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Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

NATIONAL SENIOR CERTIFICATE

GRADE 12

AGRICULTURAL MANAGEMENT PRACTICES

NOVEMBER 2021

MARKS: 200

TIME: 3 hours

This question paper consists of 13 pages.

INSTRUCTIONS AND INFORMATION

1. This question paper consists of TWO sections.
2. Answer ALL the questions in the ANSWER BOOK.
3. Read the questions carefully and answer only what has been asked.
4. Number the answers correctly according to the numbering system used in this question paper.
5. You may use a non-programmable calculator.
6. Start EACH question on a NEW page.
7. 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 write only the letter (A–D) next to the question numbers (1.1.1 to 1.1.10) in the ANSWER BOOK, e.g. 1.1.11 D.

1.1.1 The removal of moisture from a product to inhibit the growth of micro-organisms:

- A Cooling
- B Heating
- C Drying
- D Salting

1.1.2 The amount of money generated by a farming enterprise in one season:

- A Income
- B Turn-over
- C Expenditure
- D Credit

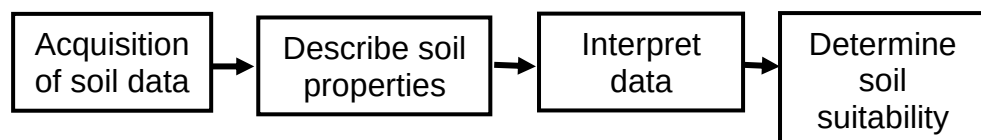
1.1.3 Equipment needed to accurately record the application of water when using a sprinkler system:

- A Rain gauge
- B Tensiometer
- C Barometer
- D Evaporation pan

1.1.4 Capital that a farmer borrows and then uses to purchase livestock and machinery:

- A Movable capital
- B Medium-term credit
- C Fixed capital
- D Long-term credit

1.1.5 The flow diagram below represents the steps when doing a soil ...



- A sampling.
- B survey.
- C analysis.
- D utilisation.

1.1.6 Choose the demographic factors that identify the target market for an agricultural product:

- (i) Number of consumers
- (ii) Age of the consumers
- (iii) Income level of the consumers
- (iv) Health concerns of the consumers

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

1.1.7 A pre-requisite of a well-motivated labour force:

- A Disciplinary actions
- B Better than adequate working conditions
- C Extra duties
- D A time register

1.1.8 A labourer that is trained and has experience of a particular task:

- A New seasonal labourer
- B Unskilled labourer
- C Casual labourer in training
- D Skilled labourer

1.1.9 The financial statement that reflects the movement of money in and out of a business during a short period of time:

- A Cash Flow Statement
- B Income Statement
- C Balance Sheet
- D Trial Balance

1.1.10 The replacement of manual labour on farms to eliminate fatigue and poor labour efficiency:

- A Daily planning
- B Mechanisation
- C Supervision
- D Economic farm planning

(10 x 2) (20)

- 1.2 Choose a description from COLUMN B that matches a term/phrase in COLUMN A. Write only the letter (A–L) next to the question numbers (1.2.1 to 1.2.10) in the ANSWER BOOK, e.g. 1.2.11 M. Use each description in COLUMN B only ONCE.

COLUMN A		COLUMN B	
1.2.1	Market information	A	deals with the value adding, processing and presentation of agricultural products
1.2.2	Labour contract		
1.2.3	Management	B	indicated on the label of a processed agricultural product
1.2.4	Secondary agricultural enterprise	C	must be adaptable to changing circumstances of living things
1.2.5	Business strategies	D	has a direct influence on the number of products sold at a specific time
1.2.6	Pricing		
1.2.7	Distribution channel	E	complete list of items that are owed by the business
1.2.8	Sugar fermentation	F	farm account that must be paid at the end of the month
1.2.9	Prerequisite of farm workers	G	primarily the work of the person concerned with decisions, planning, organising and control
1.2.10	Nutritional information	H	indicates the volume and price of products at different times at the point of selling
		I	should be considered for a business to survive in a competitive market
		J	will be influenced by perishability and bulkiness of the product
		K	a process used for the production of wine, beer and to make bread rise
		L	legal agreement that sets out the duties of the worker

(10 x 2)

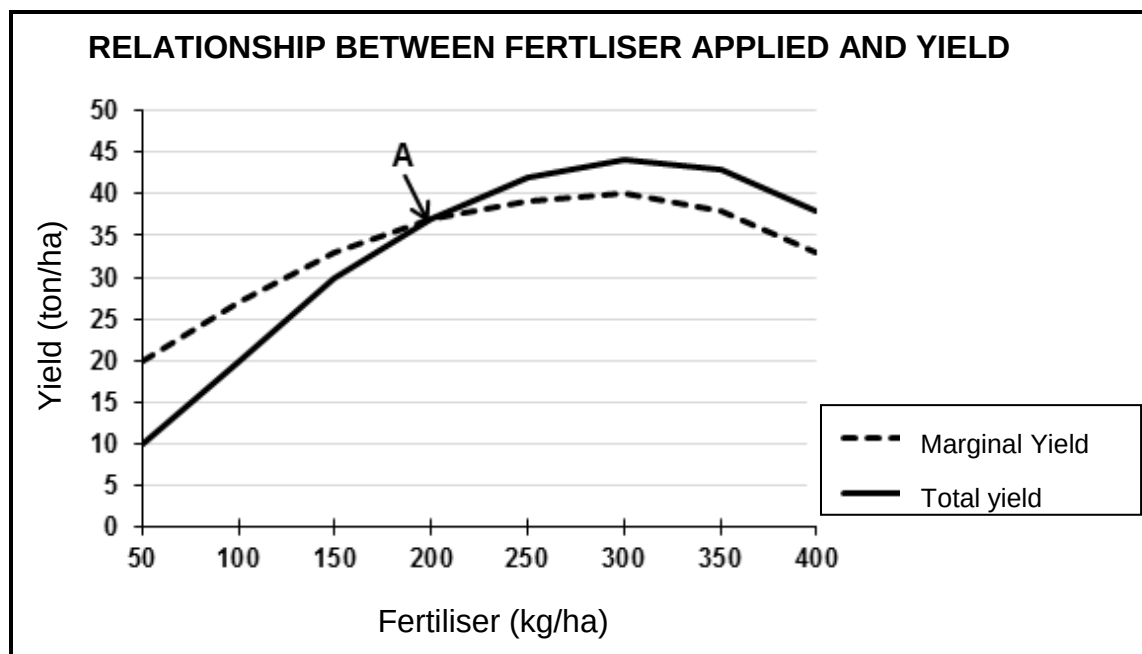
(20)

- 1.3 Give the CORRECT agricultural term for EACH of the following descriptions. Write only the term next to the question numbers (1.3.1 to 1.3.5) in the ANSWER BOOK, e.g. 1.3.6 Precision farming.
- 1.3.1 Expanding the number of activities or enterprises to be managed by a farmer to reduce the risk in the farming enterprise
- 1.3.2 Prevention of soil degradation, soil pollution, soil erosion and loss of soil nutrients
- 1.3.3 The management aspect whereby a farm manager gives instructions to the workers and listens to work-related problems of the workers
- 1.3.4 Outstanding debts, loans and accounts contained in the Balance Sheet
- 1.3.5 The source document needed for recordings on the Cash Flow Statement which indicates the money received (5 x 1) (5)
- 1.4 Change the UNDERLINED WORD to make the statements CORRECT. Write the answer next to the question numbers (1.4.1 to 1.4.5) in the ANSWER BOOK, e.g. 1.4.6 Fixed capital.
- 1.4.1 A withdrawal slip is completed at a financial institution if a person pays cash into the farm business account.
- 1.4.2 The label requirements of the packaging material should, amongst others, protect the product, be easy to print on and must be suitable for the specific product.
- 1.4.3 Manufacturing is the changing of raw food products into new products that are less perishable.
- 1.4.4 Demand is the number of products that producers send to the market.
- 1.4.5 Chemicals is a preservation method used in a smoker that alters the taste of the product. (5 x 1) (5)
- TOTAL SECTION A: 50**

SECTION B**QUESTION 2: PHYSICAL AND FINANCIAL PLANNING**

Start this question on a NEW page.

- 2.1 Water is the single most important substance for any living being.
- 2.1.1 State the main source of water for a farmer. (1)
- 2.1.2 Name FOUR factors that determine the effectiveness of rainfall. (4)
- 2.2 A farmer must plan and manage the natural veld to ensure maximum production without the veld deteriorating.
- 2.2.1 Explain the effect of trampling of the feed available and the carrying capacity of a camp. (4)
- 2.2.2 Name TWO methods that a farmer can use to overcome the required feed factor for lactating cows during the calving season. (2)
- 2.3 The graph below indicates the relationship between fertiliser applied and yield of a crop.



- 2.3.1 Give the agricultural term for the relationship shown in the graph above. (1)
- 2.3.2 Describe the term *marginal yield*. (3)
- 2.3.3 Explain the implications of point **A** on the graph. (4)

2.4 Planning the utilisation of various veld types can be done in the following steps:

- A Determine the veld condition
- B Group veld types into units according to the veld condition
- C Water availability
- D Determine primary camps
- E Calculate grazing capacity
- F Allocate primary camps to the needs of the herd
- G Plan the fodder flow program

Match the descriptions in QUESTIONS 2.4.1 to 2.4.4 with the appropriate steps above. Write only the letter next to the question numbers (2.4.1 to 2.4.4). Each step can only be used ONCE.

- 2.4.1 Ensure there is enough food available for each season by planted pastures or spare camps (1)
- 2.4.2 Make sure that there is a water trough in each camp (1)
- 2.4.3 Separate lactating and dry cows into different camps (1)
- 2.4.4 Indicating the types and number of grasses in the different stages of the succession progress of the veld (1)

2.5 Capital is created by human endeavour and is productive only when it is used to increase existing wealth.

- 2.5.1 Name and explain TWO main sources of capital for a farming business. (6)
- 2.5.2 Give THREE problems related to capital as a production factor. (3)

2.6 In tabular form, compare a *conventional planter* with a *no-till planter* based on the following aspects:

- Cost of the planter
- Cultivation costs
- Traction required (6)

2.7 Name THREE factors that will influence the drift of spray during the application of a pesticide. (3)

2.8 Describe THREE challenges of agritourism in rural areas. (3)

2.9 Name THREE characteristics of a niche market. (3)

2.10 Name THREE aspects that a farmer must consider when acquiring used (second-hand) implements. (3)

[50]

QUESTION 3: BUSINESS PLANNING, ENTREPRENEURSHIP, MARKETING, PRICE DETERMINATION AND THE MANAGEMENT PROCESS

Start this question on a NEW page.

3.1 Name and discuss the THREE main types of resources that have to be considered when compiling a business plan. (6)

3.2 Name the farming system where entrepreneurial characteristics are vital for creating a successful business. Discuss TWO reasons for your answer. (5)

3.3 A farmer produces a product and has the following production costs:

COSTS	
Fixed cost (per ha)	R6 500
Variable cost (per ha)	R1 000
Price (per ton)	R3 500

3.3.1 Calculate the break-even point (BEP) using the information in the table above and the following formula:

$$\text{BEP} = \frac{\text{fixed cost}}{\text{price} - \text{variable cost}} \quad (2)$$

3.3.2 Explain the break-even point for a farming enterprise. (4)

3.3.3 Calculate the profit that the farmer will make if the yield is 4 ton/ha. (3)

3.4 Name the factors that determine the number of products that the consumer is prepared to buy. (4)

3.5 Discuss THREE reasons for advertising an agricultural product. (3)

3.6 Explain the following concepts that must be addressed within the marketing strategies of a business plan.

3.6.1 Target market (2)

3.6.2 Competition (2)

3.6.3 Distribution (2)

3.7 Complete the table below in the ANSWER BOOK.

Use the table to distinguish between *diversification* and *specialisation* with regard to implements and management.

	DIVERSIFICATION	SPECIALISATION
Implements		
Management		

(4)

3.8 A farmer assigns a worker the task of spraying herbicides on cultivated crops. The farmer ensures that the worker receives the necessary safety equipment. Despite all the precautions taken, the worker gets ill from the spray.

3.8.1 Which Act entitles the worker to claim for being ill after working with chemicals? (1)

3.8.2 Indicate the action that the farmer can take if the worker refuses to wear protective clothing when working with chemicals. (1)

3.8.3 Discuss THREE requirements of the steps that the farmer should follow to correct the worker's action in QUESTION 3.8.2. (3)

3.9 State THREE objectives obtained by the farm manager when he/she motivates the farm workers. (3)

3.10 Give THREE reasons why training farm workers is important. (3)

3.11 Name TWO psychological needs of farm workers. (2)
[50]

QUESTION 4: FINANCIAL PLANNING, RECORDING, HARVESTING, VALUE ADDING, AND PACKAGING

Start this question on a NEW page.

- 4.1 A budget is a plan of future income and expenses of a business as shown below.

Expected income and expenditure information:

- 2 kg seed @ R400,00 per kg
- 850 kg fertilisers @ R80,00 per 50 kg bag
- Transport for 17 bags of fertiliser @ R5,00 per 50 kg bag (only one trip)
- Wages for 2 workers @ R400,00 per person per week for planting
- 1 500 product packaging material @ R1,50 each
- Transport to market @ R300,00 per trip (6 trips)
- Sales of the 1 500 boxes of the product @ R15,00 a box

Complete the table below in the ANSWER BOOK.

Use the data above to draw up a budget for your crop enterprise.

EXPECTED EXPENDITURE			
ITEM	QUANTITY	PRICE PER UNIT (R)	TOTAL PRICE (R)
Total expenses			

EXPECTED INCOME			
ITEM	QUANTITY	PRICE PER UNIT (R)	TOTAL PRICE (R)
Total expenses			

EXPECTED PROFIT			
Profit			

(10)

- 4.2 The Balance Sheet informs the farmer of how the capital is obtained and how it is allocated.

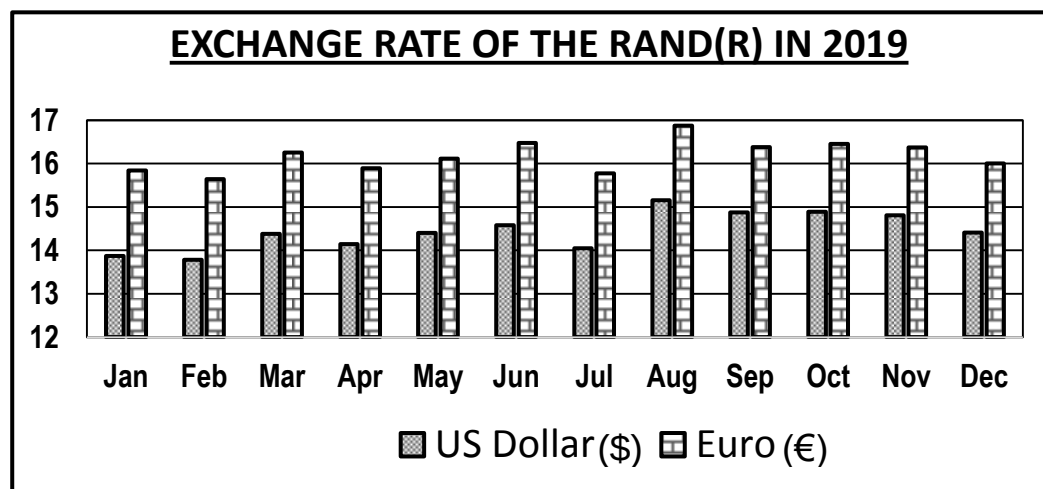
4.2.1 Explain the following terms that are used in the Balance Sheet:

- (a) Fixed assets (2)
- (b) Depreciation (2)
- (c) Creditor (2)

- 4.2.2 Describe the importance of analysing the Income Statement as a financial record. (2)

- 4.3 Give THREE reasons why consumers are interested in buying processed products. (3)
- 4.4 Name THREE important reasons for the grading of agricultural products. (3)
- 4.5 As a risk-reducing strategy the management team of a fruit farm investigated the development of a juice extraction plant on the farm. The farm currently exports all the produce to the United States of America and Europe.

The graph below shows the exchange rate over a period of time.



- 4.5.1 Explain why the processing of a fruit juice concentrate would be a good strategy to reduce the risks involved in the export of fresh produce. (3)
- 4.5.2 A bottle of fruit juice concentrate sells at R116,00 in South Africa with a break-even point of R82,00. Calculate the profit made per bottle. (2)
- 4.5.3 A bottle of fruit juice concentrate sells at €12 in December in Europe. Determine the value in South African rand (ZAR). (3)
- 4.5.4 Predict the influence that the exchange rate will have on the profit. (2)

- 4.6 All agricultural products should be harvested.
- 4.6.1 Define *harvesting* of an agricultural crop. (2)
- 4.6.2 Name THREE advantages of harvesting farm produce by hand. (3)
- 4.6.3 The stage of ripeness at which crops are picked, depends on their usage. State FOUR purposes for which crops are used. (4)
- 4.7 Describe THREE aspects to consider when designing packaging material for agricultural products. (3)
- 4.8 Describe FOUR main causes of food spoilage. (4)
- [50]**
- TOTAL SECTION B: 150**
- GRAND TOTAL: 200**