higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE

FINANCIAL MANAGEMENT: FARMING N4

(4090484)

15 November 2019 (X-Paper)
09:00–12:00

Nonprogrammable calculators may be used.

This question paper consists of 9 pages.

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DEPARTMENT OF HIGHER EDUCATION AND TRAINING
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE
FINANCIAL MANAGEMENT: FARMING N4
TIME: 3 HOURS
MARKS: 200

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 pens
5. Balance sheets and income statements should be done on TWO sheets facing one another where necessary.
6. Indicate units where applicable.
7. Write neatly and legibly.

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QUESTION 1: THE FARM MANAGEMENT INFORMATION SYSTEM

1.1 You are starting a farm management information system for the farm that you have inherited as there is currently no proper information system.

Provide the guidelines that you would use to place a value on the following assets for the inventory.

1.1.1 Commercial livestock

1.1.2 Harvested grains

1.1.3 Fruits in the orchard

1.1.4 Land

1.1.5 Insured tree plantations

1.1.6 Unused seeds

(6 × 2) (12)

1.2 Give the TWO basic aims of calculating depreciation and depreciating assets. (2 × 2) (4)

1.3 Discuss THREE things a farmer needs to know about his/her farming enterprise before deciding which aspects of farming management information system he ought to consider. (3 × 2) (6)

1.4 Answer the following questions based on the establishment of an inventory:

1.4.1 Name TWO assets that must be excluded from an inventory.

1.4.2 Give TWO important aspects to consider when drawing up the inventory.

(2 × 2) (4)

1.5 The following information regarding a tractor to be purchased on the farm is made available:

DESCRIPTION	UNIT
• Purchase price of the tractor	R250 000
• Expected useful life	10 years
• Expected salvage value	R20 000

INSTRUCTIONS:

Use the diminishing balance method to calculate the following, showing the formulae and calculations, where applicable:

1.5.1 The rate of depreciation that will be applied. (3)

1.5.2 The capital recovery and depreciation of the tractor for the first two years. (6)

1.5.3 The book value (initial value) of the tractor at the start of the third year. (4)

1.6 Give TWO disadvantages of using the straight-line method of depreciation. (2 × 2) (4)

1.7 Indicate the ways in which the initial value can be determined referring to the following situations:

1.7.1 If the original cost price of the particular asset is known.

1.7.2 If the original cost price of the particular asset is not known. (2 × 2) (4)

1.8 List THREE matters relating to personnel of which human resource records must keep track of. (3)

[50]

QUESTION 2: PRODUCTION ECONOMIC PRINCIPLES

2.1 Briefly explain what is meant by the following terms:

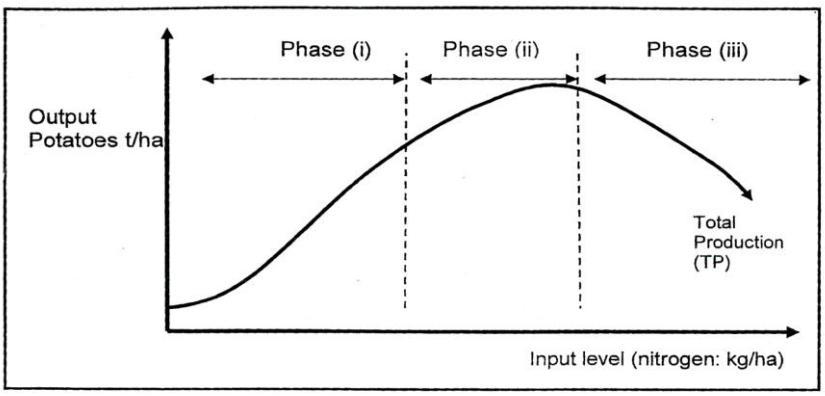
2.1.1 A production function

2.1.2 Marginality

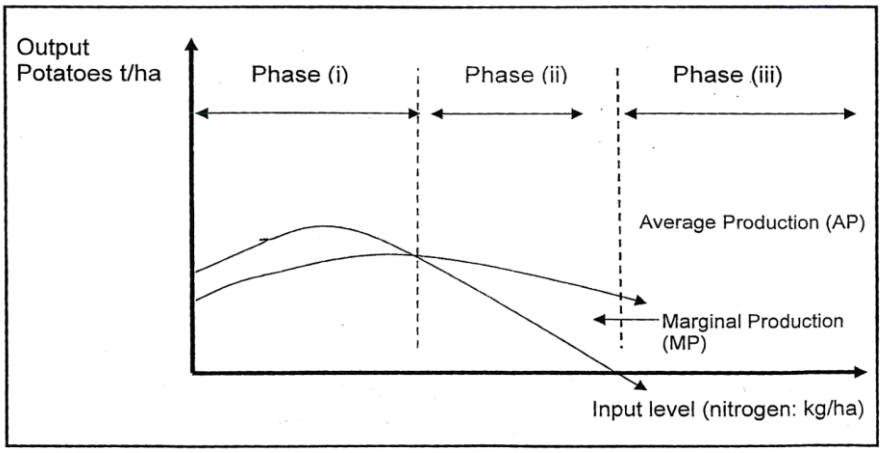
2.1.3 State the law of diminishing marginal returns. (3 × 2) (6)

2.2 An example of a typical production function is when the production of a product such as potatoes varies as one of such inputs such as nitrogen fertiliser varies while the remainder of the inputs stays constant.

The following graphs show an example of this type of production function:



GRAPH 1



GRAPH 2

Study the graphs on production functions and discuss the following THREE phases, in each phase indicate whether the phase is 'Rational' or 'Irrational'. Give a reason for your answer.

2.2.1 Phase I (8)

2.2.2 Phase II (6)

2.2.3 Phase III (5)

2.3 Indicate whether the following statements are TRUE or FALSE. Choose the answer and write only 'True' or 'False' next to the question number (2.3.1–2.3.10) in the ANSWER BOOK.

2.3.1 Marginal cost can be determined by dividing the change in total cost by the change in production.

2.3.2 Marginal product is determined by dividing the change in total product by the change in input.

2.3.3 The maximum profit per hectare is only achieved when the production is at maximum potential.

2.3.4 The rate of physical substitution is the ratio of additional input (X_1) required to generate different production with a reduction of another input.

2.3.5 A decreasing rate of substitution implies that as the quantity of X_1, increases more and more units of X_2 are required to replace one unit of input X_1.

2.3.6 Total cost is the sum of the total variable cost and total fixed cost.

2.3.7 Total variable cost is the product of input and input price.

2.3.8 Supplementary products are obtained where a change in the production of one product has no effect on the production of another.

2.3.9 The optimum point occurs where the additional income from an additional unit of an output is not equal to the cost involved in its production.

2.3.10 Least cost combination of inputs is the point where the physical rate of substitution of the two inputs is equal to the inverted price of the inputs.

(10 × 1) (10)

2.4 The table below is a part of production function of canola yield to phosphate application with ALL other factors remaining the same:

Input level Phosphate application (kg/ha)	**Total canola yield (kg/ha)**
X	**Y**
20	400
40	910
60	1 350
80	1 710
100	1 960

2.4.1 The average product at an input level of 60 kg phosphate per hectare (5)

2.4.2 The marginal yield if the input level of phosphate is increased from 40 kg/ha to 60 kg/ha (6)

2.4.3 Which other information is necessary (besides the production function) to determine what most profitable input level will be.

(2 × 2) (4)

[50]

QUESTION 3: THE FARMING BALANCE SHEET

3.1 The farm balance sheet is a systematic exposition/layout of the assets or possessions and liabilities or interest in the farming enterprise with their respective values.

Supply the correct term/word for each of the following description that are related to the balance sheet.

3.1.1 The amount of money that the farmer would retain if he/she were to sell all the farm assets.

3.1.2. Where the debts in the farming enterprise exceed the value of assets.

3.1.3 Assets that are used in the production process to produce other assets that can be sold.

3.1.4 The mutual relationship between the different types of assets and liabilities.

3.1.5 The debt of the enterprise plus the value of the leased land.

(5 × 2) (10)

3.2 Briefly explain the TWO purposes of drawing up the balance sheet in the farming enterprise. (2)

3.3 Briefly explain what you would use the value of the leased land for in relation to calculating a form of capital. (2)

3.4 The following information regarding assets and liabilities is given on the 31 December 2016.

DESCRIPTION	VALUE (R)
Electricity account paid in advance	6 000
Deferred bonus payment funds	25 000
Sugar-cane plantation on the land for ten years	20 000
Cattle feed purchase but not used	10 000
Positive bank balance at Standard Bank	35 500
Office equipment	25 000
Tractors	130 000
VAT owed to the farmer by receiver of revenue	20 000
Weedkillers in store	2 000
Debtors	6 000
Kraals and fences	50 000
Value of extra land rented from the neighbour	500 000
Land purchased	750 000
Renovations of the buildings	15 000
Outstanding account at NTK co-operative	3 000
Bank overdraft at ABSA	30 000
Balance of bond at ABSA for the land bought	400 000
Balance 5 year purchase agreement with Standard Bank	80 000

Determine the following totals for the farming enterprise as they will appear in a balance sheet. Show ALL calculations in detail.

NOTE: A negative mark will be given for each item entered incorrectly.
TIP: Draw up a balance sheet.

3.4.1 Current liabilities (3)

3.4.2 Medium-term liabilities (2)

3.4.3 Long-term liabilities (2)

3.4.4 Total debt (3)

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3.4.5	Net worth	(3)
3.4.6	Total liabilities	(1)
3.4.7	Current assets	(7)
3.4.8	Investment and other	(2)
3.4.9	Movable assets	(4)
3.4.10	Fixed assets	(4)
3.4.11	Total assets	(2)
3.4.12	Value of leased field	(1)
3.4.13	Total capital invested	(2)
		[50]

QUESTION 4: THE FARMING INCOME STATEMENT

The following financial information and production details are provided for a financial year about a certain farmer that farms with sheep and lucerne.

	R
Rent paid for part of the lucerne field	20 000
Interest paid on land bank loans	15 000
Repayment on loans (excluding interest)	10 000
Bales of lucerne sold	160 000
Bales of lucerne fed to sheep	30 000
Fuel stock at the beginning of the year	4 000
Fuel stock at the end of the year	2 000
Fuel purchased during the year	12 000
Ewes bought on credit by the farmer	10 000
Wages of permanent labourers	48 000
Depreciation on improvements and equipment	32 000
Veterinary costs and medicines	20 000
Sheep sold, money not received yet	130 000
Sale of wool to BKB	30 000
Sheep slaughtered for domestic use	2 500
Sheep slaughtered for the labourers	4 000
Unsold wool stock at the beginning of the year	30 000
Unsold wool stock at the end of the year	10 500
Value of sheep at the end of the year	270 000
Value of sheep at the beginning of the year	250 000
Maintenance of vehicles and implements	35 000
Electricity	50 000
Auxiliary farm expenses	9 000
Value of sheep stolen	15 000
Protective clothing for labourers	6 000

Calculate the following showing ALL calculations and formulae where applicable:

4.1	The gross production value for the sheep branch	(10)
4.2	The gross production value for the lucerne branch	(4)
4.3	The gross production value for the farm as a whole	(5)
4.4	The cost of labour for the year	(5)
4.5	The cost of fuel for the year	(5)
4.6	The total production, marketing and administration costs for the year	(11)
4.7	The net farm income	(5)
4.8	The farm profit	(5)
		[50]

TOTAL: 200

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