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TOTAL
MARKS

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INTERNATIONAL SECONDARY CERTIFICATE EXAMINATION
NOVEMBER 2023

AGRICULTURAL MANAGEMENT PRACTICES

EXAMINATION NUMBER

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Time: 3 hours

200 marks

PLEASE READ THE FOLLOWING INSTRUCTIONS CAREFULLY

1. This question paper consists of 36 pages. Please check that your question paper is complete.
2. This question paper consists of TWO sections.
3. **Answer ALL the questions on this question paper and hand it in at the end of the examination. Remember to write your examination number in the space provided above.**
4. Read all the questions carefully and make sure that you answer only what is being asked.
5. Non-programmable calculators may be used.
6. ALL calculations must be rounded off to TWO decimal places unless stated otherwise.
7. It is in your best interests to write legibly and to present your work neatly.
8. FOUR lined pages (pages 33–36) are included at the end of the question paper. If you run out of space for a question, use these pages. Clearly indicate the number of your answer should you use this extra space.

MARK ALLOCATION

QUESTION 1	QUESTION 2	QUESTION 3	QUESTION 4	TOTAL

SECTION A**QUESTION 1**

1.1 Various options are provided as possible answers to the following questions. Choose the correct answer and **write down the letter (A–D)** that corresponds to your answer in the space provided at the end of the question **on page 3**.

1.1.1 Knowledge that was collected over a long time by various generations and that emphasises cultural and ecological sustainability:

- A Scientific knowledge
- B Theoretical knowledge
- C Practical knowledge
- D Indigenous knowledge

1.1.2 A management task that allows cooperation among groups and individuals and prevents the duplication of tasks:

- A Coordinating
- B Motivating
- C Resource utilisation
- D Payment of salary

1.1.3 A list of all the ledger accounts as contained in a Ledger of an enterprise:

- A Petty cash
- B Balance sheet
- C Trial balance
- D None of the above

1.1.4 Goods (products) that are sold to satisfy the needs of people:

- A Commodities
- B Livestock
- C Economic units
- D Fixed assets

1.1.5 The veld type that has the highest carrying capacity of all veld types:

- A Savannah
- B Grassland
- C Valley bushveld
- D Forests

1.1.6 The most important steps in grazing planning are to determine ...

- A veld condition, veld types, soil condition and land gradient.
- B veld composition and veld surface.
- C rainfall and temperatures.
- D herd size and availability of capital.

1.1.7 Buildings, dams and land that are the property of a farmer (person) or an enterprise:

- A Long-term liabilities
- B Fixed assets
- C Current assets
- D Investment assets

1.1.8 Which one is NOT part of the SWOT analysis?

- A Threats
- B Strong points (Strengths)
- C Opportunities
- D Oppositions

1.1.9 A document that is compiled to determine possible costs of marketing:

- A Marketing plan
- B Marketing records
- C Marketing budget
- D Marketing vision

1.1.10 A document that is a summary of a month's expenses and income, as well as the totals compared with the budgeted figures:

- A Balance sheet
- B Trial balance
- C Cash flow statement
- D Financial statements

1.1.1	1.1.2	1.1.3	1.1.4	1.1.5	1.1.6	1.1.7	1.1.8	1.1.9	1.1.10

(20)

- 1.2 Choose a description from COLUMN B that matches a term from COLUMN A. Write down only the letter (A–K) of your choice in the space provided at the bottom of the page. Each description in COLUMN B may be used only ONCE.

COLUMN A		COLUMN B	
1.2.1	Perseverance	A	Characteristics of an area, such as the mountains, hills and contours
1.2.2	Standardisation	B	The property of soil that determines the tilling capacity and degradation
1.2.3	Specialisation	C	A way to visually represent qualitative data
1.2.4	Homogeneous land	D	Farming produces just enough for household use with no surplus to sell
1.2.5	Topography	E	The sorting of products with the same size and colour
1.2.6	Crop rotation	F	A graphical representation of an enterprise's structure
1.2.7	Turnover	G	Successive cultivation of different crops on the same piece of land
1.2.8	Semi-intensive farming	H	The total of all the trade receipts for a given time
1.2.9	Organogram	I	Characteristic that urges the entrepreneur to keep going until the work is done
1.2.10	Gradient	J	Large-scale cultivation
		K	Ensures that the quality of products is the same worldwide
		L	Farming where livestock is sometimes fed because land and pastures are a limiting factor
		M	When a producer focuses only on one commodity
		N	An area that has the same type of soil

1.2.1	1.2.2	1.2.3	1.2.4	1.2.5	1.2.6	1.2.7	1.2.8	1.2.9	1.2.10

(10)

1.3 Give the correct agricultural term for each of the following descriptions. Write down only the correct term, **for example Marketing**.

1.3.1 Management skill (task) that gives the farmer the opportunity to make his/her workload more manageable and that could be a valuable training opportunity for employees.

(1)

1.3.2 The type of grazing where livestock eats only certain plants.

(1)

1.3.3 The monetary value of a farming enterprise during an accounting period.

(1)

1.3.4 Depositing money in a bank account using internet banking.

(1)

1.3.5 Decrease in the monetary value of movable assets over time.

(1)

1.3.6 The type of competition with an enterprise supplying the same product as you to satisfy the needs of customers.

(1)

1.3.7 Ensuring that the correct amount of fertiliser, seed or chemicals is administered on a certain area.

(1)

1.3.8 The term describing the flow of products from the farm to the consumer.

(1)

- 1.3.9 The soil property that describes to what extent separate soil particles naturally cling together in secondary lumps to form bigger compound units.

(1)

- 1.3.10 The physical, chemical and biological deterioration of soil as a result of poor farming practices.

(1)

- 1.4 Change the UNDERLINED WORDS in EACH of the following statements to make the statements TRUE. Write down only the answer, **for example Economics**.

- 1.4.1 An enterprise may broadly be defined as one housing large numbers of animals on a relatively small piece of land.

(1)

- 1.4.2 Too much of a product means that the demand for a product is lower than the supply.

(1)

- 1.4.3 Activity means that crops are planted without any tilling of the soil beforehand.

(1)

- 1.4.4 The water level of the soil indicates when the specific soil has reached veld capacity.

(1)

- 1.4.5 The characteristic of soil has an effect on soil fertility and influences compaction and crusting of the soil.

(1)

- 1.4.6 During studies information about consumers' needs and preferences is collected and processed.

(1)

1.4.7 The preferred document is used to indicate the profitability of an enterprise.

(1)

1.4.8 Control is the management principle that a farmer should apply first before a new operation is started.

(1)

1.4.9 Shops receive products from members, and these products are then graded so that a standardised product can be sold.

(1)

1.4.10 An agricultural product is preserved by heat, not higher than 90 °C, for about half an hour.

(1)

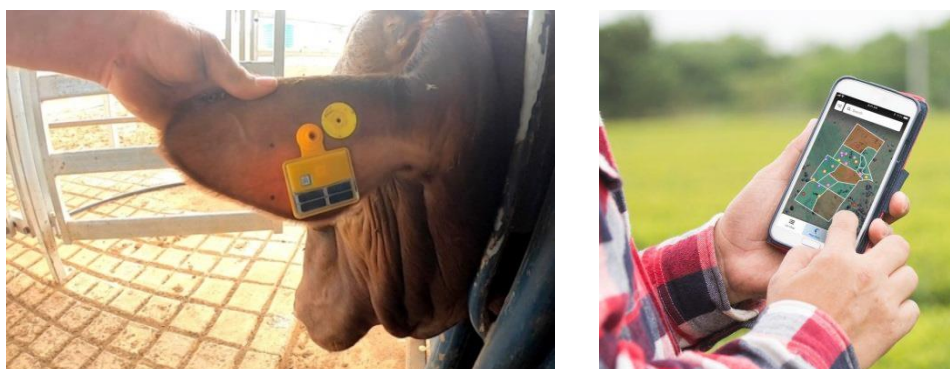
50 marks

SECTION B**QUESTION 2 RESOURCE UTILISATION, LAND USE AND FARMING SYSTEMS**

Study the article below and then answer the questions that follow.

A hanging tag connected to GPS to monitor livestock reaches the commercial market

Precision stockbreeding is an innovative approach to breeding livestock. Recent developments in stockbreeding indicate three different problematic tendencies on a global scale. First, the demand for animal products increases almost exponentially as the global population grows and animal products are becoming less affordable. Second, the number of livestock farmers decreases and the amount of land available for stockbreeding remains constant. Third, there is greater concern about stockbreeding's harmful contribution to serious global issues such as global warming, deforestation and environmental degradation in general. To address all these problems, precision stockbreeding, still in its infancy, emerged as a viable and promising solution.



Solar-powered GPS hanging tag with software on a farm in Africa

A hanging tag in the ear of an animal, connected to GPS and solar powered, can detect the location of individual animals in real time and provide a wealth of information to farmers who are thinking ahead. It also adds another level of production efficiency across Africa.

The system includes the GPS hanging tag itself, an antenna to receive the GPS location and software to allow monitoring and the analysis of the received data. With the hanging tag in each animal's ear, the location of each animal can be monitored in real time. This means that the farmer's phone receives a notification when an animal stands still for too long or ends up on the neighbour's property through a fence.

Another advantage is that the pressure on grazing in a camp can be mapped. 'We have combined the data of individual animals to create grazing patterns and used the data from the assessment of the composition of the veld to redesign camps and manage grazing time in a camp before damage is caused to the environment.'

[Adapted from article at: <<https://www.beefcentral.com/ag-tech/gps-enabled-livestock-monitoring-tags-reach-the-commercial-market/>>]

2.1 Formulate a short explanation of precision farming as applied in the article above.

(3)

2.2 Provide TWO functions of the computer software on this precision livestock farm.

(2)

2.3 Identify the technological aids that are used in the following divisions of this cattle-farming enterprise (written out in full).

2.3.1 Ear tags of cattle to monitor movement.

(1)

2.3.2 Maps indicating grazing patterns and veld composition.

(1)

2.4 Although commercial cattle farming has a small economic profit margin, precision cattle farming is becoming an important part of the industry.

2.4.1 Define **profit margin** in cattle farming.

(2)

2.4.2 Provide ONE economic advantage of technology in cattle farming.

(1)

2.4.3 Distinguish between **gross profit** and **net profit**.

(4)

2.5 According to the data that was collected, the veld composition consists of two veld types, namely sweetveld and sourveld.

2.5.1 In which types of soils can the farmer expect to find sweetveld and sourveld grasses, respectively?

Sweetveld: _____

Sourveld: _____

(4)

2.5.2 Sweetveld and sourveld are both nourishing for cattle. However, sweetveld is more palatable to cattle than sourveld. The farmer has decided to fence off the different types of veld separately and use the sourveld camps for summer grazing and the sweetveld camps for winter grazing. Justify the farmer's decision.

[illegible]

(7)

2.5.3 How would you go about preventing overgrazing and even increasing the productivity of the veld?

(3)

2.6 In commercial farming enterprises record-keeping is done by a computer system with a large database and the information that is collected plays an important role in the management decisions made by a farmer on a daily basis.

2.6.1 Differentiate between commercial farming and subsistence farming.

(2)

2.6.2 Identify TWO advantages and TWO disadvantages of a database for a commercial farming enterprise.

(4)

2.6.3 Which data can a farmer expect to find in the LIVESTOCK RECORDS?

(4)

2.7 Any farm sometimes has to make small payments from petty cash.

2.7.1 Which document is issued when cash purchases have to be made from petty cash?

(1)

2.7.2 To prevent the misuse of cash, the petty cash fund has to comply with certain requirements. Explain how you would prevent the misuse of this fund.

(3)

2.7.3 Any purchase made from petty cash must be supported by a source document. Identify the source document.

(1)

2.8 Record-keeping on a farm should keep track of the depreciation of assets.

2.8.1 Construct a short explanation of **depreciation** by referring to the factors that result in the depreciation of an asset.

(3)

- 2.8.2 A farming enterprise buys a cattle trailer to the value of R140 000 (excluding 15% VAT). The useful life of the trailer is 10 years. The depreciation on the trailer is a fixed amount each year. Calculate the value (VAT included) of the trailer after 2 years. **Show calculations.**

(4)
[50]

QUESTION 3 SUSTAINABILITY, BUSINESS PLAN, ENTREPRENEURSHIP AND MARKETING

- 3.1 The following are examples of different marketing methods. Study the pictures carefully and then answer the questions that follow.

TYPE A  [<https://youimg1.tripcdn.com/target/ww0g1f000001goz452631_C_900_600_Q70.webp?proc=source%2ftrip&proc=source%2ftrip>]	TYPE B  [Adapted: <https://www.vafb.com/Portals/FBA/images/supporting-farmers/logo-graphic.jpg>]
TYPE C  [Adapted: <https://www.marketing91.com/what-is-global-marketing/>]	

- 3.1.1 Identify the marketing method in the following pictures:

TYPE A: _____

TYPE C: _____ (2)

- 3.1.2 When preparing a budget, all possible costs should be taken into consideration. Provide TWO possible marketing costs involved in TYPE A marketing.

(2)

3.1.3 Describe the role of a country's government in the TYPE B marketing method.

(2)

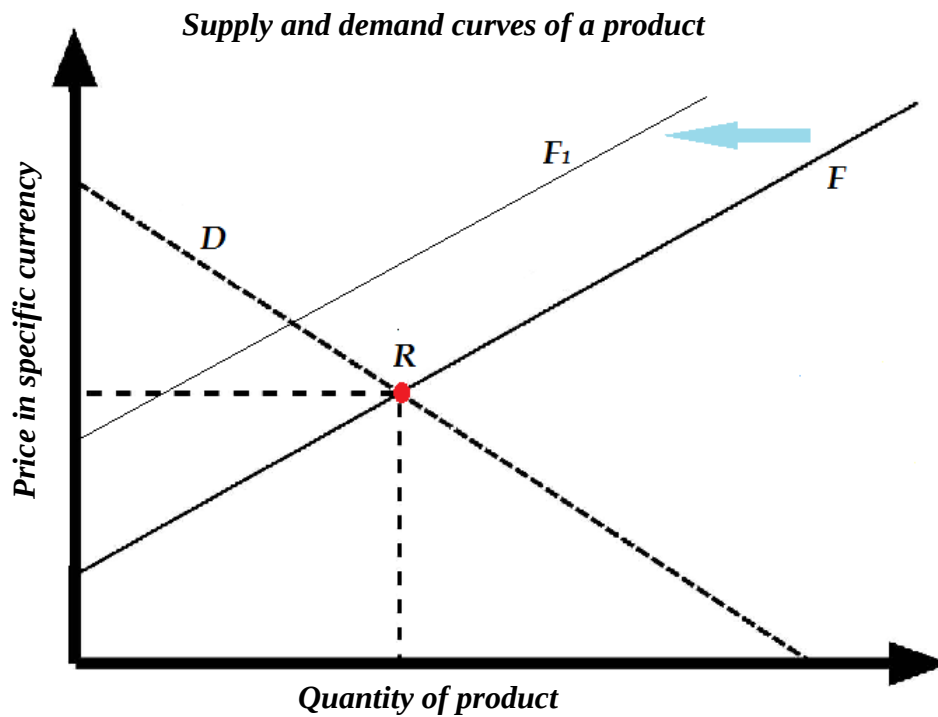
3.1.4 Briefly explain the purpose of TYPE B marketing.

(2)

3.1.5 Strict legislation is necessary during TYPE C marketing. Justify the statement.

(2)

3.2 Study the graph below and then answer the questions that follow.



3.2.1 Use the supply curve (F) to explain the law of supply.

(3)

3.2.2 State TWO factors that can affect the supply of a product.

(2)

- 3.2.3 During certain times of the year the supply curve shifts to the left (F_1). Make assumptions about the *supply and price* of the product.

(2)

- 3.2.4 Identify POINT R and summarise what is happening at this POINT.

(3)

- 3.3 Read the extract from an article on *Fairtrade Africa.net* below and then answer the questions that follow.



WHO ARE WE?

Fairtrade Africa, established in 2005, is the independent non-profit umbrella organisation representing all Fairtrade-certified producers in Africa. Fairtrade Africa is owned by members. The members are producer organisations in Africa that produce traditional export commodities such as coffee, cocoa, tea, cotton, bananas and mangoes, and non-traditional commodities such as shea butter and rooibos tea against the standards of Fairtrade. Currently, the organisation represents more than 1 050 000 producers in 33 African countries. Fairtrade Africa sets standards and certifies and labels products that promote a sustainable livelihood for farmers and farm workers and protect the environment. The organisation also provides market information and facilitates research and training regarding technology.

Fairtrade Africa's Mission and Vision are:

We cherish and promote justice and equality in global trade by being open, trustworthy and transparent in our work.

Fairtrade has a vision of **a world in which justice and sustainable development are the core of trade and business so that everybody, through their work, is able to maintain a dignified and decent livelihood**. Our staff and supporters are passionate about our vision, and they focus on working towards achieving our vision.

[<<https://fairtradeafrica.net/who-we-are/>>]

- 3.3.1 Is Fairtrade Africa a production (product) or a marketing organisation?

(1)

- 3.3.2 Provide TWO reasons for your answer to Question 3.3.1.

(2)

- 3.3.3 The organisation represents 1 050 000 farmers in Africa. Name THREE other possible benefits of this organisation for farmers.

(3)

- 3.3.4 Any organisation's business plan contains a *mission and vision*. Describe what a *mission and vision* is so that the PURPOSE of a mission and vision can be clearly understood.

(2)

3.4 Study the advertisements below and then answer the questions that follow.



[<<https://www.creativosonline.org/af/ontwerp-advertensie-brosjure.html>>]
[<<https://www.facebook.com/groups/Boerderykopers/>>]

3.4.1 Identify the type (method) of advertising in Advertisement K.

(1)

3.4.2 Briefly explain the purpose of advertising in agritourism.

(3)

3.4.3 Provide TWO other electronic methods of advertising to reach foreign tourists.

(2)

3.4.4 State a disadvantage of agritourism on a farm.

(1)

3.5 Study the quotation below, which has been adapted from an article on the website, *How we made it in Africa*.

Whether it is the export of modern superfood or the conversion of farm waste into organic fertiliser, Africa offers many agricultural business opportunities to entrepreneurs and investors.

3.5.1 Give a short definition of an entrepreneur.

(2)

3.5.2 Provide TWO characteristics of a 'good' entrepreneur.

(2)

3.5.3 When an entrepreneur starts or expands an agricultural business, a business plan should be compiled. Explain why the development of a business plan is necessary.

(3)

3.5.4 State TWO advantages of a business plan.

(2)
[50]

QUESTION 4 **FARM MANAGEMENT, FINANCIAL PLANNING AND ADDING VALUE TO HARVESTS**

- 4.1 Read the article below on the cultivation and marketing of mushrooms and then answer the questions that follow.

Mushrooms: 'Niche market absolutely spot on!' says Uncle Martiens

After reading many books and doing a lot of market research, Uncle Martiens took the gap in the African market for gourmet mushrooms and started cultivating oyster mushrooms. He initially started on a small scale and mainly for home consumption, but he was compelled to expand the venture after he had concluded a contract with a well-known group of stores.

The exotic mushrooms are very unpredictable in terms of growth and yield. Although the input costs are not as high as for the more familiar button mushrooms, the risk is considerably higher and the return on investment lower, says Uncle Martiens.

Because oyster mushrooms were not well known in Africa in the past, he switched to other types that are more familiar and therefore more acceptable to the consumer when there was no demand for his product. Later on he also started cultivating shiitake mushrooms and oyster mushrooms in various colours to expand the market.

To increase his farming profit, he started marketing processed products, such as pickles and chutney, as well as mushrooms in dried and ground (powder) form, which are especially popular among campers and hikers.

The biggest problem with mushrooms is *Trichoderma* (green mould) and mushroom flies. Therefore, precautionary measures and hygiene are crucial in the tunnels and in the packing plant. The requirements of the chain store are very strict and frequent inspections take place to ensure that they are conformed to.

The mushrooms are picked manually throughout the year and 2 to 3,5 tons are produced per week. This makes mushroom cultivation quite labour intensive and 15 permanent workers work in the mushroom plant, while temporary workers are hired for some tasks.

[Adapted from: <<https://www.landbou.com/landbou/bedrywe/tuinbou/sampioene-nismark-reg-in-die-kol-20170914>>. Picture: <<https://grondtotmond.com/2022/06/01/chanmar-sampioene/>>]

4.1.1 Identify TWO types of labour that are used in the farming enterprise above.

(2)

4.1.2 Explain the term *niche market*.

(2)

4.1.3 Distinguish between *manual harvesting* and *mechanical harvesting*.

(2)

4.1.4 State TWO advantages of manually harvesting mushrooms.

(2)

4.1.5 Harvesting mushrooms (product) is a critical and very important activity on the farm. Therefore, planning is crucial. Identify THREE labour factors that the farmer should consider when planning the harvesting season.

(3)

4.1.6 Explain how precautionary measures and good hygiene can be applied in the packing plant.

(2)

4.1.7 Describe the following financial terms:

(a) Input costs

(2)

(b) Profit

(2)

- 4.2 The following pictures are examples of processed mushroom products. Study the pictures carefully and then answer the questions that follow.



[<<https://grondtotmond.com/2022/06/01/chanmar-sampioene/>>]
[<<https://af.covidografia.pt/43-best-wellness-products-help-you-stay-sane-balanced>>]

- 4.2.1 Identify the processing methods that were used in the pictures above.

PICTURE A: _____

PICTURE B: _____

(2)

- 4.2.2 Distinguish between processing and preservation.

(2)

- 4.2.3 Fresh produce does not have a long shelf life. Explain the main causes of chemical and physical changes in fresh produce such as mushrooms.

(2)

4.2.4 The bottles in PICTURE A were sterilised. Justify the decision.

(2)

4.3 Different methods can be used to pack mushrooms and other fresh produce. One method is depicted in the photo below.



[<<https://grondtotmond.com/2022/06/01/chanmar-sampioene/>>]

4.3.1 State TWO aspects that should be considered if the type of packing material above is considered for mushroom packing.

(2)

4.3.2 Provide TWO advantages of the packing material in the photo above.

(2)

- 4.3.3 Packed fresh produce must be labelled. Justify strict regulations (legislation) regarding the labelling of fresh produce.

(2)

- 4.4 Study the text below and then answer the questions that follow.

What enables young farmers to continue running a successful farming enterprise despite low prices, unfavourable weather conditions and unreliable electricity supply?

In a successful farming enterprise, diversification is one of the golden principles and detailed planning is the principle that makes all the difference.

It is very easy to make plans, but it requires purposeful action to carry them out. It is also crucial that the plan be flexible because the policy environment changes all the time. This means that management planning is a continuous and repetitive process having many advantages for a farm.

[Adapted from: <https://www2.senwes.co.za/Files/main_Scenario/archive_articles/2010/06/voorbeeldstorie/jaco_swart.htm>]

- 4.4.1 Explain why diversification in a farming enterprise is important.

(3)

- 4.4.2 Identify TWO factors that justify planning and replanning in a farming enterprise.

(2)

4.4.3 Good planning is crucial for the success of any farm. State TWO advantages of good planning.

(2)

4.5 Management activities that are also crucial for the success of any farm are organising, motivating, and controlling.

4.5.1 State TWO possible work factors that may negatively affect labourers' motivation.

(2)

4.5.2 What are the ADVANTAGES of organising and controlling labour on a farm well?

(4)

4.5.3 Justify the use of training and incentives when motivating labourers.

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and extend across the width of the page. There are no margins, text, or other markings on the paper.

(6)
[50]

150 marks

Total: 200 marks

ADDITIONAL SPACE (ALL QUESTIONS)

**REMEMBER TO CLEARLY INDICATE AT THE QUESTION THAT YOU USED THE
ADDITIONAL SPACE TO ENSURE THAT ALL ANSWERS ARE MARKED.**

[illegible]

[illegible]

[illegible]

[illegible]