



basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

NATIONAL SENIOR CERTIFICATE

GRADE 12

AGRICULTURAL MANAGEMENT PRACTICES

FEBRUARY/MARCH 2015

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 dominant factor which determines whether a region is suitable for the cultivation of a particular crop:

- A Soil water
- B Climate
- C Biotic factors
- D Planning

1.1.2 Human energy required to ensure primary agricultural production:

- A Climate
- B Capital
- C Labour
- D Land

1.1.3 An implement that is used to make a furrow and then places seed and fertiliser into the furrow at a controlled rate:

- A Planter
- B Plough
- C Harrow
- D Ridger

1.1.4 Economic farm planning that gives you information about your farm's liquidity:

- (i) Cash flow
- (ii) Income statement
- (iii) Physical data
- (iv) Trial balance

Choose the most appropriate combination for the description above:

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



- 1.1.5 This type of loan is given for investment in fixed assets:
- A Short-term loan
 - B Medium-term loan
 - C Long-term loan
 - D Quarterly loan
- 1.1.6 Paying money into your banking account is called a ...
- A loan.
 - B withdrawal.
 - C deposit.
 - D budget.
- 1.1.7 A threat for every farm business:
- A HIV/Aids
 - B Malaria
 - C Salinisation
 - D Sedimentation
- 1.1.8 Enterprises that use agricultural raw material to manufacture food products:
- A Retailers
 - B Food processing companies
 - C Exporters and importers
 - D Brokers
- 1.1.9 A management aspect measuring the outcomes by implementing your plan:
- A Communication
 - B Coordinating
 - C Monitoring
 - D Planning
- 1.1.10 Processes in the supply chain are:
- (i) Sales
 - (ii) Distribution
 - (iii) Producing
- Choose the most appropriate order for the processes in the supply chain above:
- A (i), (ii) and (iii)
 - B (iii), (ii) and (i)
 - C (ii), (iii) and (i)
 - D (i), (iii) and (ii)

(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	Motivation	A	a method of pasteurising liquids
1.2.2	Business plan	B	an organisation that supplies research information to producers
1.2.3	Agricultural Research Council	C	the economic term used when the value of an item decreases over time
1.2.4	Market equilibrium	D	indicates a condition where the quantity of a product that buyers require is exactly equal to the quantity which sellers wish to sell
1.2.5	Law of diminishing returns	E	a management aspect that applauds the effort of the workers
1.2.6	Depreciation	F	tests the correctness or double entries and the accuracy of the accounts
1.2.7	Variable costs	G	shows how the business will function, the layout, and plans for the operation of the enterprise
1.2.8	Trial balance	H	includes money spent on casual labour, livestock feed, fertiliser and seeds
1.2.9	Blanching	I	the decrease in the rate of improvement of the yield despite the increase in a specific production factor
1.2.10	Marketing chain	J	can be defined in physical terms as everything that happens to farm products from the time they are loaded at the farm gate until they get to the consumer's table
		K	primarily aimed at eliminating enzyme systems while the microbe population is reduced
		L	gives the effect of all the unknown in the production process

(10 x 2)

(20)



- 1.3 The following statements are INCORRECT. Change the UNDERLINED word to make each statement CORRECT. Write only the correct word next to the question number (1.3.1–1.3.10) in the ANSWER BOOK, for example 1.3.11 Climate.
- 1.3.1 A business plan outlines how the business should advertise, promote and sell their produce.
- 1.3.2 Labour is the most basic resource of the agricultural industry which is utilised to produce products.
- 1.3.3 The production system where different crops are produced on the same piece of land in consecutive years is a monoculture production system.
- 1.3.4 The goal of extensive farming systems is to gather and analyse soil variability and crop information to maximise input efficiency in farming areas.
- 1.3.5 The sum of all the costs for items like licences, property tax and bank fees is known as variable cost.
- 1.3.6 The budget for the operation of the farm for a specific period of time, usually a year, is called the enterprise budget.
- 1.3.7 Product inelasticity is the change in the amount of produce that customers need at a certain time.
- 1.3.8 Cooperative marketing is a marketing system where the producers can sell the produce at a price that is set by the minister of agriculture.
- 1.3.9 A dividend is the arrangement between the private sector or a company and land reform beneficiaries.
- 1.3.10 The income statement shows all the figures relating to movement of money into or out of the farmer's account for a specific period of time. (10 x 1) (10)

TOTAL SECTION A: 50



SECTION B**QUESTION 2: FARM PLANNING**

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

2.1 The physical characteristics of soil determine the productivity of any crop production enterprise.

2.1.1 State **FOUR** main factors that will influence soil productivity. (4)

2.1.2 Explain **THREE** farming practices that will result in the conservation of soil moisture. (3)

2.2 A farmer does a soil analysis to determine the use of the soils for different types of farming.

The following data was recorded for 100 g of dry soil:

DATA	LAND A	LAND B
Average soil depth	0,5 m	3 m
Water capacity (100 mℓ)	40%	80%
Water infiltration (100 mℓ)	10 seconds	30 seconds
Water drainage (100 mℓ)	15 seconds	45 seconds
P content	10 d.p.m.	50 d.p.m.
K content	20 d.p.m.	40 d.p.m.
Soil pH	4,5	6,5

2.2.1 Deduce from the table above the land (**A** or **B**) that the farmer will most probably use to cultivate. (1)

2.2.2 Explain your answer to QUESTION 2.2.1. Give **TWO** reasons. (2)

2.3 The main aim of farm planning is to utilise soils in such a way that the highest production can be maintained. Camps are laid out for livestock grazing according to soil type or natural pastures.

Give **THREE** major reasons why a livestock farmer would lay out camps on pastures. (3)

2.4 A budget is a planning instrument which represents the activities of an enterprise for a particular future period in monetary terms.

2.4.1 Indicate **TWO** of the initial factors required for developing a budget. (2)

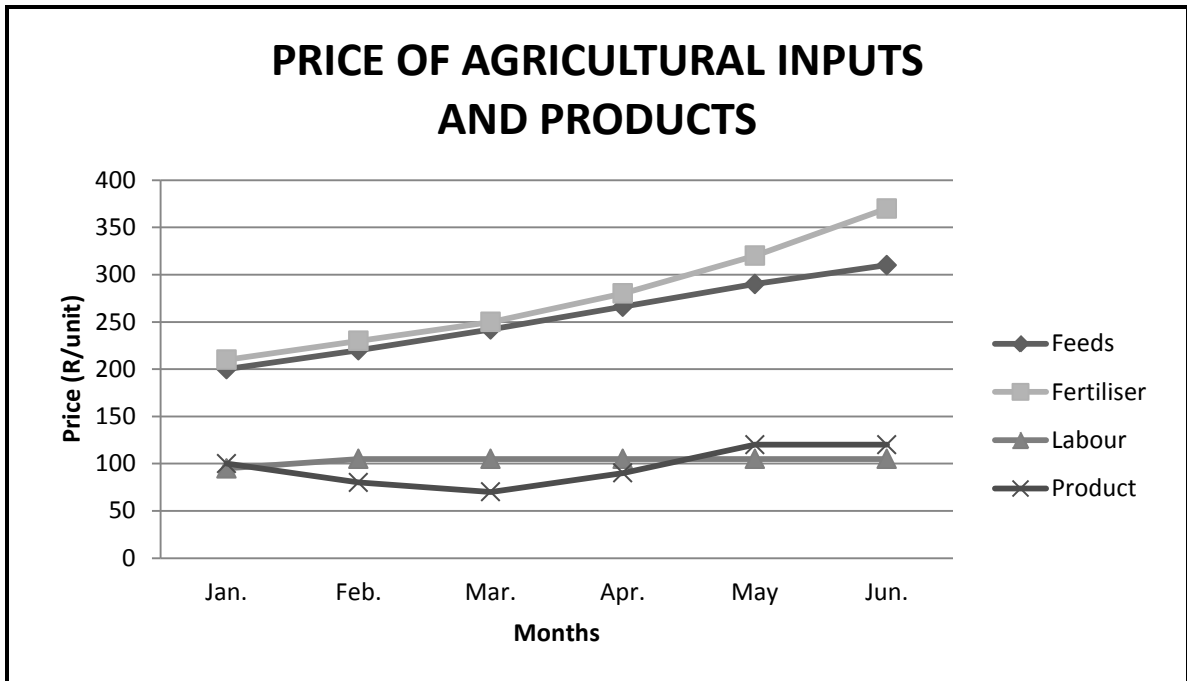
2.4.2 Describe **THREE** important indicators that a cash flow budget would show to the farmer. (3)



- 2.5 The Occupational Health and Safety Act, 1993 (Act 85 of 1993) stipulates that workers must wear protective clothing, especially those working in the food processing industry and at abattoirs.
- 2.5.1 List FOUR types of protective clothing that should be given to a worker employed in the industry above. (4)
- 2.5.2 State FOUR impacts of HIV/Aids and related illnesses on the South African agricultural industry. (4)
- 2.6 Farmers must use herbicides and pesticides responsibly according to the Conservation of Agricultural Resources Act, 1983 (Act 43 of 1983).
- Indicate the measures that a farmer should implement to prevent environmental pollution. (5)
- 2.7 Precision farming is the use of technologies such as global positioning systems, sensors and aerial images (from satellites) to assess the variations in soil's potential productivity.
- 2.7.1 Tabulate TWO functions each for the global positioning system (GPS) and the geographic information system (GIS). (4)
- 2.7.2 Give the meaning of *VRT* as it is used in precision farming and state the function of this technological tool. (2)
- 2.8 Agriculture has played a key role in the development of human civilisation. At first farmers produced only enough products for their own households, with a small portion left for bartering. There has been a shift in the agricultural industry over the last 100 years. Machines replaced animals and humans at a fast rate. Some farmers produced more than needed by their households which led to national and international trade of produce.
- Refer to the paragraph above and deduce THREE important functions of agribusiness. (3)



2.9 The graph below shows the prices of agricultural inputs. Answer the questions that follow.



2.9.1 Explain the effect of the change in price of different inputs on the profit of the enterprise. (2)

2.9.2 Analyse the graph and set up a hypothesis regarding the budget requirement for the next six months. (8)

[50]



QUESTION 3: ENTREPRENEURSHIP, RECORDING, MARKETING AND BUSINESS PLANNING

Start this question on a NEW page.

3.1 Many farming enterprises rely on computers and information technology to handle their business data. There is a variety of computers available.

Name TWO types of computers a farmer can use for the farming enterprise. (2)

3.2 The data below indicates the rainfall records for a crop farmer for the 2012/2013 rain season in the average to low rainfall area of South Africa.

- October – 45 mm
- November – 70 mm
- December – 65 mm
- January – 55 mm
- February – 50 mm
- March – 35 mm
- April – 20 mm

3.2.1 Draw a bar graph to show the distribution of rainfall for this farm. (5)

3.2.2 Write down ONE element of weather which is measured with the instruments listed below to assist the farmer in collecting climatological data. Redraw the table below in the ANSWER BOOK and complete it.

NAME OF INSTRUMENT	ELEMENT OF WEATHER MEASURED
Cup anemometer	
Wet-and-dry-bulb thermometer	
Rain gauge	
Maximum and minimum thermometer	

(4)



3.3 Redraw the table below in the ANSWER BOOK. Complete the table using the given assets as depreciable and non-depreciable assets.

- Fertilisers
- Buildings
- Marketable livestock
- Machinery

DEPRECIABLE ASSETS	NON-DEPRECIABLE ASSETS
1.	1.
2.	2.

(4)

3.4 Banks will not accept deposits if they are not recorded properly on the bank deposit slip.

3.4.1 Name FOUR details that must appear on the deposit slip for the bank to accept the deposit slip.

(4)

3.4.2 Explain the reason for the use of the words 'not negotiable' on a cheque.

(2)

3.5 Study the entries as income and expenditure for livestock farming. Answer the questions that follow.

DATE	ITEM BOUGHT	AMOUNT (R)
03/01/2015	Animal health care products	2 240,00
05/01/2015	Wages for stockman	1 200,00
10/01/2015	500 kg licks @ R136/50 kg	1 360,00
17/01/2015	Transport to abattoir	1 000,00
18/01/2015	Five carcasses sold at R5 000,00 each	25 000,00
22/01/2015	Dehorning equipment	2 570,00
26/01/2015	5 000 kg animal manure sold @ R4,00/kg	20 000,00
30/01/2015	Slaughtering fee	3 000,00

3.5.1 Use the information above and calculate the following values for the enterprise: (Show ALL calculations.)

(a) The total income

(2)

(b) The total expenses

(2)

3.5.2 Determine the profit or loss of this livestock farming enterprise. Show ALL calculations.

(3)



3.6 Describe the marketing function of an agribusiness. (3)

3.7 The information below relates to an employee on a livestock farm who works five days a week.

8-hour working day:

- A rate of R12,70 per hour
- Three hours overtime for this week
- The rate for overtime is 1,5 times the normal rate

Deductions for the week are as follows:

- UIF contribution at a rate of 1% on gross wage
- Social club R15,00 per week

3.7.1 Calculate the employee's gross wage for the week. Show ALL calculations. (3)

3.7.2 Calculate the employee's net wage for the week. Show ALL calculations. (4)

3.7.3 What does the abbreviation *UIF* stand for? (1)

3.7.4 Indicate who, other than the worker, contributes to the UIF. (1)

3.8 The table below indicates the prices of agricultural products which are determined by supply and demand in free marketing. A farmer keeps records of the prices obtained for the products and creates the table below as soon as the products have been sold.

QUANTITY (BOXES PER WEEK)	PRICE (RAND PER BOX)
2 600	10
2 200	14
1 600	20
800	28
600	30

3.8.1 Plot the information provided on a line graph. (6)

3.8.2 The farmer has a profit margin of 25% on each box of the product that is sold at R20.

Calculate the profit the farmer will make if all produce is sold. Show ALL calculations.

(4)
[50]



QUESTION 4: HARVESTING, PROCESSING AND MANAGEMENT

Start this question on a NEW page.

4.1 The entrepreneur who embarks on a value-adding enterprise should consider certain factors. Name FOUR of these factors. (4)

4.2 Processing involves changing the agricultural product from its original form or condition into a consumable commodity.

4.2.1 Redraw the table below in the ANSWER BOOK.

Name THREE agricultural enterprises and describe the different ways in which each agricultural enterprise processes agricultural products.

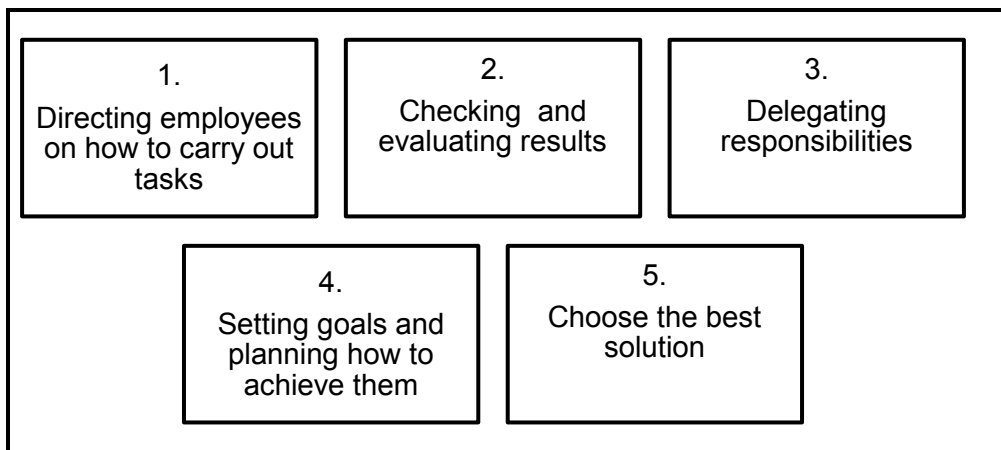
AGRICULTURAL ENTERPRISE	DESCRIBE DIFFERENT WAYS OF PROCESSING

(3 x 2) (6)

4.2.2 Describe TWO disadvantages of processing. (2)

4.3 Management is a production factor that includes functions such as planning, organising and coordinating, implementing, decision-making, control, et cetera.

Analyse the duties below and link each to the relevant management function.



(5)

4.4 A method used to motivate farm workers is to delegate tasks.

4.4.1 Discuss the meaning of *delegate tasks*. (3)

4.4.2 State TWO effects that the delegation of tasks will have on farm workers. (2)



- 4.5 Distinguish between the following types of agritourism:
- 4.5.1 Farm-stay holidays (2)
- 4.5.2 Ecotourism (2)
- 4.6 Agricultural products must be harvested at the correct stage of readiness.
- 4.6.1 Give ONE reason why agricultural products should be harvested at the correct stage of readiness. (1)
- 4.6.2 State THREE factors to consider when planning for the successful harvesting of agricultural products. (3)
- 4.7 Storing and packaging harvested agricultural products is vitally important for food security and a variety of methods is used by farmers.
- 4.7.1 Verify this statement by giving TWO reasons. (2)
- 4.7.2 Name FOUR types of packaging material. (4)
- 4.8 Packed, processed products must be labelled. Certain information must appear on the label as prescribed by law.
- Describe FOUR labelling requirements as determined by current legislation. (4)
- 4.9

The farm manager used cooperative financial services to evaluate the progress of the farming enterprise. The report of the farm evaluation indicated the following aspects:

 - Source documents were not organised.
 - No cash flow statement were created.
 - The farmer was afraid of taking risks.
 - The farm produced good products, but the farmer was blunt and grumpy.
 - The farmer did not know his target markets and competitors.
 - The farmer lacked self-discipline in the use of money.

Study the evaluation report above and identify THREE factors which led to the failure of this farm manager. (3)

4.10 A business plan is a written presentation of the business.

4.10.1 Design a business plan cover sheet for TAU Fresh Produce Enterprise with Francis Louw as the owner. Include ALL relevant information required on the cover sheet. (5)

4.10.2 Name TWO aspects of market information that should be included in the agribusiness business plan. (2)

[50]

TOTAL SECTION B: 150
GRAND TOTAL: 200

