.1.5 The first step in the strategic planning process:
- A Define the situation.
 - B Evaluate the plan.
 - C Set goals and objectives for the business.
 - D Develop the vision and mission statements.

- 1.1.6 The characteristic that makes land a sound investment for the farmer:
- A The average rainfall in the area
 - B The distance from the market
 - C The land's production potential
 - D Market prices of produce
- 1.1.7 The net worth of a business is defined as the total ...
- A assets of the business minus the liabilities.
 - B liabilities of the business minus the assets.
 - C expenditure of the business minus the income.
 - D income of the business minus the expenditure.
- 1.1.8 An increased scarcity of farm labourers may be the result of ...
- A political stability.
 - B less attractive working conditions.
 - C a lack of skills.
 - D effective labour management.
- 1.1.9 The main reason for the cooling of agricultural products during distribution to various market outlets, is to ...
- A reduce its weight for easier transport.
 - B reduce its volume for easier transport.
 - C improve its taste for consumers.
 - D prevent it from perishing.
- 1.1.10 The legislation that regulates information on ingredients and nutritional values:
- A Standards Act, 1962 (Act 33 of 1962)
 - B Foodstuffs, Cosmetics and Disinfectants Act, 1972 (Act 54 of 1972)
 - C Agricultural Product Standards Act, 1990 (Act 119 of 1990)
 - D Regulations relating to the Labelling and Advertising of Foodstuffs (R146 of 2010) (10 x 2) (20)

- 1.2 Choose a description from COLUMN B that matches the term in COLUMN A. Write only the letter (A–L) next to the question number (1.2.1–1.2.10) in the ANSWER BOOK, for example 1.2.11 M. Each description in COLUMN B may be used only ONCE.

COLUMN A		COLUMN B	
1.2.1	Mechanisation	A	the process where the employer, employee and a union representative discuss an incident where an employee was drunk at the workplace, with the aim of reprimanding the employee
1.2.2	Natural resources		
1.2.3	Casual labourers		
1.2.4	Advertising	B	a manager uses a clock and time card for labourers
1.2.5	Computers		
1.2.6	Control	C	used to determine the projected movement of funds in an enterprise
1.2.7	Precision farming	D	technology used to make payments over the Internet
1.2.8	Grading system	E	soil, rainfall, climate and water
1.2.9	Disciplinary action	F	labour, capital and information
1.2.10	Cash-flow budget	G	an agricultural marketing function aimed at promoting farm produce
		H	budget for income and expenditure to indicate the profit or loss of an enterprise
		I	the worker is only appointed to clean the farm dam and then leaves the farm
		J	the farming system where the farmer uses modern technology, such as GIS, for land surveys
		K	the grouping of farm products according to quality
		L	switching from animal-driven implements to engine-driven implements

(10 x 2) (20)

- 1.3 Give the CORRECT agricultural term for each of the following descriptions. Write only the term next to the question number (1.3.1–1.3.10) in the ANSWER BOOK, for example 1.3.11 Recording.
- 1.3.1 Capital that is required for investing in assets such as vehicles, equipment, breeding stock, dairy herds and machinery
- 1.3.2 The cost of labour which increases with every service rendered
- 1.3.3 The person who organises, makes decisions and takes the greater risk in a business
- 1.3.4 An autonomous association of persons united voluntarily to meet their social, economic and cultural needs and aspirations through a jointly owned and democratically controlled enterprise
- 1.3.5 The funds contributed to the farming business by the owner
- 1.3.6 The physical movement of farm products from the production site to points where consumers are located
- 1.3.7 The system whereby products of producers are placed together and handled in bulk by cooperatives
- 1.3.8 The amount of money that a financial institution charges for lending capital
- 1.3.9 All direct and indirect costs that the producer incurs to market farm products
- 1.3.10 The sum of the income from all the cash crops and livestock enterprises on the farm plus sundry farm income (10 x 1) (10)
- TOTAL SECTION A: 50**

SECTION B**QUESTION 2: PHYSICAL AND FINANCIAL PLANNING**

Start this question on a **NEW** page.

2.1 Temperature is an important factor of climate. It can directly or indirectly restrict agricultural production.

Describe FIVE ways in which temperature can restrict agricultural production. (5)

2.2 Discuss the influence of slope on crop production. (4)

2.3 Explain the effect of soil depth on crop production. (4)

2.4 State THREE factors that could cause a change in the composition of plant species that grow in the veld. (3)

2.5 Redraw the table below and complete it with the different forms of credit that can be given to farmers. Use the following THREE examples of credit to complete the table:

- Purchase of machinery
- Purchase of land
- Purchase of fertilisers

TYPES OF CREDIT FOR FARMERS	LONG-TERM CREDIT	MEDIUM-TERM CREDIT	SHORT-TERM CREDIT
Duration	(1)	(1)	(1)
Credit use	(1)	(1)	(1)

(6)

2.6 The pictures below represent different production methods in farming.



A



B

2.6.1 Identify the picture representing each of the following production methods in farming:

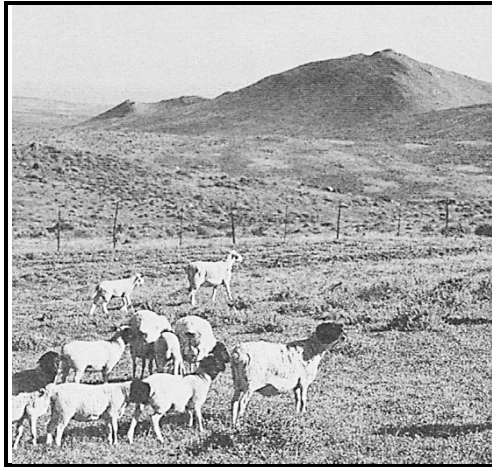
- (a) Subsistence farming
- (b) Precision farming (2)

2.6.2 Redraw the table below to motivate your answer to QUESTION 2.6.1 by referring to the type of equipment used. State TWO advantages of using the equipment in EACH production method.

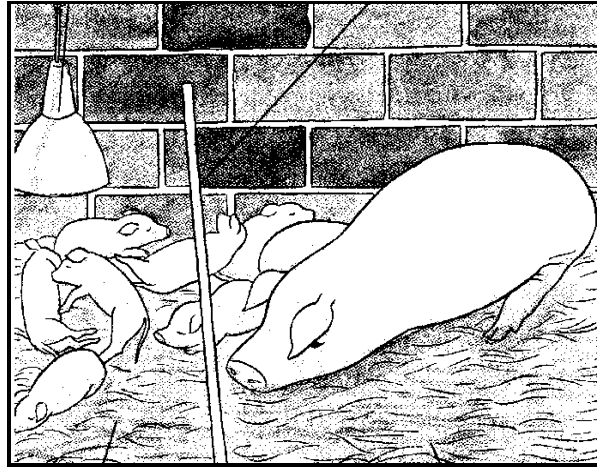
	PRECISION FARMING	SUBSISTENCE FARMING
Equipment used	(1)	(1)
TWO advantages	(2)	(2)

(6)

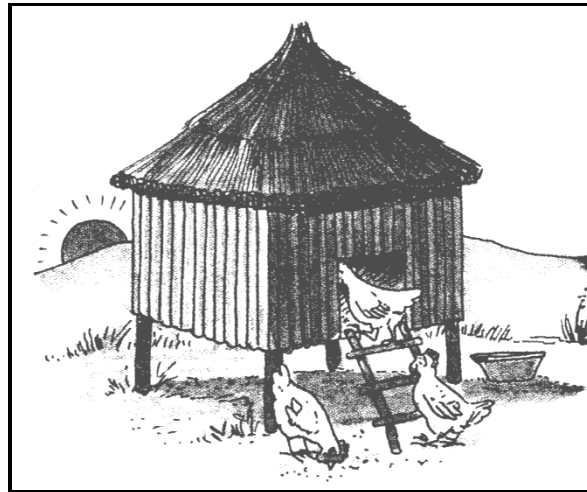
2.7 Study the pictures below and answer the questions that follow.



A



B



C

2.7.1 Identify the type of farming system represented by each picture (A–C). (3)

2.7.2 In which type of farming system are animals kept indoors but also given access to pasture outside the shelter? (1)

2.8 Read the scenario below and answer the questions that follow.

A pilot project was launched on four farms by the organisation Agri-AIDS. Workers that participate in the project are tested for HIV and given free anti-retroviral treatment, if necessary.



Name FOUR benefits for the farms whose workers participate in this project. (4)

2.9 A budget is a plan of the future income and expenses of a farm business. The following is a draft of a farm budget:

CROP PRODUCTION BUDGET

EXPECTED EXPENSES			
Item	Quantity	Value	Total price
Seed	2 kg	R40/kg	(a)
Fertilisers	850 kg	R280/50 kg	R4 760
Transport of fertilisers	17 bags	R5/bag	(b)
Pesticide	500 g	R187/500 g	R187
Wages for workers per week	4 workers	R400	(c)
Packaging materials	1 500 units	R1/unit	R1 500
Transport to markets	6 trips	R300/trip	R1 800
Total expected expenses			(d)
EXPECTED INCOME			
Item	Quantity	Value	Total price
Harvested crops	1 500 bags	R15/bag	(e)
Total expected income			

2.9.1 Calculate the missing amounts (a)–(e). (5)

2.9.2 Calculate the profit or loss. Motivate your answer. (4)

2.10 Indicate THREE aspects that should be considered by the farmer during planning to improve the efficiency of farm machinery. (3)
[50]

QUESTION 3: ENTREPRENEURSHIP, RECORDING, MARKETING, BUSINESS PLANNING AND ORGANISED AGRICULTURE

Start this question on a NEW page.

- 3.1 Name FIVE challenges for farmers who use farm gate marketing to sell their products. (5)
- 3.2 Explain the role of agricultural marketing legislation. (3)
- 3.3 Tabulate THREE differences between *marketing* and *selling*. (6)
- 3.4 Before approaching a bank or financial institution for a loan, a farmer must first develop a business plan.
- 3.4.1 Define the term *business plan*. (2)
- 3.4.2 Give reasons why a bank needs a business plan for an enterprise from a farmer. (4)
- 3.5 The production of agricultural products should be market-oriented. Producers have to know what consumers need, as well as what price they are prepared to pay.
- 3.5.1 Name THREE methods of price setting for agricultural products. (3)
- 3.5.2 State FOUR prerequisites of a market for the marketing of agricultural products. (4)
- 3.6 A processing plant buys cattle from a farmer at a price of R20/kg. The processing plant processes the meat, which adds value to the product, and then sells the processed meat with a 70% price increase to a chain store. The chain store adds 50% to the cost price before selling the meat to consumers.
- 3.6.1 Calculate the price of the product for the consumer at the point of sale. (4)
- 3.6.2 Describe the relationship between the marketing chain and the price of the product. (2)

- 3.7 A farmer recorded the performance of two seasonal workers in the table below.

SEASON	BAGS HARVESTED PER DAY	
	WORKER A	WORKER B
1	10	5
2	15	10
3	18	20
4	20	30

- 3.7.1 Draw a double bar graph to indicate the performance of the TWO workers. (6)
- 3.7.2 Suggest ONE possible reason for the poor performance of WORKER B during the first season. (1)
- 3.7.3 Name the worker that would most probably be offered a permanent appointment. Give TWO recommendations. (3)
- 3.8 Study the extract from a Balance Sheet below and answer the questions that follow.

Extract from the Balance Sheet of a crop-producing enterprise as on 30 December 2014

LIABILITIES	RANDS	ASSETS	RANDS
Current liabilities		Current assets	
Labourers' salaries for next month	23 500	Cash in hand	150 000
Medium-term liabilities		Medium-term assets	
Tractor loan outstanding	2 500	Tools and machinery	284 000

- 3.8.1 Calculate the percentage that tools and machinery contribute to the assets of the farm. (3)
- 3.8.2 State the negative effect of high farm mechanisation. (2)
- 3.9 Explain the term *recording* in agricultural management. (2)
- [50]**

QUESTION 4: HARVESTING, PROCESSING, MANAGEMENT AND AGRITOURISM

Start this question on a **NEW** page.

- 4.1 Redraw the table below to compare the different approaches to the harvesting process by a large-scale commercial farmer and a small-scale commercial farmer respectively. Both farmers use an extensive production system.

	LARGE-SCALE COMMERCIAL FARMER	SMALL-SCALE COMMERCIAL FARMER
Time management	(1)	(1)
Transport and handling	(1)	(1)
Storage	(1)	(1)

(6)

- 4.2 State FOUR critical components that need to be taken into consideration when designing packaging material for agricultural products. (4)
- 4.3 State FOUR characteristics of the ideal packaging or containers for agricultural products. (4)
- 4.4 Read the scenario below and answer the questions that follow.

A farmer plans the next season's production process. The main concern is the type of crop or combination of crops that should be produced for the specific season. To make the decision easier, the farmer compiles a budget to compare the different crops or combination of crops with each other. Different places to market the products and their respective prices are studied to ensure the best possible profit. The process includes the keeping of records on production and labourers (permanent and seasonal). If new crops are chosen, the labourers must be trained to obtain high yield. To ensure that the produce is sold, the farmer organises a farmer's market day as a promotion drive.

Classify the different management activities in the scenario above into the following categories:

- 4.4.1 Technical activities (1)
- 4.4.2 Commercial activities (1)
- 4.4.3 Financial activities (1)
- 4.4.4 Administrative and accounting activities (1)
- 4.4.5 Personnel management (1)
- 4.4.6 Communication activities (1)

- 4.5 The processing of agricultural products is part of value adding and it is a way of preserving food products.
- 4.5.1 Give FOUR reasons for preserving food. (4)
- 4.5.2 Name FOUR food-preserving methods where the development of micro-organisms is inhibited but NOT stopped. (4)
- 4.5.3 Describe FOUR food-preserving methods where micro-organisms are destroyed. (4)
- 4.6 Coordination is one of the most important aspects to ensure productivity in farming. State the FOUR types of coordination on a farm. (4)
- 4.7 State FOUR factors a farmer has to consider when harvesting should start. (4)
- 4.8 The farmer can play a significant role in educating others about agritourism. Support this statement with TWO reasons. (2)
- 4.9 Read the scenario below and answer the questions that follow.

FARMER A has a neat farming operation and is prepared to invest in the farm. The infrastructure and machinery are in an excellent condition due to good budgeting for maintenance. The farmer built new well-equipped homes for the workers. The farm has a time register and workers are often sent for skills development training. Labourers are given incentives for good work.

FARMER B will use money to fix breakages as they occur and there is no regular maintenance. Farm workers have to build their own houses. The farmer usually hires unskilled workers and does not even bother to train or show them how to handle the equipment. The farmer and labourers often argue about absenteeism, but an agreement is never reached.

- 4.9.1 Identify the managerial skills of FARMER A and motivate your answer by referring to the examples used in the scenario. (6)
- 4.9.2 Determine if it is possible for FARMER B to take disciplinary action against the workers for poor handling of equipment. Give a reason for your answer. (2)
- [50]**

TOTAL SECTION B: 150
GRAND TOTAL: 200



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GRADE 12

AGRICULTURAL MANAGEMENT PRACTICES

NOVEMBER 2015

MEMORANDUM

MARKS: 200

This memorandum consists of 11 pages.

SECTION A**QUESTION 1****1.1 Multiple-choice questions**

1.1.1	A ✓✓		
1.1.2	B ✓✓		
1.1.3	D ✓✓		
1.1.4	D ✓✓		
1.1.5	A ✓✓		
1.1.6	C ✓✓		
1.1.7	A ✓✓		
1.1.8	B ✓✓		
1.1.9	D ✓✓		
1.1.10	D ✓✓	(10 x 2)	(20)

1.2 Matching items

1.2.1	L ✓✓		
1.2.2	E ✓✓		
1.2.3	I ✓✓		
1.2.4	G ✓✓		
1.2.5	D ✓✓		
1.2.6	B ✓✓		
1.2.7	J ✓✓		
1.2.8	K ✓✓		
1.2.9	A ✓✓		
1.2.10	C ✓✓	(10 x 2)	(20)

1.3 Correct agricultural term

1.3.1	Movable capital ✓		
1.3.2	Variable cost ✓		
1.3.3	Entrepreneur ✓		
1.3.4	Cooperative ✓		
1.3.5	Own capital ✓		
1.3.6	Distribution ✓ / transportation ✓		
1.3.7	Pool system ✓		
1.3.8	Interest ✓		
1.3.9	Marketing cost ✓		
1.3.10	Gross farm income ✓	(10 x 1)	(10)

TOTAL SECTION A: 50

SECTION B

QUESTION 2: PHYSICAL AND FINANCIAL PLANNING

- 2.1 **FIVE ways how temperature restricts agricultural production.**
- Late/early frost can cause damage to crops, or even destroy the whole season's production ✓
 - Long cold spells can reduce the growth rate as well as the yield of both crops and livestock ✓
 - Extreme cold can kill many crops and livestock ✓
 - Very high temperatures increase evaporation of water from the soil which results in drought ✓
 - Very high temperature results in crops wilting which lowered production ✓
 - Very high temperatures can cause heat stroke ✓ (Any 5) (5)

- 2.2 **The influence of slope on crop production**
- The slope of land should not be too steep ✓
 - Because rain falling on a steep cultivated land will easily wash away the top soil and promote soil erosion ✓
 - Northern slope is more productive ✓ / southern slope is less productive ✓
 - Because of warmer temperatures and/or direct sunlight ✓ (4)

- 2.3 **Effect of soil depth on plant production**
- Shallow soil**
- Restricts the development of plant roots ✓
 - Have a lower water capacity this leads to poor yield ✓
 - Have a quicker water logged ✓
- Deep soils**
- Hold water better ✓
 - Better root development ✓
 - Have a higher production potential ✓ (Any 4) (4)

- 2.4 **THREE factors that cause the change of the plant species**
- Overgrazing ✓
 - Selective grazing ✓
 - Under grazing ✓
 - Veld fires ✓
 - Drought/climate change ✓ (Any 3) (3)

2.5 **Types of credit for farmers**

Types of credit for farmers	Long term credit	Medium term credit	Short term credit
Duration	10 years and longer ✓	2–10 years ✓	2 years and lower ✓
Use of credit	Land ✓	Machinery ✓	Fertilisers ✓

(6)

2.6 **Production methods in farming**

- 2.6.1 (a) B – subsistence farming ✓
(b) A – precision farming ✓ (2)

2.6.2 **Motivation of QUESTION 2.6.1**

	Precision farming	Subsistence farming
Equipment used	<ul style="list-style-type: none"> Highly technological ✓ 	<ul style="list-style-type: none"> Mainly hand equipment ✓
TWO advantages	<ul style="list-style-type: none"> Cost effective related to inputs Less time consuming ✓ Electronic information is changed into management strategies ✓ Determine the soil potential productivity ✓ Predict yield potential ✓ Determine soil cultivation method ✓ Determine the sowing density and type of fertilizers ✓ (Any 2) 	<ul style="list-style-type: none"> Less expensive ✓ Easy to operate ✓

(6)

2.7.1 **The type of farming system**

- A – extensive ✓
 - B – intensive ✓
 - C – semi-intensive ✓
- (3)

2.7.2 **Farming system**

- Semi-intensive / C ✓
- (1)

2.8 **FOUR benefits of AIDS project for farm**

- Prevention/awareness will have a healthier labour force ✓
 - Workers will create a healthier environment ✓
 - Earlier detection and treatment leads to less absentees ✓
 - Productivity of farm can increase ✓
 - Labour/transport/medical costs will be lower ✓
- (Any 4) (4)

2.9.1 **Calculate missing amounts**

- R80,00 ✓
 - R85,00 ✓
 - R1 600,00 ✓
 - R10 012,00 ✓
 - R22 500,00 ✓
- (5)

2.9.2 Conclusion and calculation

- Profit / loss = Total expected income – total expected expenses
= R22 500,00 ✓ – R10 012,00 ✓
= R12 488,00 ✓

- The crop farmer will make a profit ✓ (4)

2.10 Three aspects of planning

- Condition of the engine ✓
- Appropriateness of the engine ✓
- Conditions of the equipment to be used with the engine ✓
- Type of equipment with the engine size ✓

(Any 3) (3)
[50]

QUESTION 3: ENTREPRENEURSHIP, RECORDING, MARKETING AND BUSINESS PLANNING

3.1 FIVE challenges faced by farm gate marketing

- Number of customers visiting the farm ✓
- Cannot get the price that the farmer wanted ✓
- Lack of storage facilities ✓
- Low bargaining power ✓
- Lack of capital ✓
- Farm not situated favourably ✓

(Any 5) (5)

3.2 The role of agricultural marketing legislation

- It provide legal platform for the marketing of agricultural products ✓
- It regulates the economic functioning by promoting, guiding the overall operation of agricultural markets ✓
- It provides guidelines for the operation of the markets in different ways in order to avoid serious bad results to the environment and consumers at large ✓

(3)

3.3 THREE differences between marketing and selling.

Marketing	Selling
• Profit orientated ✓	• Product orientated ✓
• Long term plans are made ✓	• Short term objectives ✓
• Emphasis is on consumer needs and satisfaction ✓	• Consumer needs and satisfaction are neglected ✓
• Emphasises working together ✓	• No working together ✓
• Technological innovation is important ✓	• Costs are reduced to achieve maximum sales profit ✓

(Any 3 in each column) (6)

3.4.1 A business plan

- It is a document that describes the business you want to start and indicate your goals and objectives ✓
- Indicate the income and costs/ financial aspect of the business ✓
- Indicate the operation of the business and its sustainability ✓

(Any 2) (2)

3.4.2 Reasons why a bank requires a business plan

Business plans informs the bank manager on the following important aspects:

- Viability of the business ✓
- Sustainability of business ✓
- If profit will be big enough for repayment ✓
- The probable income and expenditure ✓
- Predicted cash flow ✓
- Assets and liabilities ✓

(Any 4) (4)

3.5.1 THREE methods of price setting

- Cost plus pricing/profit ✓
- Competition orientated ✓
- Market orientated pricing/going rate pricing ✓
- Breakeven point ✓
- Supply and demand/Market equilibrium ✓

(Any 3) (3)

3.5.2 FOUR prerequisites of a market

- Market size ✓
- Geographical placing ✓
- Stability ✓
- Availability ✓
- Satisfy needs ✓
- Organised ✓
- Good marketing functions and intuitional organisation ✓
- Risk evasion ✓
- Trust and ethical codes ✓
- Available, trustworthy market information ✓
- Buying power of the consumers ✓

(Any 4) (4)

3.6.1 Calculate price at point of sell

- Price after processing = $R20/kg \times 1.7$ ✓
= $R34/kg$ ✓
- Final price = $R34/kg \times 1.5$ ✓
= $R51/kg$ ✓

OR

- Price processing = $R20/kg + R20 \times 70\%$ ✓
= $R20/kg + R14$
= $R34/kg$ ✓
- Final price = $R34/kg + R34/kg \times 50\%$ ✓
= $R51/kg$ ✓

OR

- Increase = $R20/kg \times 70\%$
 $R14/kg$ ✓
- Price processing = $R20/kg + R14/kg$
= $R34/kg$ ✓
- Price increase = $R34/kg \times 50\%$ ✓
= $R17/kg$
- Final price = $R34/kg + R17/kg$
= $R51/kg$ ✓

(4)

3.6.2 Describe relationship

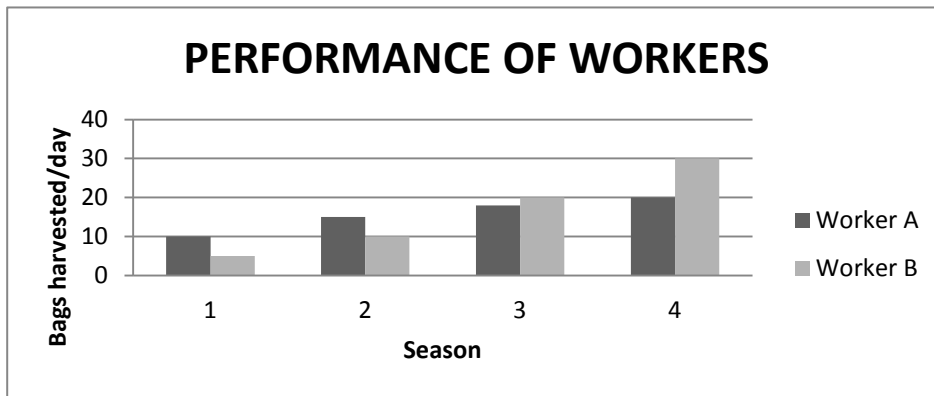
- The longer the marketing chain, the higher the price the consumer will pay

OR

- The shorter the marketing chain the less the consumer will pay for the product. ✓✓

(only one statement relevant) (2)

3.7.1 **Bar graph on performance of workers**



Rubric

- ✓ appropriate heading
- ✓ correct x-axis and labelling
- ✓ correct y-axis and labelling
- ✓ key
- ✓ correct type of graph
- ✓ correct values of graph

(6)

3.7.2 **Possible reason for poor performance**

- New worker on the farm ✓
- Unskilled/untrained worker in the specific task ✓
- Illness ✓
- Absenteeism ✓
- New type of work for the worker ✓

(Any 1) (1)

3.7.3 **Selection and recommendations for worker**

- Worker B ✓

AND

- Worker productivity improved over time ✓
- Worker B outperformed worker A from the third season ✓
- Worker B became more skilful ✓

(Any 2) (2)

3.8.1 **Percentage that tools and machinery contribute to the assets**

- Total assets = R150 000 + R284 000
= R434 000 ✓

- % of asset = $\frac{R284\ 000}{R434\ 000} \times 100$ ✓
= 65,43% ✓

(3)

3.8.2 **The negative effect of high farm mechanisation**

- (a) Social justice: job losses/unemployment/ no skilled labourers ✓ (1)
- (b) Environmental justice: air pollution/land pollution/water pollution ✓ (1)
- (c) Economic matters: expensive (1)

3.9 Keeping record of farm related information ✓ e.g. (production, income, expenditure) to help in planning and decisions making. ✓

(2)

[50]

QUESTION 4: HARVESTING, PROCESSING, AGRITOURISM AND MANAGEMENT

4.1 **Compare different approaches to harvesting between the small commercial farmer and Large commercial farmer**

	Large Commercial farmer	Small Commercial farmer
Time management	Saves time as own harvesters can do the harvesting. ✓	Time consuming as he need to hire contractors for harvesting, that is not always available ✓
Transport and handling	Own transport available ✓ and have equipment that handle bulk ✓ (Any one)	Own transport not available ✓ bulk not easily handled. ✓ (Any one)
Storage	Normally well-structured storage facilities ✓ (Silo)	No/poor storage facilities ✓

(6)

4.2 **FOUR components when designing packaging material**

- Protection of the product ✓
- Deliver and display the product in a way that it attracts the customers ✓
- Make the product recognisable ✓
- Have features that make it easy to handle ✓
- Cost effective ✓
- Provide information to the consumers ✓
- Type of material ✓

(Any 4)

(4)

4.3 **FOUR characteristics of ideal packaging**

- Sanitary ✓
- Non – Toxic ✓
- Transparent ✓
- Light weight ✓
- Tamper proof ✓
- Easily disposable ✓
- Easily printed or labelled ✓
- Resistant to mechanical and thermal damage ✓
- Compatible with high speed tilling machinery ✓
- Compatible with food/product ✓
- Protective against light ✓
- Easily opened/closed ✓
- Impermeable to gasses and odours ✓
- Environmentally friendly ✓

(Any 4)

(4)

- 4.4 **Classify management activities**
- 4.4.1 • Type of crop or combination of crops to produce ✓ (1)
- 4.4.2 • Decision on where to market the produce ✓ (1)
- 4.4.3 • Set up of budgets for comparison ✓ (1)
- 4.4.4 • Studying of market prices ✓
- Keeping of records on production and labour ✓ (Any 1) (1)
- 4.4.5 • Training of labourers ✓ (1)
- 4.4.6 • Organising a farmers market day. ✓ (1)
- 4.5.1 **FOUR reasons for preserving food**
- To protect the food against micro – organisms, enzymes and other form of spoilage ✓
- To prepare food of uniform quality on a large scale
- to provide a stable market for food that is available for only a few days or weeks in a year/food security ✓
- To have a greater variety of food available in non-producing areas ✓ (4)
- To feed humankind ✓
- 4.5.2 **FOUR food preserving methods where micro-organisms development is inhibited**
- Applying cold/ freezing ✓
- Increasing the osmotic pressure/Canning ✓
- Decreasing the moisture content through drying or dehydration ✓
- Decreasing the pH through the adding of acid ✓ (4)
- 4.5.3 **FOUR methods of food preserving where micro-organisms are killed**
- Apply high concentration of salt or sugar ✓
- Alcohol ✓
- Chemical preserving agents ✓
- Spices containing antimicrobial action ✓
- Heating/pasteurization/sterilization/blanching ✓
- Radiation/ultra violet rays ✓ (4)
- 4.6 **FOUR types of coordination**
- Informal coordination ✓
- Programmed coordination ✓
- Negotiated coordination ✓
- Group coordination ✓ (4)
- 4.7 **FOUR factors to consider for decision on harvesting**
- Readiness/ripeness ✓
- Climate ✓
- Availability of labourers/machinery ✓
- Availability of contractor ✓ (4)
- Availability of storage facilities ✓
- Marketing aspects ✓

4.8 **TWO ways that a farmer can play a significant role in agri-tourism**

- By promoting farm stay holidays ✓
- By bringing the country and city life together/education ✓
- By ensuring the sustainable utilization of our natural resources ✓ (Any 2) (2)

4.9.1 **Managerial skill and example**

Managerial skills	Example
<ul style="list-style-type: none"> • Planning ✓ • Control ✓ 	<ul style="list-style-type: none"> • Budget for maintenance ✓ • Time register ✓
<ul style="list-style-type: none"> • Motivation ✓ 	<ul style="list-style-type: none"> • Incentives ✓ • Training ✓ • Build well-equipped houses ✓ <p style="text-align: right;">(Any 1 for motivation)</p>

(6)

4.9.2 **Disciplinary action**

- Cannot take disciplinary action ✓ (1)

AND**Reason:**

- No training of workers ✓
- Do not show proper handling of equipment ✓
- Fix breakages as it occurs ✓
- No regular maintenance ✓ (Any 1) (1)

[50]

TOTAL SECTION B: 150
GRAND TOTAL: 200