



# higher education & training

Department:  
Higher Education and Training  
**REPUBLIC OF SOUTH AFRICA**

N580(E)(N14)H

**NATIONAL CERTIFICATE**

**FINANCIAL MANAGEMENT: FARMING N4**

(4090484)

**14 November 2018 (X-Paper)**

**09:00–12:00**

Nonprogrammable calculators may be used.

This question paper consists of 10 pages.

**DEPARTMENT OF HIGHER EDUCATION AND TRAINING**  
**REPUBLIC OF SOUTH AFRICA**  
NATIONAL CERTIFICATE  
FINANCIAL MANAGEMENT: FARMING N4  
TIME: 3 HOURS  
MARKS: 200

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**INSTRUCTIONS AND INFORMATION**

1. Answer ALL the questions.
  2. Read ALL the questions carefully.
  3. Number the answers according to the numbering system used in this question paper.
  4. Use only BLACK or BLUE ink.
  5. Balance sheets and income statements should each be done on two facing sheets where necessary.
  6. Write neatly and legibly.
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**QUESTION 1: THE FARM MANAGEMENT INFORMATION SYSTEM**

1.1 Define the term *scientific farm management*. (2)

1.2 To make the best decision on aspects like branches of production, degree of mechanization, etc., the farmer must have information about the farm.

Which information about the farm is necessary? (6)

1.3 Before farmers can decide which information they ought to gather, they need to know certain things about their farming enterprise.

Discuss THREE of these things. (6)

1.4 Name FOUR auxiliary statements that the farmer should have at his disposal. (4)

1.5 Give TWO important aspects to consider when drawing up the inventory. (4)

1.6 The following information is available for an asset to be purchased:

|                                   |   |          |
|-----------------------------------|---|----------|
| Cost price of the asset           | = | R150 000 |
| Expected scrap value of the asset | = | R15 000  |
| Expected life period of the asset | = | 5 years  |

**INSTRUCTION:** Use the straight-line method of depreciation to answer the following questions:

1.6.1 What will be the annual depreciation value of the asset? (5)

1.6.2 What is the book value of the asset in its second year? (3)

1.6.3 Depreciation of the asset decreases annually by the same amount until salvage or scrap value is reached.

Show by means of calculation how scrap value will be reached at the end of the 5<sup>th</sup> year. Give ALL the steps. (10)

1.7 COLUMN A in the table below is a list of farming assets, and in COLUMN B are a number of guidelines for valuing assets of a farming enterprise. The farmer needs to use the guidelines in COLUMN B to set up an inventory of the farming assets in COLUMN A.

Choose a guideline from COLUMN B to match an asset in COLUMN A. Write only the letter (A–G) next to the question number (1.7.1–1.7.5) in the ANSWER BOOK.

| COLUMN A |                                                                             | COLUMN B |                                                         |
|----------|-----------------------------------------------------------------------------|----------|---------------------------------------------------------|
| 1.7.1    | Unused seeds, fertiliser, livestock remedies                                | A        | establishment cost                                      |
| 1.7.2    | Harvested grains and wool clips                                             | B        | conservative market value                               |
| 1.7.3    | Sugar cane plantations                                                      | C        | lowest of either the purchase price or the market price |
| 1.7.4    | Land                                                                        | D        | cost price less the accumulated depreciation            |
| 1.7.5    | Machinery and implements (assets obtained after establishment of inventory) | E        | net sales value                                         |
|          |                                                                             | F        | current market value                                    |
|          |                                                                             | G        | initial value                                           |

(5 × 2)

(10)  
[50]

**QUESTION 2: PRODUCTION ECONOMICS PRINCIPLES**

- 2.1 What does the production function indicate? (2)
- 2.2 Information obtained from the production function cannot be used alone to determine the most profitable input or production level.  
Give TWO additional types of information that can be required. (4)
- 2.3 In the production function, when do we say maximum profit has been reached? (2)
- 2.4 An input/input ratio deals with various combinations of inputs  $X_1$  and  $X_2$ , which will produce the same output or realise the same production.  
Name the type of combination that is described in each of the following cases:
- 2.4.1 As the quantity of  $X_1$  decreases, more and more units of  $X_2$  are required to replace one unit of input  $X_1$ .
- 2.4.2 On input,  $X_1$  can always be substituted in the same ratio with  $X_2$  to generate the same production.
- 2.4.3 Inputs are used in the production process according to a fixed ratio and no substitution takes place.
- 2.4.4 As the quantity of  $X_1$  increases, fewer and fewer units of  $X_2$  must be used to replace one unit of input  $X_1$ . (4 × 2) (8)
- 2.5 In agriculture, five general products/product relationships usually occur.  
Discuss the following products/product relations by means of examples.
- 2.5.1 Complementary products
- 2.5.2 Supplementary products
- 2.5.3 Joint products
- 2.5.4 Antagonistic products (4 × 3) (12)

- 2.6 The following table is part of a production function that correlates the amount of nitrogen and the amount of maize that is produced when all other inputs and circumstances are the same.

| INPUT LEVEL<br>PHOSPHATE APPLICATION (X) KG/HA | TOTAL MAIZE YIELDS<br>MAIZE OUTPUT (Y) KG/HA |
|------------------------------------------------|----------------------------------------------|
| 0                                              | 0                                            |
| 10                                             | 300                                          |
| 20                                             | 820                                          |
| 30                                             | 1 150                                        |
| 40                                             | 1 310                                        |

Assume that the following figures are applicable:

|                                |         |
|--------------------------------|---------|
| Total fixed costs per hectare  | R400,00 |
| Input price (phosphate) per kg | R5,00   |
| Selling price per kg of maize  | R2,50   |

**INSTRUCTION:** Calculate the following, using the information from above. Show ALL calculations and formulae.

- 2.6.1 The marginal return if the input level of phosphate is increased from 0 kg/ha to 10 kg/ha (5)
- 2.6.2 The total variable cost at an input level of 30 kg phosphate per hectare (4)
- 2.6.3 The average variable cost at an input level of 30 kg phosphate per hectare (5)
- 2.6.4 The total cost at an input level of 30 kg phosphate per hectare (3)
- 2.6.5 The average total cost at an input level of 30 kg phosphate per hectare (5)
- [50]**

**QUESTION 3: THE FARMING BALANCE SHEET**

3.1 Indicate whether the following statements are TRUE or FALSE. Choose the answer and write only 'True' or 'False' next to the question number (3.1.1–3.1.10) in the ANSWER BOOK.

- 3.1.1 The farm balance sheet reflects the financial position of a farming enterprise on the last day of the financial year.
- 3.1.2 Medium-term liabilities are debts that are repayable over a period that can vary from one to ten years.
- 3.1.3 Net worth is the sum of the value of the assets and the extent of the total debt.
- 3.1.4 The enterprise is said to be insolvent when the debts are equal to the value of the assets.
- 3.1.5 Foreign capital is represented by the debt of the enterprise plus the value of leased land.
- 3.1.6 Capital structure refers to the combination of the interest in the assets of the enterprise.
- 3.1.7 Liabilities are grouped into current liabilities, medium-term liabilities, long-term liabilities and total capital employed.
- 3.1.8 Net-current assets refer to the difference between the value of current assets and the long-term liabilities.
- 3.1.9 Total capital employed is the sum of the value of assets and market value of the leased land.
- 3.1.10 Total assets are the sum of the value of the assets.

(10 × 1) (10)

- 3.2 On 31 December 2016 the values of the assets and liabilities of a farming enterprise were as follows:

| DESCRIPTION                                  | VALUE (R) |
|----------------------------------------------|-----------|
| Cash in the bank                             | 3 100     |
| Petty cash                                   | 200       |
| Inventory (raw materials)                    | 31 000    |
| Prepaid insurance                            | 1 000     |
| Wool on sheep                                | 3 500     |
| Co-operative levy fund                       | 1 200     |
| Office equipment                             | 20 000    |
| Tata truck                                   | 150 000   |
| Accumulated depreciation on movable assets   | 70 000    |
| Land owned                                   | 1 200 000 |
| Buildings                                    | 200 000   |
| Accumulated appreciation on land             | 20 000    |
| Accumulated depreciation on buildings        | 30 000    |
| Overdraft at ABSA                            | 25 000    |
| Provision for income tax                     | 6 100     |
| Bond payable at Nedbank                      | 1 050 000 |
| Land rented                                  | 60 000    |
| Repayment agreement at Wesbank for the truck | 10 000    |

**INSTRUCTION:** Use a double page in the ANSWER BOOK and draw up a balance sheet as at 31 December 2016.

**NOTE:** For every incorrect entry a mark will be deducted.

(40)  
[50]

**QUESTION 4: THE FARMING INCOME STATEMENT**

- 4.1 The following financial and production information is made available regarding a certain farm that has a poultry branch and a crop branch.

| DESCRIPTION                                     | VALUE(R) |
|-------------------------------------------------|----------|
| <b>Farm products sold</b>                       |          |
| Poultry sold for meat                           | 70 000   |
| Eggs sold to Checkers                           | 350 000  |
| Manure from poultry branch sold to another farm | 20 000   |
| Maize grains transported to milling company     | 200 000  |
|                                                 |          |
| <b>Stock at the start of the year</b>           |          |
| Eggs producing chickens                         | 150 000  |
| Packaging for eggs                              | 4 000    |
| Diesel                                          | 10 000   |
|                                                 |          |
| <b>Stock at the end of the year</b>             |          |
| Eggs producing chickens                         | 250 000  |
| Packaging for eggs                              | 3 000    |
| Diesel                                          | 4 000    |
|                                                 |          |
| <b>Expenses for the year</b>                    |          |
| Electricity                                     | 60 000   |
| Vehicle maintenance                             | 30 000   |
| Poultry slaughtered for labourers               | 15 000   |
| Short-term insurance                            | 20 000   |
| Land leased from neighbour                      | 9 000    |
| Wages for permanent labourers                   | 70 000   |
| Feed purchased                                  | 130 000  |
| Interest paid on land bank loans                | 15 000   |
| Fertiliser purchased                            | 20 000   |
| Diesel purchased                                | 30 000   |
| Packaging for eggs                              | 20 000   |
|                                                 |          |
| <b>Other information provided</b>               |          |
| Insurance paid for stolen chickens              | 25 000   |
| Manure from poultry used for crops              | 10 000   |
| Eggs for own consumption                        | 6 000    |
| Eggs for employees' rations                     | 5 000    |

**INSTRUCTION:** Use the above information to answer the following questions:

|     |       |                                                                                      |             |
|-----|-------|--------------------------------------------------------------------------------------|-------------|
| 4.1 | 4.1.1 | Define the term <i>gross production value</i> (GPV).                                 | (2)         |
|     | 4.1.2 | Calculate the gross production value for the poultry branch.                         | (11)        |
|     | 4.1.3 | Calculate the gross production value for the crop branch.                            | (2)         |
|     | 4.1.4 | Calculate the gross production value for the farm as a whole.                        | (2)         |
| 4.2 |       | Calculate the packaging costs for the poultry branch.                                | (5)         |
| 4.3 |       | Calculate the diesel expenses.                                                       | (5)         |
| 4.4 |       | Calculate the total expenses for the farm: production, marketing and administrative. | (13)        |
| 4.5 | 4.5.1 | Explain what <i>net farm income</i> (NFI) represents.                                | (2)         |
|     | 4.5.2 | Calculate the net farm income for the enterprise.                                    | (3)         |
| 4.6 | 4.6.1 | Explain what <i>farm profit</i> represents.                                          | (2)         |
|     | 4.6.2 | Calculate the farm profit for the financial year.                                    | (3)         |
|     |       |                                                                                      | <b>[50]</b> |

**TOTAL: 200**