



# basic education

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

**NATIONAL  
SENIOR CERTIFICATE**

**GRADE 12**

**AGRICULTURAL MANAGEMENT PRACTICES**

**NOVEMBER 2014**

**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. Start EACH question on a NEW page.
4. Read the questions carefully and answer only what is asked.
5. Number the answers correctly according to the numbering system used in this question paper.
6. You may use a non-programmable calculator.
7. Round off ALL calculations to TWO decimal places, unless stated otherwise.
8. Write neatly and legibly.

**SECTION A****QUESTION 1**

1.1 Various options are provided as possible answers to the following questions. Choose the correct 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 type of soil that most likely contains large soil particles:
- A Clay soil
  - B Loam soil
  - C Sandy soil
  - D Clay loam soil
- 1.1.2 A physical characteristic of soil that a farmer CANNOT change by means of adding soil improvement substances:
- A Soil structure
  - B Soil texture
  - C Soil nutrient content
  - D Soil drainage
- 1.1.3 The document compiled by a farmer to plan for funds to be available for payments and expenditure or to apply for credit:
- A Cash Flow Statement
  - B Income Statement
  - C Trial Balance
  - D Budget
- 1.1.4 The climatic factors that will influence a natural production enterprise the most if there is an abnormal change in a particular season:
- (i) Temperature
  - (ii) Rainfall
  - (iii) Duration of daylight
- Choose the most appropriate combination for the statement above:
- A (i), (ii) and (iii)
  - B (i) and (ii)
  - C (i) and (iii)
  - D (ii) and (iii)
- 1.1.5 Produce on a field that is ready to be harvested is part of the ... on the Balance Sheet.
- A fixed costs
  - B variable costs
  - C assets
  - D liabilities

1.1.6 Which ONE of the following actions will be acceptable if a farmer pays by cheque?

- A Changing the date and signing next to the change.
- B Changing the numbers without changing the words.
- C Signing on behalf of your legal delegate.
- D Securing by writing the word 'non-transferable' across the cheque.

1.1.7 The information that is printed separately on the packaging of an agricultural product and not necessarily on the label:

- A Ingredients
- B Nutritional value
- C Expiry date
- D Producer's name

1.1.8 Before a farmer can start an agro-processing unit it is essential to ...

- A decide on the price of the product.
- B do market research on the product.
- C buy alternative land for processing.
- D invest on the stock exchange.

1.1.9 An important record for a livestock farmer with no crops or cultivated pasture, which will affect profitability if it is not controlled:

- A Feed record
- B Fertiliser record
- C Irrigation record
- D Crop-density record

1.1.10 Important aspects to consider when exporting farm produce:

- (i) The exchange rate of our currency
- (ii) The legislation of the importing country
- (iii) The time needed to transport the produce

Choose the most appropriate combination for the statement above.

- A (i) and (ii)
- B (i) and (iii)
- C (ii) and (iii)
- D (i), (ii) and (iii)

(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) 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    | Soil sample                      | A        | the number of animals kept per hectare without degrading the field                    |
| 1.2.2    | Rotational grazing               | B        | degradation of soil   |
| 1.2.3    | Irrigation scheduling            | C        | value of a tractor for record purposes  |
| 1.2.4    | Carrying capacity                | D        | a portion of soil obtained with a soil auger for analysis                             |
| 1.2.5    | Labour Tenants (Land Reform) Act | E        | water plants only when it is necessary and using the correct amount                   |
| 1.2.6    | Calibration                      | F        | game farming enterprise   |
| 1.2.7    | Soil erosion                     | G        | the total number of animals on a farm in a year                                       |
| 1.2.8    | Grading                          | H        | provides security for farm workers living on a farm                                   |
| 1.2.9    | Agritourism                      | I        | keeping animals in one camp for a certain period and then moving them to another camp |
| 1.2.10   | Entrepreneur                     | J        | determining the fat content of a carcass  |
|          |                                  | K        | setting of sprayers to deliver the correct amount of herbicide                        |
|          |                                  | L        | the person that creates job opportunities by starting a farming enterprise            |

(10 x 2)

(20)

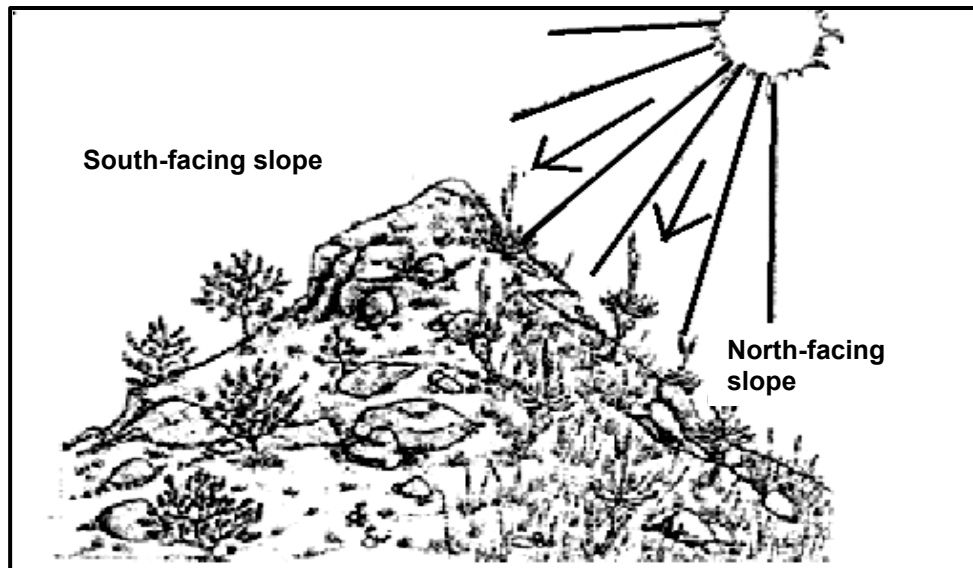
- 1.3 Give the CORRECT agricultural term for each of the following descriptions. Write only the term next to the question number (1.3.1–1.3.10) in the ANSWER BOOK, for example 1.3.11 Climate.
- 1.3.1 The ability of soils to retain water after rainfall or irrigation
- 1.3.2 The commercial farming system on a small piece of land that needs a large number of labourers and/or a lot of capital with a high output
- 1.3.3 A natural resource that occurs during a specific season and which is essential for every living organism
- 1.3.4 The document that is needed to apply for a loan at a bank and which contains the future development and budgets of a farming enterprise
- 1.3.5 The collective term for all the different documents that are needed to complete an Income Statement
- 1.3.6 The marketing system whereby a farmer can sell an agricultural product to any one at an agreed price
- 1.3.7 A farm worker who has received numerous certificates for different agricultural courses and who has a lot of experience
- 1.3.8 The money that you receive from a financial institution that is payable over a few years with interest
- 1.3.9 A processing method that removes any substances that cause turbidity in liquids
- 1.3.10 The management principle that limits wastage and loss on a farm
- (10 x 1) (10)
- TOTAL SECTION A: 50**

**SECTION B****QUESTION 2: FARM PLANNING**

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

- 2.1 The Basic Conditions of Employment Act, 1997 (Act 75 of 1997) states that farm workers are entitled to leave. Name FOUR types of leave that a farm worker can take during the course of a year. (4)
- 2.2 Contours are used to prevent soil erosion on steep slopes. The incorrect establishment of contours increases the risk of soil erosion.
- 2.2.1 Define *soil erosion*. (2)
- 2.2.2 Describe *contour ploughing*. (1)
- 2.2.3 One of the advantages of contours is that the loss of agricultural resources is reduced. Briefly discuss this statement. (6)
- 2.3 Farming implements play an important role to increase productivity on a farm.
- 2.3.1 List the steps to follow in the decision-making process to acquire implements. (5)
- 2.3.2 Name TWO disadvantages of using implements. (2)
- 2.4 Give THREE important reasons why farm workers should sign a contract before assumption of duty. (3)
- 2.5 Compare conventional commercial farming systems and precision farming systems by referring to the following factors:
- 2.5.1 Essential information (2)
- 2.5.2 Technical level of equipment used (2)

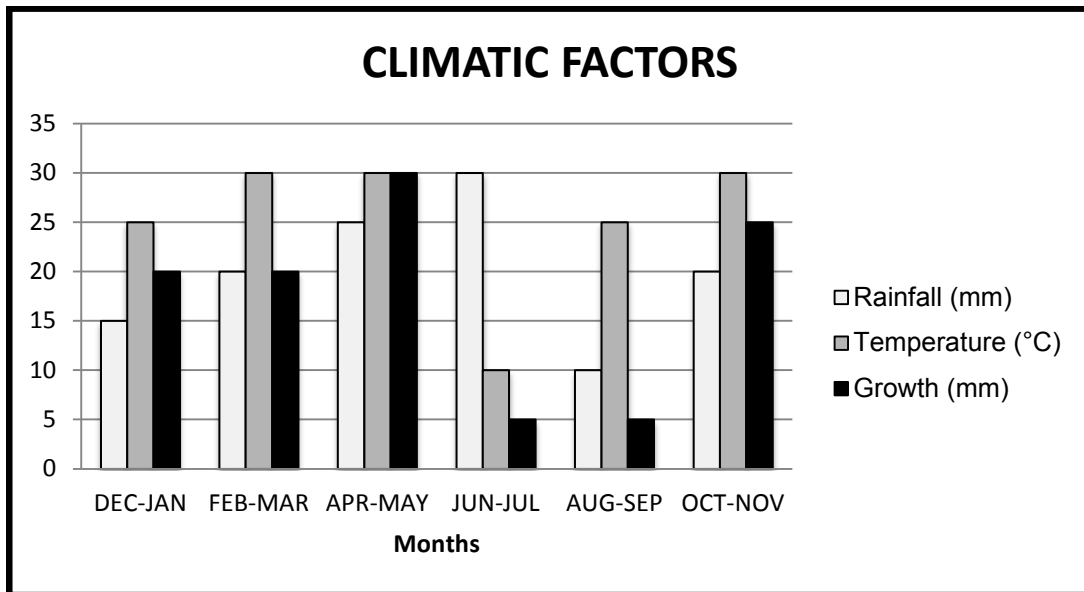
- 2.6 Crop production is determined by the amount and intensity of the sunlight that reaches the plant. The amount of light a slope receives differs depending on the season, the time of day and the slope orientation, as indicated in the picture below.



- 2.6.1 Identify the slope where plants in South Africa will have a higher growth rate and give TWO reasons for your answer. (3)
- 2.6.2 Give reasons why the duration of daylight is important for animals and plants. (4)
- 2.7 Budgets play an important role in the successful management of a farm.
- 2.7.1 Distinguish between a *whole-farm budget* and an *enterprise budget*. (2)
- 2.7.2 Give FIVE examples of production budgets. (5)



2.8 The graph below shows the influence of climatic factors on growth rate in plants. Answer the questions that follow.





- 2.8.1 Indicate the period with the highest growth rate in the year. (1)
- 2.8.2 Explain how the relationship between rainfall and temperature influences growth rate. Refer to the graph in your answer. (8)
- [50]**

**QUESTION 3: ENTREPRENEURSHIP, RECORDING, MARKETING AND BUSINESS PLANNING**

Start this question on a NEW page.

- 3.1 State FOUR advantages of keeping records using a computer rather than keeping handwritten notes. (4)
- 3.2 A cheque can be used to pay for items bought at an auction. A farmer bought 10 weaners for R3 600 each at an auction and has to pay 10% commission on the transaction.

|                |                      |          |                  |         |  |
|----------------|----------------------|----------|------------------|---------|--|
|                | NCS BANK<br>Pretoria | Silver   | 3.2.1            | 334-567 |   |
| Datum/Date     |                      |          |                  | Datum   |  |
| Aan/To         |                      |          |                  | Date    | 3.2.2  |
| Vir/For        | Betaal<br>Pay        |          |                  |         | of Toonder<br>or Bearer  |
| Saldo R        | Die bedrag van       |          | 3.2.3            |         |  |
| Dep R          | The sum of           |          |                  |         | 3.2.4  |
| Totaal/Total R |                      |          |                  |         |  |
| Tjek/Cheque R  |                      |          |                  |         |  |
| Totaal/Total R |                      |          |                  |         |  |
|                | 2520                 | 334567/: | 11223344556677/: | 2520    | <br>Bakgat Boerdery<br>Bakgat Farming |

Complete the above cheque and ensure that it is safeguarded against fraudulent actions. Write the correct information next to the question number (3.2.1–3.2.4) in the ANSWER BOOK. (4)

- 3.3 Depreciation can be calculated in various ways. Two such methods are the straight-line method or cost price method and the diminishing-balance method or book value method.
  - 3.3.1 Define the term *depreciation*. (2)
  - 3.3.2 Use the straight-line method to calculate the depreciation of a vehicle bought for R200 000 with a salvage value of R10 000 and an expected useful lifespan of 10 years.

The formula for the straight-line method is given as:

$$D = \frac{CP - S}{L}$$

where:

- D = Depreciation
- CP = Cost price
- S = Salvage value
- L = Lifespan

(2)

3.4

The information below is part of a farm's vegetable enterprise records. Use the information to answer the questions that follow.

**TRANSACTIONS:**

- Land preparation, R10 000
- Selling of cucumbers, R11 500
- Seed, R6 500
- Planting, R6 000
- Casual labour, R8 000
- Selling of tomatoes, R20 000
- Fuel and lubricants, R10 000
- Fertiliser, R10 000
- Disease, pest and weed control, R10 000
- Selling of cabbages, R9 400
- Repair and maintenance, R5 500
- Packaging and marketing, R4 000
- Selling of beetroot, R28 000

3.4.1 Redraw the table below in the ANSWER BOOK and complete it by entering the information in the appropriate columns and calculating the totals.

**INCOME STATEMENT FOR YEAR ENDING  
31 DECEMBER 2014**

| <b>EXPENDITURE</b> | <b>RAND</b> | <b>INCOME</b> | <b>RAND</b> |
|--------------------|-------------|---------------|-------------|
|                    |             |               |             |
| <b>TOTAL</b>       |             | <b>TOTAL</b>  |             |

(5)

3.4.2 Determine whether the farm had a profit or loss for this period and substantiate your answer with calculations.

(3)

3.4.3 List at least THREE possible solutions addressing the high expenditure without reducing the size of the vegetable enterprise.

(3)

3.5

A farmer had the following balances on 31 July 2013:

- Cash – R2 000
- Capital investment – R115 000
- Land (at cost) – R100 000
- Bank overdraft – R15 000
- Stock (at cost) – R20 000
- Debtors – R13 000
- Mortgage loan – R120 000
- Implements – R25 000
- Second-hand tractor – R50 000
- Buildings (at cost) – R50 000
- Creditors – R10 000

Use the above data to complete the missing information in the Balance Sheet below. Include values where applicable. Write only the answer next to the question number (3.5.1–3.5.6) in the ANSWER BOOK.

| ASSETS               | RANDS   | LIABILITIES              | RANDS        |
|----------------------|---------|--------------------------|--------------|
| Fixed assets         |         | Capital investment       | 115 000      |
| <b>3.5.1</b> →       |         |                          |              |
| Buildings (at cost)  | 50 000  | Mortgage loan            | 120 000      |
| Movable assets       |         |                          |              |
| <b>3.5.2</b> →       |         |                          |              |
| Implements (at cost) | 25 000  |                          |              |
|                      |         |                          |              |
| Current assets:      |         | Current liabilities:     |              |
| Stock (at cost)      | 20 000  | <b>3.5.5</b> →           |              |
| <b>3.5.3</b> →       |         | Bank overdraft           | 15 000       |
| <b>3.5.4</b> →       |         |                          |              |
|                      |         |                          |              |
| <b>Total assets</b>  | 260 000 | <b>Total liabilities</b> | <b>3.5.6</b> |

(6)

3.6 Preparing a business plan is important for a progressive farmer. Recommend FIVE essential steps that should be taken when preparing a business plan. (5)

3.7 A farmer has the option of using *contract marketing to supermarkets* or *farm-gate marketing*. Briefly distinguish between these TWO marketing channels. (4)

3.8 Market exchange is the process of selling and buying where the price of the product is established.

3.8.1 Define the term *fixed price*. (2)

3.8.2 Explain the advantages of a fixed price for an agricultural product. (3)

3.8.3 Name FOUR marketing strategies that the producer can use that are not too costly. (4)

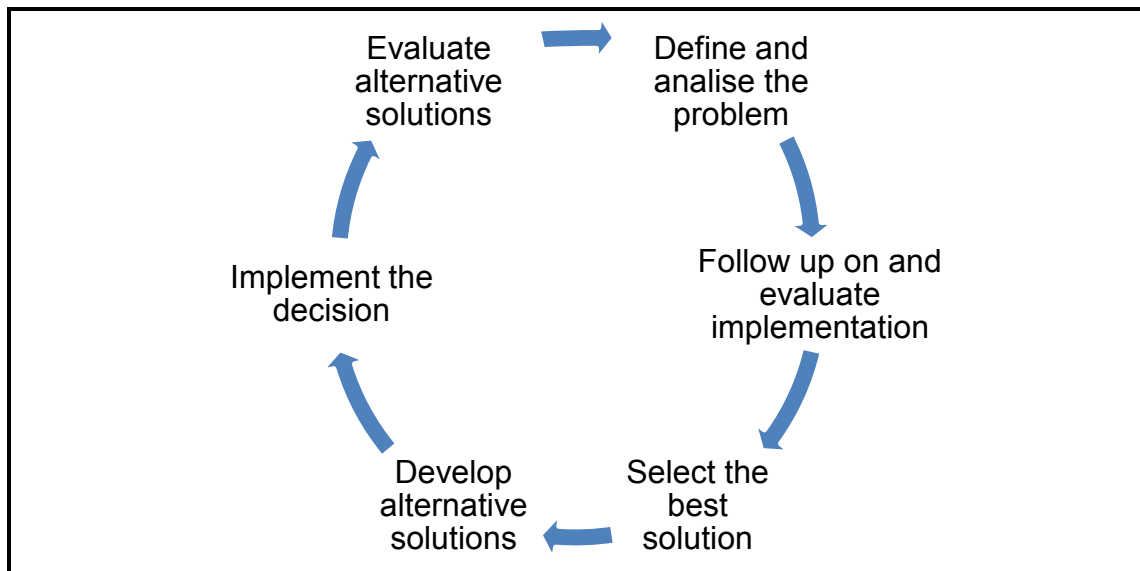
3.9 Discuss diversification as a business survival strategy. (3)

[50]

**QUESTION 4: HARVESTING, PROCESSING AND MANAGEMENT**

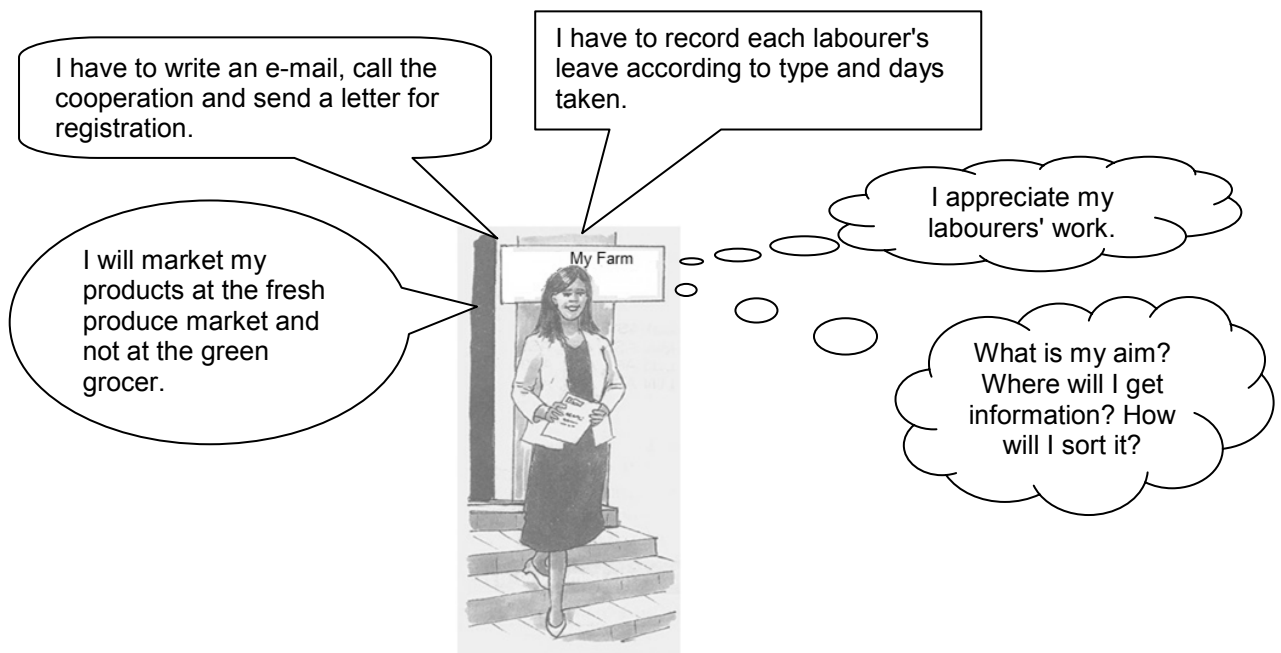
Start this question on a NEW page.

4.1 Decision-making is part of the management process of a farm. Study the flow diagram on the decision-making aspects below and arrange them chronologically (in the correct order).



(6)

4.2 Examples of daily management tasks are given in the picture below. State the FIVE managerial tasks in the picture below.



(5)

- 4.3 Consumers find it difficult to use unharvested agricultural products.
- 4.3.1 Define *harvesting* of an agricultural crop. (2)
- 4.3.2 Give the chronologically steps that a vegetable crop or soft fruit will follow from harvesting until it reaches the supermarket. (6)

4.4 Processing involves changing a raw product into a form that is easier for the consumer to use.

- 4.4.1 Explain fermentation as a method of preserving farm products. (4)
- 4.4.2 Differentiate between *processed food* and *raw food products* under the following. Redraw the table below in the ANSWER BOOK and complete it.

|                            | Raw food product | Processed product |
|----------------------------|------------------|-------------------|
| Shelf life                 |                  |                   |
| Packaging and distribution |                  |                   |

- 4.5 Describe FOUR hygienic (sanitation) practices that farm workers should adhere to in the food processing industry. (4)
- 4.6 Different methods are used to package farm produce.
- 4.6.1 State FOUR advantages of packaging food products. (4)
- 4.6.2 Tabulate THREE ways of packaging food products with reference to material rigidity and give ONE example of material used in each case.

| Way of packaging | Example of material used |
|------------------|--------------------------|
|                  |                          |

- 4.7 Agritourism is a broad concept involving the agricultural industry and several facets of tourism.
- 4.7.1 Name the TWO main groups of tourists in South Africa. (2)
- 4.7.2 Redraw the table below in the ANSWER BOOK and briefly distinguish between the FOUR types of tourists.

| Types of tourists      | Description |
|------------------------|-------------|
| Educational tourists   |             |
| Adventure tourists     |             |
| Cultural tourists      |             |
| Product route tourists |             |

- 4.7.3 Discuss awareness as a requirement for successful agritourism. (3)

**TOTAL SECTION B: 150**  
**GRAND TOTAL: 200**