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NATIONAL SENIOR CERTIFICATE

GRADE 12

AGRICULTURAL MANAGEMENT PRACTICES

NOVEMBER 2012

MARKS: 200

TIME: 2½ hours

This question paper consists of 14 pages and a 2-page answer sheet.

INSTRUCTIONS AND INFORMATION

1. This question paper consists of FOUR questions. Answer ALL the questions.
2. SECTION A (QUESTION 1) must be answered on the attached ANSWER SHEET.
3. Place the ANSWER SHEET for SECTION A (QUESTION 1) inside the front cover of the ANSWER BOOK.
4. SECTION B (QUESTIONS 2 to 4) must be answered in the ANSWER BOOK.
5. QUESTION 4.5.1 must be answered on the attached ANSWER SHEET. Place the answer sheet inside the front cover of the ANSWER BOOK.
6. Start EACH question in SECTION B on a NEW page.
7. Read the questions carefully and answer only what is asked.
8. Number the answers correctly according to the numbering system used in this question paper.
9. Non-programmable calculators may be used.
10. ALL calculations must be rounded off to TWO decimal places unless stated otherwise.
11. Give special attention to units where applicable.
12. 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 make a cross (X) in the block (A–D) next to the question number (1.1.1–1.1.10) on the attached ANSWER SHEET.

Example:

1.1.11	<input checked="" type="checkbox"/> A	B	C	D
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- 1.1.1 The most important aspect of light as a climatic factor that will influence the hormonal balance and metabolism of animals in an animal production unit is the ...

- A length of daylight.
- B duration of cloudiness on a specific day.
- C light intensity for photosynthesis.
- D phase of the moon.

- 1.1.2 The soil characteristic that a farmer cannot change by means of farming or cultivation methods is ...

- A soil structure.
- B soil texture.
- C soil nutrient content.
- D soil drainage.

- 1.1.3 The carrying capacity of natural pastures can be increased with ...

- A an increase in stocking rate.
- B rotational grazing.
- C uncontrolled veld fires.
- D a system of kraaling the animals.

- 1.1.4 The global information system (GIS) will give you information on your farm's ...

- (i) pasture distribution.
- (ii) grass identification.
- (iii) size (area) of the cultivated soils.

Choose the most appropriate combination to complete the statement above:

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

- 1.1.5 A fixed capital item that farmers need to start a farming enterprise:
- A Cattle
 - B Implements
 - C Land
 - D Labour
- 1.1.6 A source document normally contains ...
- A only the date of the transaction.
 - B only the particulars of the parties involved.
 - C only the amount of the transaction.
 - D the date, particulars and amount of the transaction.
- 1.1.7 Recording the leave and absences of workers is part of ...
- A planning.
 - B organisation.
 - C control.
 - D evaluation.
- 1.1.8 An important factor that a farmer must consider before slaughtering animals as it may have a toxic effect or cause an allergic reaction in humans when they consume the meat:
- A The age of the animal
 - B The weight of the animal
 - C The sex of the animal
 - D The prescribed time span after medication was administered
- 1.1.9 The free market system principle which is applied during auctions depends mainly on the ...
- A supply and demand.
 - B price fixing.
 - C cartel formation.
 - D bargaining power.
- 1.1.10 The processing of agricultural products will lead to the following:
- (i) An increased lifespan or shelf life of the product
 - (ii) An increase in the value of the product
 - (iii) Addressing the oversupply of produce
- Choose the most appropriate combination for the statement above:
- A (i) and (ii)
 - B (i) and (iii)
 - C (ii) and (iii)
 - D (i), (ii) and (iii)
- (10 x 2) (20)

- 1.2 Choose a description from COLUMN B that matches a item in COLUMN A. Write only the letter (A–L) next to the question number (1.2.1–1.2.10) on the attached ANSWER SHEET, for example 1.2.11 M. Each description in COLUMN B may only be used ONCE.

COLUMN A	COLUMN B
1.2.1 Soil water capacity	A a simple document issued when products are returned to the seller for a refund
1.2.2 Mixed veld	
1.2.3 Fertiliser	B an artificial pasture that is planted with two types of grasses
1.2.4 Farm gate marketing	C an organisation that looks after the interests of consumers
1.2.5 Credit note	D is drawn up to ensure that consumers have access to and knowledge of a product
1.2.6 Market plan	
1.2.7 Slaughtering procedures	E the maximum amount of water that can be retained in soil capillaries
1.2.8 Game reserve	F an entity that funds research for a specific production enterprise to support the farmer
1.2.9 Producer organisation	
1.2.10 Crop evaluation	G pasture that contains a balance between sweet veld and sour veld grass species
	H chemical substance that increases the production output of the soil
	I procedures prescribed by legislation that supply guidelines for the processes starting from the killing of an animal to the final meat product in an abattoir
	J selling produce directly from the farm to entrepreneurs
	K an example of an enterprise utilised to combine a farming system with ecotourism
	L an example of determining the profitability of an enterprise

(10 x 2)

(20)

1.3 The following statements are INCORRECT. Change the UNDERLINED word to make the statement CORRECT. Write the correct word next to the question number (1.3.1–1.3.10) on the attached ANSWER SHEET, for example 1.3.11 Planning.

1.3.1 Humidity is a climatic factor that can increase evaporation and lower production in stormy weather conditions.

1.3.2 Hazardous chemicals are used in farming systems that also make use of natural predators.

1.3.3 In subsistence farming it is always very important to utilise the latest technology and most modern equipment to prevent waste.

1.3.4 Control is the management principle that a farmer applies first before starting a new enterprise.

1.3.5 The Occupational Health and Safety Act will ensure that farmers apply risky procedures.

1.3.6 A grading system puts together produce of different qualities, received from a number of different farmers, in one lot.

1.3.7 Producer organisations will evaluate the grading of agricultural products to compare quality before buying these products from producers or processors.

1.3.8 Partial farm evaluation will include the evaluation of all the different production activities on the farm.

1.3.9 A farmer must determine the age of the agricultural produce before it can be harvested.

1.3.10 The preserving of an agricultural product by means of applying heat not higher than 90 °C and for more or less half an hour is called purification. (10 x 1) (10)

TOTAL SECTION A: 50

SECTION B**QUESTION 2: ANIMAL AND CROP PRODUCTION**

Start this question on a NEW page.

- 2.1 An emerging crop farmer has recently acquired 50 hectares of land near a village. After conducting intensive research about the land, the farmer decided to plant an indigenous crop which is in great demand by the local community. The only problem is that the farmer is uncertain about the potential of the soil for this purpose.

2.1.1 Indicate the FOUR main resources which are to be investigated by the farmer to determine the land's suitability for the intended purpose. (4)

2.1.2 Name and describe THREE aspects of rainfall that will have an influence on the growth of a crop. (6)

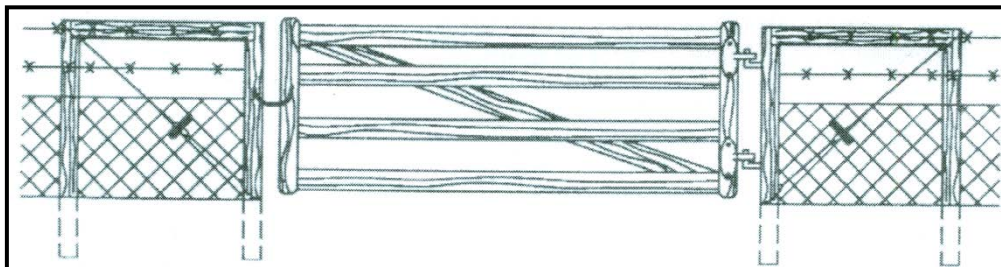
- 2.2 The picture below represents a form of agricultural production.



2.2.1 Land can be divided into grazing, marginal land and high production land. Classify the land in the picture above into ONE of these categories. (1)

2.2.2 Name FOUR soil factors that will directly influence the tillability of the soil. (4)

- 2.3 Veld or pasture management is the key to healthy and productive pastures. It is recommended that a farmer treats a specific veld according to its nature. Veld of the same grazing potential and plant palatability should be fenced together to utilise it optimally.



- 2.3.1 Name the grazing system a farmer wants to implement by dividing the pastures into camps. (1)
- 2.3.2 State FOUR factors to consider when dividing pasture into camp systems. (4)
- 2.3.3 Briefly discuss the influence of the following natural resources on the re-growth of pastures: (2)
- (a) Soil depth (2)
 - (b) Distribution of rainfall (2)

2.4

Farm labourers work in harsh weather conditions. Most of the time it is difficult to find labourers that are willing to work on a farm. The labourers have difficulty doing their tasks because of a lack of experience. The secondary industries often offer the workers better salaries. The amount of work on a farm fluctuates from season to season and therefore farmers tend not to recruit many labourers.

The farmer ensures good quality meals and provides protective clothing for the workers. The farmer acquires new and modern equipment for the workers to work more efficiently. Better remuneration of the workers will be implemented and even certificates of appreciation for excellent work will be handed out to the workers.

- 2.4.1 Name FOUR general problems related to labour as a production factor as it is contained in the scenario above. (4)
- 2.4.2 Identify FOUR ways in the scenario in which the farmer improved the working conditions of the farm workers. (4)

- 2.5 The data below refers to two farmers (FARMER A and FARMER B).

FARMER A

The owner of Model Farm is a crop farmer who is one of the 47 farmers in South Africa who produce Fair Trade Certified Products. The products are destined for the European export market. Production on this farm depends partly on irrigation.

FARMER B

A young livestock farmer produces good quality livestock. The farmer provides products only for the household. The livestock on the farm are kept in a feedlot that utilises feeds that the farm has produced.

Distinguish between the types of farmers and the farming systems practised by the two farmers in the paragraphs above by making use of the table below.

	FARMER A	FARMER B
Aim of farming enterprise		
Reason		
Farming system		
Reason		

(8)

- 2.6 Distinguish between *specialised* and *diversified* farming systems. Give an example of each farming system.

(6)

- 2.7 Name TWO methods that a farmer can use to overcome soil erosion on a sloped area. Give a reason to support your answer in each case.

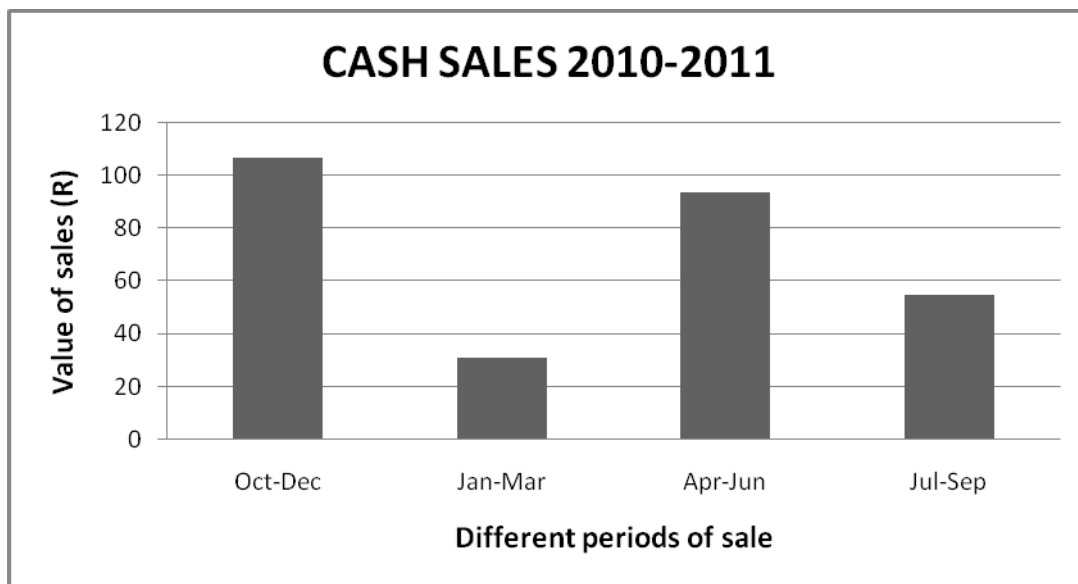
(4)

[50]

QUESTION 3: RECORDING, FINANCIAL STATEMENTS AND ENTREPRENEURSHIP

Start this question on a NEW page.

- 3.1 A progressive, privately owned, small stock-producing farm recorded and classified its total cash sales for four periods as shown in the graph below.



- 3.1.1 Name FOUR kinds of business activities where the farmer needs to issue a receipt. (4)
- 3.1.2 Identify the TWO periods with the highest cash sales. (2)
- 3.1.3 Suggest THREE possible factors that have an influence on the demand for products during the periods mentioned in QUESTION 3.1.2. (3)

- 3.2 Members of a new farmers' cooperative plan to start a crop production enterprise. They seek assistance from a business adviser. The business adviser gives the members a table of essential resources with suggested types of capital and instructs them to discuss each of these items for further clarification.

ESSENTIAL RESOURCES	SUGGESTED CAPITAL
Buildings	Fixed capital
Labour	Working capital
Own savings	Working capital
Management	Working capital
Machinery	Movable capital
Land	Fixed capital

- 3.2.1 Name the TWO human resources. (2)
- 3.2.2 Identify a resource of which the value depreciates over time. (1)

3.2.3 Indicate the TWO resources of which the value appreciates over time and give a reason for this appreciation. (3)

3.2.4 Identify the source of capital in the table on the previous page that would be most suitable to utilise as working capital. (1)

3.3 The following are important types of records that a livestock farmer keeps:

- Performance records
- Sales records
- Mortality records
- Feeding information

3.3.1 Write down the names of the records above and then briefly explain the type of information that should be indicated in each type of record. (4)

3.3.2 Identify the type of record that a farmer needs to keep to assist in the management of diseases in an area. (1)

3.4 The Income Statement of a farm that is owned by a group of young people is shown below:

INCOME STATEMENT FOR THE YEAR ENDING 31 DECEMBER 2010

Purchases and Expenses	Rand	Sales and Income	Rand
Stock of animals	36 000	Animal products	94 172
Feeds and supplements	89 463	Sale of crops	159 820
Seeds	23 719	Miscellaneous	31 244
Fertilisers and sprays	51 460		
		Income received (credit) for private use of:	
Wages	50 170	Farm house	28 000
Repairs and small tools	44 233	Farm vehicle	9 000
Fuel and electricity	21 742	Farm produce (eggs, milk, vegetables)	5 372
Rent	10 400		
Implements purchased	33 512		
Opening evaluation	<u>11 424</u>	Closing evaluation	<u>134 967</u>
	372 123		462 575

3.4.1 Give THREE examples of credit items listed above. (3)

3.4.2 Calculate the total value of the credit items mentioned in QUESTION 3.4.1. (2)

3.4.3 Calculate the net profit for the year 2010 according to this Income Statement. (2)

- 3.5 A farmer with two enterprises has the following information available in the separate financial records of the two enterprises:

ENTERPRISE A (10 ha)	ENTERPRISE B (15 ha)
Variable costs	Variable costs
Seeds R8 034,66	Animal feeds R22 304,00
Fertilisers R19 151,13	Medicines R6 228,27
Chemicals R4 916,45	
Returns from sale of produce R39 011,00	Returns from sale of produce R37 361,00

- 3.5.1 Calculate the gross margins of the enterprises indicated above. Show ALL the calculations. (6)
- 3.5.2 Determine the most profitable enterprise on the basis of profit made per producing hectare. Show ALL the calculations. (5)
- 3.6 Distinguish between a *cash flow budget* and a *maintenance budget*. (4)
- 3.7 Solomon Farm is a multi-farming enterprise. Stock on the financial statements indicates the position of Solomon Farm. This was taken and compiled on 31 March 2009. A list of items and values, which include assets and liabilities, is given below:

ITEM	VALUE
Harvested crops	R146 000,00
Farm tractor	R186 000,00
Due to NPK fertiliser company	R78 032,00
Crop processing machinery worth	R725 000,00
Due to farm chemicals company	R33 702,00
Balance at bank	R109 004,00
Due to agric-mechanic for repairs	R12 691,00
Livestock on the farm	R400 950,00
Due to cooperative for animal feeds	R250 000,00
Due to local veterinary services	R28 000,00

- 3.7.1 Use the information provided above and the headings provided in the table below to complete the Balance Sheet for Solomon Farming and include the net capital value.

SOLOMON FARM BALANCE SHEET AT 31 MARCH 2009			
ASSETS		LIABILITIES	
ITEM	VALUE	ITEM	VALUE

- 3.7.2 Identify the item that may cause a drop in the asset value if it is not stored or processed well and in time. (1)

[50]

QUESTION 4: HARVESTING, VALUE-ADDING, MARKETING, AGRITOURISM AND INDUSTRY

Start this question on a NEW page.

- 4.1 Bulk storage refers to a facility that can store large volumes of freshly produced and harvested agricultural products.
- 4.1.1 Name THREE advantages of using a bulk storage facility for a harvested agricultural product. (3)
- 4.1.2 Outline the TWO main methods of harvesting farm products that differ in terms of labour intensity. (2)
- 4.1.3 State THREE purposes for which harvested crops can be used. (3)
- 4.2 Market research plays a very important part in the success of marketing an agricultural product.
- 4.2.1 Give FOUR important reasons for doing market research. (4)
- 4.2.2 Name ONE type of competition that can exist in the market. (1)
- 4.3 Discuss the requirements for processing crop products with reference to the following headings:
- 4.3.1 Condition of the product after harvesting (3)
- 4.3.2 Handling of machinery and hygiene (2)
- 4.3.3 Application of the Occupational Health and Safety Act in the processing plant (3)
- 4.4 Different types of farming enterprises have different markets. Distinguish between the main roles each of these markets fulfils in farming enterprises:
- 4.4.1 Wholesalers (1)
- 4.4.2 Cooperatives (1)
- 4.4.3 Processors (1)
- 4.4.4 Retailers (1)

4.5 The following table represents the marketing of farm products.

PRICE OF THE PRODUCT (RAND)	QUANTITY DEMANDED PER WEEK (kg)	QUANTITY SUPPLIED PER WEEK (kg)
1	6	0
2	5	1
3	4	2
4	3	3
5	2	4

4.5.1 Draw a line graph, on the attached ANSWER SHEET, indicating the supply, demand and the point of market equilibrium. (4)

4.5.2 Explain how the price of a product in the market will affect the marketing strategy for your product. (2)

4.6 The following are stages through which an agricultural product went before it was finally bought and used by the consumer:

- Local grading and packaging house
- Municipality open market
- Farm shed
- School kitchen

4.6.1 Arrange the stages above in such a way that they will follow one another to represent a marketing chain. (4)

4.6.2 List any FOUR aspects that a producer must implement to ensure that agricultural products reach the consumer in the best possible condition. (4)

4.7

PRETORIA AGRI EXPO
The emphasis of this expo is on farm animals. International as well as domestic tourists flock to this show for a unique agricultural experience. The agricultural highlights of the show are usually the following activities: National Pinzgauer championships, the Hugenoot Cattle Show, the final round of the ARC Beef Star Performers and the Herd of the Year Competition.

4.7.1 Indicate the type of agricultural enterprise represented by the visitors to this expo. (1)

4.7.2 Name and distinguish between the TWO types of visitors present at the Pretoria Agri Expo. (4)

4.7.3. Indicate FOUR benefits of an agricultural expo. (4)

4.8 State any TWO management functions that a farmer has to apply to ensure the smooth running of the farm. (2)

[50]

TOTAL SECTION B: 150
GRAND TOTAL: 200

CENTRE NUMBER:

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EXAMINATION NUMBER:

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SECTION A

QUESTION 1.1

1.1.1	A	B	C	D
1.1.2	A	B	C	D
1.1.3	A	B	C	D
1.1.4	A	B	C	D
1.1.5	A	B	C	D
1.1.6	A	B	C	D
1.1.7	A	B	C	D
1.1.8	A	B	C	D
1.1.9	A	B	C	D
1.1.10	A	B	C	D

(10 x 2) (20)

QUESTION 1.2

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 x 2) (20)

QUESTION 1.3

- 1.3.1
- 1.3.2
- 1.3.3
- 1.3.4
- 1.3.5
- 1.3.6.....
- 1.3.7.....
- 1.3.8.....
- 1.3.9.....
- 1.3.10.....

(10 x 1) (10)



TOTAL SECTION A: 50

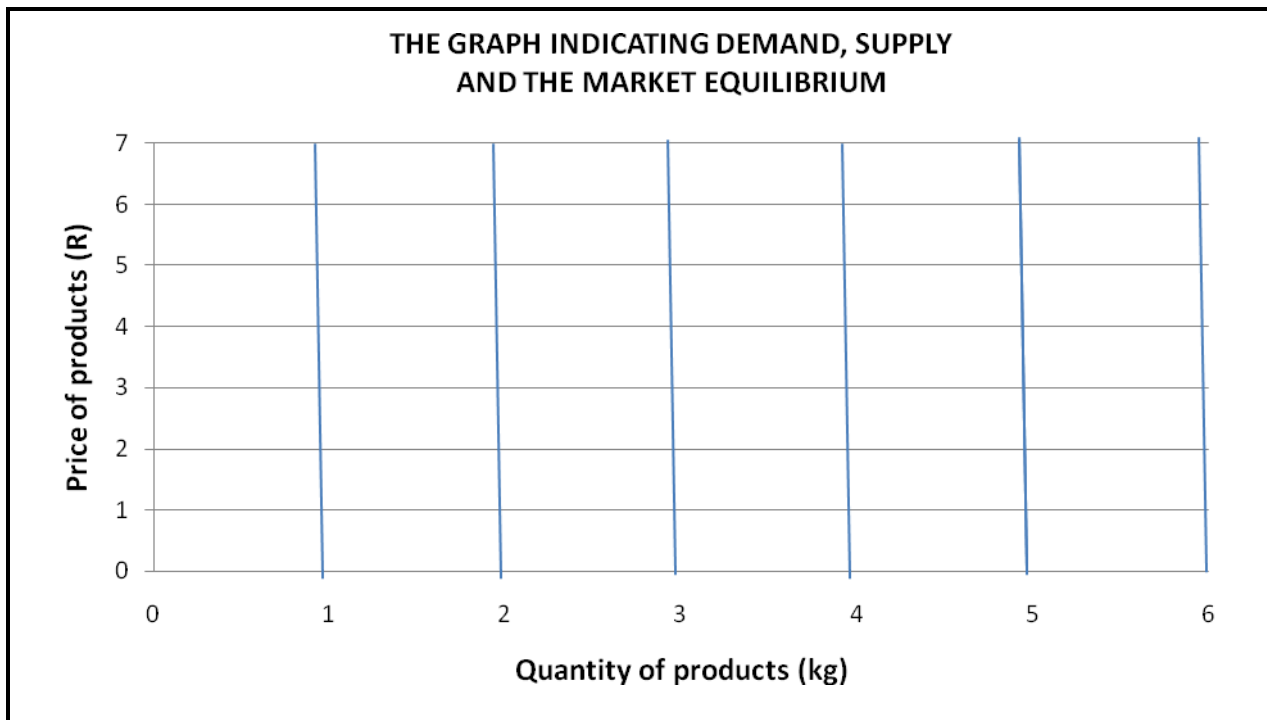
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QUESTION 4.5.1



(4)