



basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

**NATIONAL
SENIOR CERTIFICATE**

GRADE 12

AGRICULTURAL MANAGEMENT PRACTICES

NOVEMBER 2011

MARKS: 200

TIME: 2½ hours

This question paper consists of 17 pages and a 1-page answer sheet.

INSTRUCTIONS AND INFORMATION

1. This question paper consists of FOUR questions. Answer ALL the questions.
2. SECTION A (QUESTION 1) must be answered on the attached ANSWER SHEET.
3. Place the ANSWER SHEET for SECTION A (QUESTION 1) inside the front cover of the ANSWER BOOK.
4. SECTION B (QUESTIONS 2 to 4) must be answered in the ANSWER BOOK.
5. Start EACH question in SECTION B on a NEW page.
6. Read the questions carefully and answer only what is asked.
7. Number the answers correctly according to the numbering system used in this question paper.
8. Non-programmable calculators may be used.
9. ALL calculations must be rounded off to TWO decimals unless stated otherwise.
10. Give special attention to units where applicable.
11. 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 make a cross (X) in the block (A–D) next to the question number (1.1.1–1.1.10) on the attached ANSWER SHEET.

Example:

| | | | | |
|--------|---------------------------------------|---|---|---|
| 1.1.11 | A <input checked="" type="checkbox"/> | B | C | D |
|--------|---------------------------------------|---|---|---|

- 1.1.1 The type of veld that will cause ruminant animals, that are kept on natural pastures, to lose most in terms of condition during winter in a summer rainfall area:
- A Mixed veld
 - B Semi veld
 - C Sour veld
 - D Sweet veld
- 1.1.2 ... is the system of grazing that a farmer utilises when the farmer moves livestock from one camp to another in a cycle. This allows some of the camps to rest and recover while other camps are being grazed.
- A Random grazing
 - B Selective grazing
 - C Camp grazing
 - D Rotational grazing
- 1.1.3 A farmer wants to add value to a produced agricultural product by changing it into a more usable form to meet consumer needs. The changing of such a product is called ...
- A packaging.
 - B processing.
 - C standardisation.
 - D grading.
- 1.1.4 ... is when a community or group of people has access to an area or farm land.
- A Private tenure
 - B Individual tenure
 - C Communal tenure
 - D Land ownership

- 1.1.5 The farming cost that constitutes the portion of the total cost which remains unchanged for a specific production process, regardless of whether more or fewer products are produced, for example depreciation, rentals and interests:
- A Variable cost
 - B Fixed cost
 - C Supply cost
 - D Demand cost
- 1.1.6 The type of expenditure that the farmer has to incur to get his/her agricultural product from the farm to the market venue:
- A Transport cost
 - B Fixed cost
 - C Insurance cost
 - D Processing cost
- 1.1.7 The actual sorting process of agricultural products, according to the agreed standard specification, before marketing of such products can take place:
- A Merchandising
 - B Grading
 - C Auctioning
 - D Standardisation
- 1.1.8 Capital is one of the important factors of production. From the list below choose the possible sources that the farmer can utilise to generate capital:
- i Credit
 - ii Demand
 - iii Production
 - iv Own savings
- A i and iv
 - B i, ii and iii
 - C ii and iv
 - D i, iii and iv
- 1.1.9 The problem associated with capital where too few investments were made in the farming enterprise, with the result that soil and labour cannot be fully utilised and maximum profit cannot be achieved:
- A Scarcity of capital
 - B Over-capitalisation
 - C Under-capitalisation
 - D High interest rate

1.1.10 The process whereby a commercial farmer attracts public attention to a specific agricultural product through various forms of communication:

- A Marketing
- B Advertising
- C Supply
- D Market research

(10 x 2) (20)

1.2 Choose a description from COLUMN B that matches an item/phrase in COLUMN A. Write only the letter (A–L) next to the question number (1.2.1–1.2.10) on the attached ANSWER SHEET, for example 1.2.11 M. Each description in COLUMN B may only be used ONCE.

| COLUMN A | | COLUMN B | |
|----------|----------------------|----------|--|
| 1.2.1 | Balance sheet | A | the movement of farm products from the production and/or processing site to outlets |
| 1.2.2 | Interest rate | B | a farm income which is derived from the farm activity but which cannot be directly allocated to a specific farming enterprise |
| 1.2.3 | Insurance | C | total cost less total production cost |
| 1.2.4 | Variable cost | D | aspects related to capital that results in the farmer rather using own capital instead of borrowing money from a financial institution |
| 1.2.5 | Auction | E | marketing that is done by an agent where buyers bid and the highest bid is accepted |
| 1.2.6 | Elasticity | F | the cost of labour or farming material which increases with every item produced or every service rendered |
| 1.2.7 | Fresh produce market | G | a mechanism that a farmer can utilise to reduce risk in the farming operation |
| 1.2.8 | Distribution | H | supplies data that the farmer needs to do long-term planning to sell produce |
| 1.2.9 | Sundry farm income | I | the quantity demanded or supplied, that changes by a larger percentage than the price |
| 1.2.10 | Market research | J | the account of the transactions in a particular period showing the assets and the liabilities at a specific point in time, usually the last day of the accounting period |
| | | K | the situation in the market where the demand is exactly equal to the supply |
| | | L | markets close to large urban areas mainly for the sale of fruits and vegetables |

(10 x 2) (20)

1.3 The following statements are INCORRECT. Change the underlined word(s) to make each statement CORRECT. Write the correct word(s) next to the question number (1.3.1–1.3.10) on the attached ANSWER SHEET, for example 1.3.11 Recording.

1.3.1 Soil weathering will take place on uncovered soils during heavy rainfall and this results in the loss of top soil.

1.3.2 On a cropping field, the steeper the hill the further apart the contour walls will be placed.

1.3.3 Each type of animal or crop will have a maximum temperature range whereby it will produce at its highest levels.

1.3.4 Calculation is when a farmer sets the agricultural equipment to deliver a preset amount of a product in a specific time or on a specific area.

1.3.5 Medium-term credit is the type of credit that is available to a farmer at the local cooperative for the next planting season.

1.3.6 Profit is when the expenditure of an agricultural enterprise exceeds the income in a specific month.

1.3.7 The management principle applied when workers have to use a clock card in the morning when they start working as well as in the evening when they leave, is called planning.

1.3.8 To use compost as fertiliser and garlic extract to control pests is part of a conventional farming method.

1.3.9 Value adding is the change in value of a tractor over a period of time due to wear and tear.

1.3.10 Processing is the advertising and selling of an agricultural product to the consumer. (10 x 1) (10)

TOTAL SECTION A: 50

SECTION B

QUESTION 2: ANIMAL AND CROP PRODUCTION

Start this question on a NEW page.

2.1 Farm planning includes an organised and systematic schedule of all soil and water management practices, integrated with a well balanced farming programme. The result of good farm planning is the improved utilisation of resources. Factors that will influence planning can be the availability of capital, the work that each worker has to do on a specific day, the advertising and selling of the product and the availability of water.

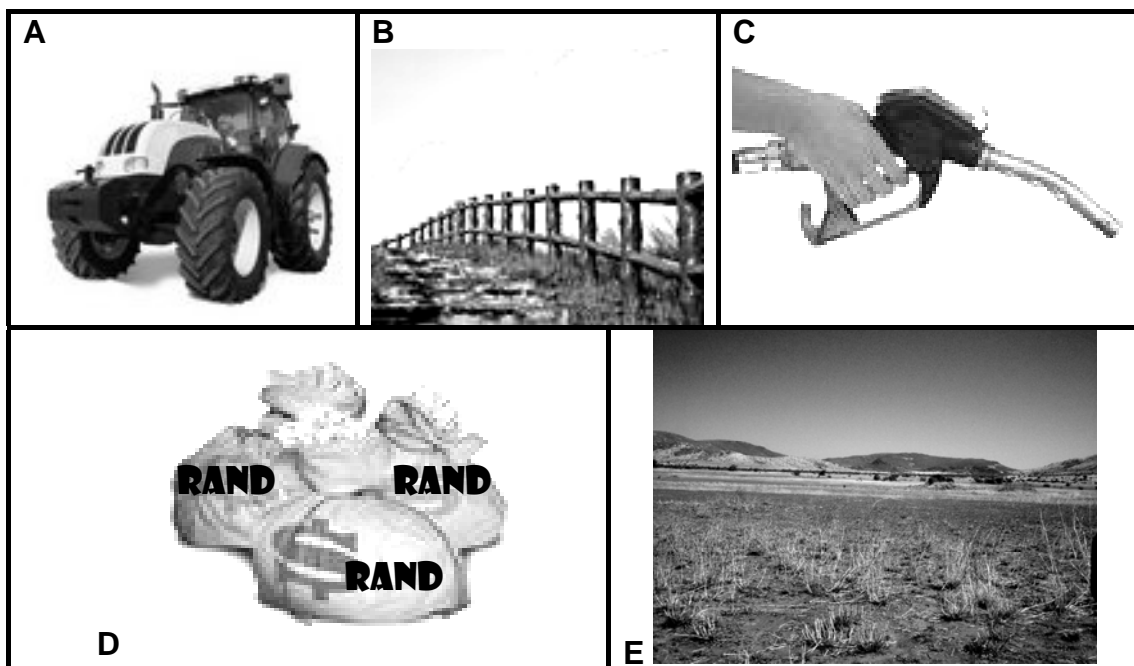
2.1.1 Explain the following three basic aspects in the procedure followed during farm planning:

- (a) Collection of recent data (1)
- (b) Classification and evaluation of data (1)
- (c) Actual plan on utilisation of resources (1)

2.1.2 A farmer wants to include a new enterprise on the farm. Name TWO important aspects that need careful consideration by referring to the data supplied above. (2)

2.1.3 During a soil survey it was suggested that the soil structure of some cultivated fields could be improved. Suggest FOUR ways in which a farmer could improve the soil structure of these cultivated fields. (4)

2.2 The pictures below, marked A–E, represent capital items on a farm.

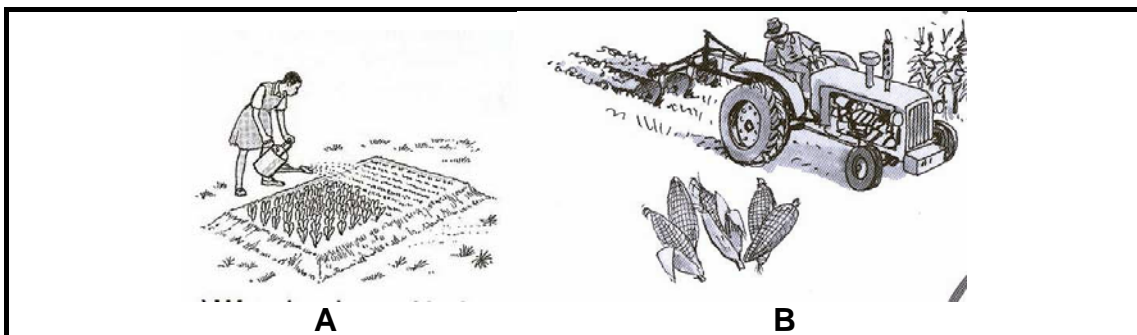


Classify these items according to the type of capital that each represents. Write only the type of capital next to the letter (A–E). (5)

2.3 A farmer in the winter rainfall area has found that soils can be classified as high potential soils, marginal soils and natural pastures utilised for grazing. Erosion has occurred in some areas on the farm. The grasses on the pastures grow slowly after grazing and will deteriorate quickly if overgrazing continues to take place. Most of these problems can be avoided if the farmer gives special attention to the management of the farm.

Identify the FOUR factors that influence the ability of the soil to produce that are linked to the data supplied in the passage above. (4)

2.4 The diagrams below represent commercial and subsistence farming systems.



Identify the type of farming system represented in each of the diagrams above. Give ONE reason for your answer in EACH case. (4)

2.5 As a crop farmer you have to ensure that the implements on your farm are well cared for. Briefly describe the procedures that you would follow in caring for your equipment immediately after it was used on cultivated soil. (4)

2.6 Precision farming can be used to improve farm management from several perspectives. Match the perspectives in the list below with the statement. Write only the perspective next to the question number (2.6.1–2.6.4) in the ANSWER BOOK.

economical perspective; crop science perspective; environmental perspective; technical perspective; chronological perspective; labour perspective.

2.6.1 Adjustment of cultivation practices to take into account the real needs of the crop (1)

2.6.2 Better time management on the farm (1)

2.6.3 The reduction of agricultural carbon emissions and pollution (1)

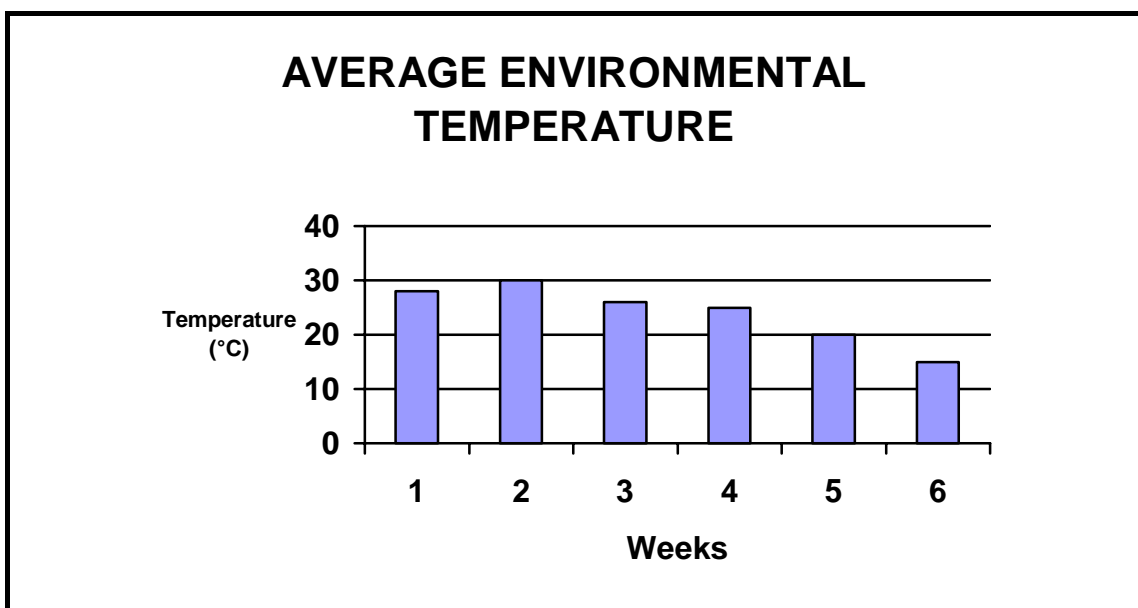
2.6.4 Increased outputs with a reduction of inputs, thus increased efficiency (1)

2.7 One of the major problems with farm labourers is their lack of skills. A skills development programme is one way of addressing this problem.

2.7.1 Farm labourers can be divided into skilled and unskilled labourers. Differentiate between these TWO types of labourers. (4)

2.7.2 Briefly explain the advantages that a skills development programme for farm labourers will have on a farming enterprise. (4)

2.8 A farmer planted a crop with a growing season of 8 weeks late in summer. The temperature during weeks 5 and 6 must be between 25 °C and 30 °C for this crop to have the highest yield. Study the graph below and answer the questions that follow.



2.8.1 Identify the following from the graph:

(a) The week with the highest temperature (1)

(b) The week with an average temperature of 20 °C (1)

2.8.2 Will this crop be able to deliver a high yield? Justify your answer by referring to the graph. (2)

2.8.3 The farmer wants to plant this crop in future aiming at the highest possible yield. Describe TWO practises that the farmer can utilise to solve the problem with the temperature. (2)

2.9 Positions in the management structure of a farm could include a FARM OWNER, a SHEPHERD, a FOREMAN FOR CROP PRODUCTION, a FOREMAN FOR LIVESTOCK PRODUCTION and a FARM MANAGER. Draw a schematic representation of the organisational structure (organogram) of this farm. Use the different positions indicated above. (6)

[50]

QUESTION 3: RECORDING, FINANCIAL STATEMENTS AND ENTREPRENEURSHIP

Start this question on a NEW page.

3.1 Budgets are working documents that are drawn up before each season or year to determine the financial management of an enterprise.

3.1.1 Name FOUR types of budgets that can be useful in different agricultural enterprises to assist the entrepreneur with financial planning. (4)

3.1.2 Select a farming enterprise and draw up part of a budget for the next financial year for that enterprise. Make use of only ONE item for income and ONE item for expenditure. Copy the partial budget below into your ANSWER BOOK.

| Enterprise | | | | Budget for financial year | | | |
|------------------|--------|------------|-------|---------------------------------|--------|------------|-------|
| INCOME | | | | EXPENDITURE | | | |
| Item | Amount | Unit price | Total | Item | Amount | Unit price | Total |
| | | | | | | | |

(8)

3.2 Indicate FIVE types of records that are important for livestock farmers. (5)

3.3 The following are major applications of capital:

- Purchasing of machinery
- Purchasing of land
- Purchasing of fertilisers

Loans from banks and other credit providers are the most common sources of capital. Use the applications of capital listed above to complete the table below. Copy the table into your ANSWER BOOK.

| DETAIL | DURATION | | |
|----------------|----------------|------------------|-----------------|
| | LONG-TERM LOAN | MEDIUM-TERM LOAN | SHORT-TERM LOAN |
| Period | | | |
| Use of capital | | | |

(6)

3.4 A balance sheet is a measure of what the business is worth (liquidity). The value of the total assets should exceed the value of the total liabilities.

A farmer had the following entries in the financial statements on 31 October 2010:

| | |
|-------------------------------------|----------|
| Cash | R2 000 |
| Outstanding credit to purchase land | R231 182 |
| Bank balance | R20 000 |
| Stock | R100 000 |
| Debtors | R120 000 |
| Implements | R60 000 |
| Vehicle (tractor) | R90 000 |
| Buildings | R50 000 |
| Creditors | R11 613 |
| Long-term loan | R150 000 |

3.4.1 Use the data above to complete the simple balance sheet below. Write down only the letter ((a) to (d)) and the relevant missing data in the ANSWER BOOK.

| ASSETS | RAND | LIABILITIES | RAND |
|---------------------------|----------------|------------------------------|---------|
| Fixed assets | | Long-term liabilities | |
| Buildings | 50 000 | Outstanding credit for land | 231 182 |
| | | Long-term loan | 150 000 |
| Current assets | | Current liabilities | |
| (a) → ... → | ... | (c) → ... → | ... |
| (b) → ... → | ... | | |
| Bank balance | 20 000 | | |
| Debtors | 120 000 | | |
| Medium-term assets | | | |
| Implements | 60 000 | | |
| Vehicle (tractor) | 90 000 | | |
| TOTAL ASSETS | 442 000 | TOTAL LIABILITIES | (d) ... |

(4)

3.4.2 Calculate the net worth for this farmer from the data in the table above.

(2)

3.5 A source document is prepared when a business transaction takes place. It captures the key data of the transaction.

Examples of the different types of source documents (3.5.1–3.5.4) used in farm businesses are shown below. Name EACH source document.

| CASH INVOICE | | No. 0001 |
|--------------|----------------|-------------------------------|
| TO: | FROM: | YOUR OWN BUSINESS STREET CITY |
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| DATE: | _____ | _____ |
| QTY | DETAILS | AMOUNT |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| TOTAL | | R |

3.5.1

| Account Deposit/Rekening-deposito | | |
|--|--------------------|--|
| Date/Datum | Branch No./Tak Nr. | |
| Acc. No./Rek. nr. | | |
| Reference/Verwysing | | |
| Account Name/Rekening Naam | | |
| Branch/tak | | |
| <small>N.B.: List money/postal orders individually under cheques. L.W.: Geld/postorders moet afsonderlik onder tjeks aangedui word</small> | | <small>Notes/Note Coins/Munt Sub-totaal Sub-totaal Bank No./nr 1 to 6 Paks./Pak. Aans.</small> |
| Drawer/Trekker | 1. | |
| | 2. | |
| | 3. | |
| | 4. | |
| | 5. | |
| | 6. | |
| | 7. | |
| | 8. | |
| | 9. | |
| | 10. | |
| | 11. | |
| | 12. | |
| | 13. | |
| | 14. | |
| | 15. | |
| (Compulsory/Verpligtend) | Total/Totaal | R |
| Details of depositor / Besonderhede van deponeerder | | |
| Name (Print)/Naam (Drukskrif) | | |
| Dialling code and telephone number/Skakelkode en telefoonnommer | | |
| Subject to conditions printed overleaf/Onderworpe aan voorwaardes op keerwyedruk | | |
| Signature/Handtekening | | |

3.5.2

| YOUR BUSINESS | | | | |
|--|--------------------|---|-----------------|---------------------|
| To: | | VAT Reg. nr. 20111114001 P.O. Box Town City 0000 011 673 4196 | | |
| Qty | Description | Price Excl. | Discount | Amount Excl. |
| | | | | |
| | | | | |
| | | | | |
| Sub Total VAT @ 14% | | | | |
| Invoice Total (Inclusive of 14% VAT) | | | | |
| E.&O.E | | | | |

3.5.3

| RECEIPT | | No. 001 |
|-------------------------------|-------|----------|
| YOUR OWN BUSINESS STREET CITY | | |
| Receive with thanks from | | |
| The sum of: | | R c |
| _____ | Rand | |
| _____ | cents | |
| for YOUR OWN BUSINESS | | |
| Cheque/Cash | | |

3.5.4

(4)

- 3.6 Differentiate between a *cash flow statement* and an *income statement*. (4)
- 3.7 A livestock farmer recorded the following monthly income and expenditure values for the 2010 financial year. The different values are represented in the table below.

| MONTH | INCOME | EXPENDITURE |
|-----------|----------|-------------|
| January | R200 000 | R70 000 |
| February | R75 000 | R75 000 |
| March | R60 000 | R80 000 |
| April | R50 000 | R85 000 |
| May | R40 000 | R90 000 |
| June | R40 000 | R95 000 |
| July | R50 000 | R100 000 |
| August | R60 000 | R100 000 |
| September | R100 000 | R90 000 |
| October | R150 000 | R80 000 |
| November | R250 000 | R70 000 |
| December | R350 000 | R60 000 |

- 3.7.1 Indicate the month(s) that the expenditure value was equal to the income value. (1)
- 3.7.2 The production plan for a livestock enterprise includes various activities that will have an impact on the income and expenditure. Give TWO possible reasons for the sudden drop in income during February. (2)
- 3.7.3 Calculate the profit/loss for the enterprise based on the data above. Determine if this farmer made a profit for this specific year. Show your calculations. (4)

3.8 The following are questions that are often asked by farmers when they draft farm business plans:



Copy the table below in the ANSWER BOOK and categorise the above questions by re-writing each question in the appropriate column in the section of a business plan below:

SECTION OF A BUSINESS PLAN:

| MARKETING | FINANCIAL PLANNING |
|-----------|--------------------|
| | |
| | |
| | |

(6)
[50]

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

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

- 4.1 Describe THREE aspects that indicate the importance of grading an agricultural product before it is processed. (3)
- 4.2

A farmer produces an agricultural product. Because of the speedy decay of this product, it never reaches high prices. Most of the time it does not even sell because consumers complain that it is bulky and difficult to handle. The farmer decides to process this particular agricultural product.

State the THREE main aims of processing an agricultural product, deduced from the paragraph above. (3)
- 4.3 Name THREE non-chemical methods that can be used to control micro-organisms that can damage stored agricultural products. (3)
- 4.4

A producer organisation plays an important role in the production enterprise that it represents. It informs farmers about international and local market trends and prices to help farmers plan for new enterprises or seasons. Promotion and advertising are done collectively on behalf of farmers representing the specific enterprise. It also serves as a negotiator between farmers and the government to determine regulatory issues.

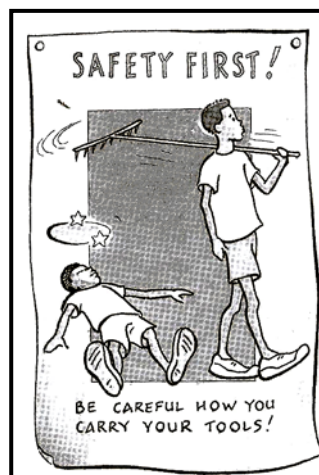
Outline the role that producer organisations play in assisting farmers by referring to THREE aspects mentioned in the paragraph above. (3)
- 4.5 State FIVE requirements of suitable packaging material for meat or meat products. (5)
- 4.6 Bigger agricultural processing businesses have to be AgriBEE compliant to participate in the economic environment in South Africa. Companies that do not adhere to BEE goals, can be prosecuted and fined. Briefly outline the aims of AgriBEE. (3)
- 4.7 Nowadays entrepreneurship also includes agritourism where the farmer and agricultural processor participate in tourism. Tourists visit farms, rural areas and agricultural processing plants as part of their tours in South Africa.
- 4.7.1 Define *agritourism*. (2)
- 4.7.2 Identify THREE benefits of agritourism. (3)
- 4.8 Harvesting is a critical task that must be done efficiently and timeously on the farm. Name any SIX factors that the farm manager needs to consider when such preparations are made. (6)

4.9 A farmer plans to plant a specific crop in the next season. Marketing such an agricultural product on a suitable market is the most important decision that any agriculturist has to make to obtain maximum profit. The table below represents some marketing information for an agricultural product.

| PRICE (R/TON) | QUANTITY OF CROP PRODUCED (MILLION TONS) | SALES (MILLION TONS) |
|---------------|--|----------------------|
| 500 | 5 | 10 |
| 700 | 6 | 9,5 |
| 900 | 7 | 9 |
| 1 100 | 8 | 8 |
| 1 300 | 9 | 6,5 |

- 4.9.1 Define the term *agricultural market*. (2)
- 4.9.2 Draw a line graph to reflect the supply and demand for this crop. (5)
- 4.9.3 Deduce from the graph the IDEAL POINT where the supply will be equal to the demand for the crop. (1)
- 4.9.4 Give the correct term used for the ideal point where supply and demand are equal. (1)
- 4.9.5 Explain the reason why the point determined in QUESTION 4.9.3 is called the ideal point. (2)

4.10 The picture below illustrates the importance of safety when handling farm equipment.



- 4.10.1 Farm equipment can be very dangerous and it is vital to follow the correct safety procedures. Give a reason why farm equipment can be considered to be dangerous. (1)
- 4.10.2 State the legislation that applies to ALL farm workers to prevent accidents. (1)

4.11 A small-scale farmer was part of a mentorship programme with a large commercial farmer. The small-scale farmer explained his/her farming enterprise to the large commercial farmer as follows:

- 30 ha land of which 20 ha is cultivated
- 4 oxen
- 2 hand ploughs
- 1 borehole
- 1 cement dam of 160 000 ℓ
- 3 mules
- 1 donkey cart

The commercial farmer identified the following aspects that can be improved successfully in his/her mentor partner's enterprise:

- A. Agritourism
- B. Irrigation
- C. Mechanisation

Write a short project report and state TWO aspects that can be utilised in the small-scale farmer's enterprise under each of the headings mentioned above.

(6)
[50]

TOTAL SECTION B: 150
GRAND TOTAL: 200

CENTRE NUMBER:

| | | | | | | | |
|--|--|--|--|--|--|--|--|
| | | | | | | | |
|--|--|--|--|--|--|--|--|

EXAMINATION NUMBER:

| | | | | | | | | | | | | | |
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|--|--|--|--|--|--|--|--|--|--|--|--|--|--|

SECTION A

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 | |
| 1.2.2 | |
| 1.2.3 | |
| 1.2.4 | |
| 1.2.5 | |
| 1.2.6 | |
| 1.2.7 | |
| 1.2.8 | |
| 1.2.9 | |
| 1.2.10 | |

(10 x 2) (20)

QUESTION 1.3

- 1.3.1
- 1.3.2
- 1.3.3
- 1.3.4
- 1.3.5
- 1.3.6.....
- 1.3.7.....
- 1.3.8.....
- 1.3.9.....
- 1.3.10.....

(10 x 1) (10)



TOTAL SECTION A: 50