NATIONAL SENIOR CERTIFICATE EXAMINATION
NOVEMBER 2020

AGRICULTURAL MANAGEMENT PRACTICES

MARKING GUIDELINES

Time: 3 hours 200 marks

These marking guidelines are prepared for use by examiners and sub-examiners, all of whom are required to attend a standardisation meeting to ensure that the guidelines are consistently interpreted and applied in the marking of candidates' scripts.

The IEB will not enter into any discussions or correspondence about any marking guidelines. It is acknowledged that there may be different views about some matters of emphasis or detail in the guidelines. It is also recognised that, without the benefit of attendance at a standardisation meeting, there may be different interpretations of the application of the marking guidelines.

SECTION A

QUESTION 1

1.1
1.1.1 A
1.1.2 A
1.1.3 C
1.1.4 B
1.1.5 D
1.1.6 D
1.1.7 C
1.1.8 C
1.1.9 D
1.1.10 B

1.2
1.2.1 D
1.2.2 G
1.2.3 K
1.2.4 A
1.2.5 J
1.2.6 E
1.2.7 B
1.2.8 H
1.2.9 F
1.2.10 I

1.3
1.3.1 Cultural agritourist
1.3.2 Calibration
1.3.3 Photosynthesis
1.3.4 Planning
1.3.5 Plant succession
1.3.6 Rain/Rainfall
1.3.7 Diversity
1.3.8 No tillage
1.3.9 Mission statement
1.3.10 Receipt

SECTION B

QUESTION 2 RESOURCE UTILISATION, LAND USE AND FARMING SYSTEMS

2.1 2.1.1 **AN INTEGRATED WEED/PEST CONTROL PROGRAMME involves …**

THREE sections from the passage:

- Reduced use of chemical inputs/toxins.
- Using sound farming practices, e.g. crop rotation/cover crops.
- Using sound management practices.

2.1.2 **TWO other practices:**

- Using sound cultivation practices/more mechanical control.
- Applying sanitation measures/hygienic conditions.
- Greater use of biological control.

(Any 2)

2.1.3 **FOUR SOUND FARMING PRACTICES**

- Crop rotation
- Cover crops
- Administering organic matter
- Intercropping

2.1.4 **EXPLAIN THE EFFECT OF …**

(a) **STRUCTURELESS SOIL ON WATER RETENTION ABILITY**

A structureless soil (single grain) indicates a sandy soil, many macropores between the soil particles, a high drainage capacity and low fertility, resulting in a low water retention ability.

(b) **BLOCK-TYPE STRUCTURE ON TILLABILITY**

A block-type structure is found in clayey soil which is known as a heavy soil that is difficult to till.

2.1.5 **DISCUSS …**

GOOD CROP ROTATION SUPPRESSES PATHOGEN SPREAD

Some pathogens live in symbiosis with a certain crop/plant.
If crop rotation takes place, the life cycle of this pathogen is interrupted, with the result that the pathogen decreases/dies because its host/crop is absent in the rotation cycle.

2.1.6 **PROCESS**

Precision farming

2.1.7 **TWO REASONS TO KNOW ABOUT INCREASED TEMPERATURE**

- It could indicate oestrus in female animals.
- It could indicate that the relevant animals are ill.

2.2 2.2.1 **EXAMPLES OF CAPITAL**

(a) FIXED CAPITAL: farm, farmhouse, boreholes, reservoir, land
(Any 2)

(b) MOVABLE CAPITAL: implements, tools, farm bakkie, cattle
(Any 2)

(c) OPERATING CAPITAL: cash, wages wheat, seed
(Any 2)

2.2.2 (a) **MARGINAL LAND**
Most difficult land to manage/cultivate with the highest input cost less profitable land/land that is economically breaking even
(Any 2)

(b) **CROP FACTOR**
Grass/pasture that is lost during grazing as a result of, for example, trampling.

2.2.3 **PROBLEMS WITH CONTOUR FARMING**

- Expensive
- Requires technical knowledge to establish

2.2.4 **CROP CULTIVATION PRACTICES IN ADDITION TO CONTOUR FARMING**

- Strip cropping
- Cover crops

2.2.5 **CALCULATION OF NUMBER OF CATTLE**
700 ha × 6 kg/day = 4 200 kg/day
4 200 kg × 0,4 crop factor = 1 680 kg lost
4 200 kg – 1 680 kg lost = 2 520 kg available to cattle
2 520 kg ÷ 10,55 kg required by one head of cattle/day = 238,86 cattle
Therefore, the young man can keep 238 cattle on the pastureland.

2.2.6 **TYPE OF LABOUR:**
(a) Casual labourer

TWO EXAMPLES:
(b) Builders/contractor
Fencers

2.2.7 **LABOUR LAW:**

(c) Basic Conditions of Employment Act, Act 75 of 1997

2.3 2.3.1 **ECONOMIC PROPERTY**
The law of diminishing returns.

2.3.2 **MARGINAL VALUE OF 2018**
Marginal yield 2018 = Total yield 2018 – Total yield 2017
= 4,5 tons – 4,8 tons
= –0,3 tons

2.3.3 **EXPLAIN LAW OF DIMINISHING RETURNS**
- With the increase in fertiliser an increased total yield as well as an increased marginal yield are obtained.
- As the fertiliser is increased, the total yield increases, but the marginal yield does not increase in the same ratio/ proportionally.
- A continuous increase in the fertiliser therefore results in an increase in the yield (2014–2016), but reaches a stage where the yield starts to flatten (2017) and later even starts to decrease (2018).

QUESTION 3 AGRITOURISM AND MARKETING

3.1 3.1.1 **DEFINE A BUSINESS PLAN**
A business plan is a document that sets out the objectives, needs, target market and financial requirements of a planned enterprise.

3.1.2 **REASONS FOR COMPILING A BUSINESS PLAN**
- To apply for a bank loan/obtaining capital.
- It tests the feasibility and viability of the business idea.
- It helps with determining the financial needs.
- It determines the daily operations.
- It indicates the vision and mission of the enterprise.
- It gathers knowledge regarding the marketing matters.

(Underlined answer + any 3)

3.1.3 **FOUR PILLARS TO JUDGE A SUSTAINABLE SYSTEM**
- Productivity/production security
- Risk management/decreased risk
- Economic viability
- Social acceptance/no risk for social community
- Conservation/no risk for environment

(Any 4)

3.1.4 **FOUR EXAMPLES FROM PASSAGE THAT EXPLAIN SWOT ANALYSIS**
- S-Strengths – Collateral/Production security
  – An established business
  – Butchery
- W-Weaknesses – Lack of finances
- O-Opportunities – Growing population for sales/market
- T-Threats – Close competition/Lack of finances

3.2 **THREE REASONS FOR DRAUGHT ANIMAL POWER**

- Much lower initial cost/lower initial capital investment
- Lower operating costs/maintenance
- Further savings by using it to transport water/products
- Additional income from animals, e.g. calves, milk, manure
- Easier to handle for women and children
- More environmentally friendly
- Less soil compaction

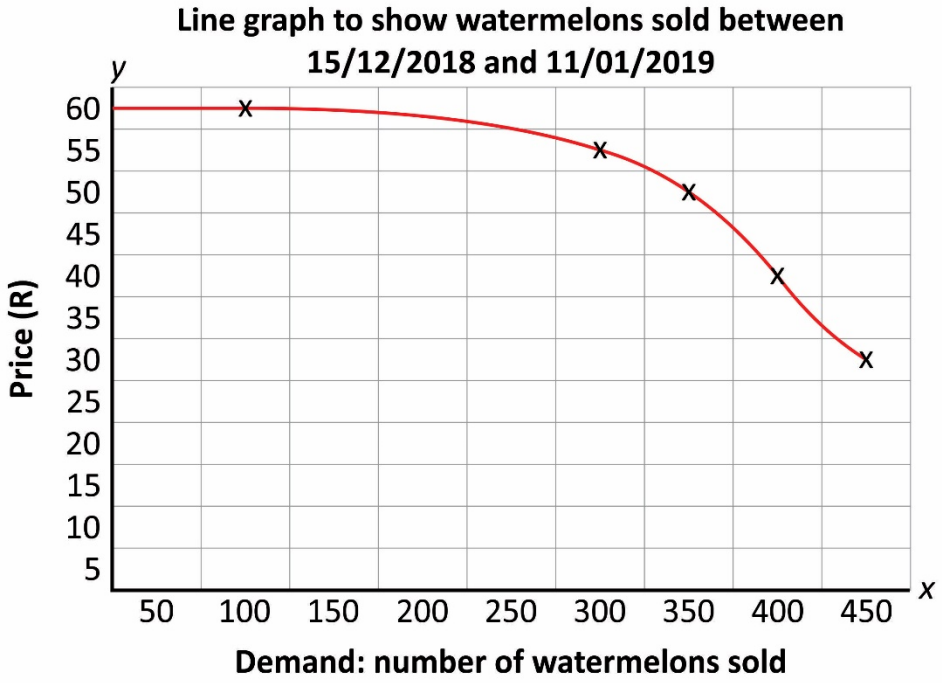
(Any 3)

3.3 **AGRITOURISM**

This is a person who leaves his/her home to visit an agricultural institution having agricultural activities and make a positive contribution to the institution etc.

3.4 **SUPPLY AND DEMAND**

3.4.1 **LINE GRAPH**



Mark allocation: full heading.
Correct labelling and correct calibration of *x*-axis.
Correct labelling and correct calibration of *y*-axis.
Correct units for x-axis and y-axis.
Line graph.
Correct as a whole.

3.4.2 **EFFECT OF PRICE ON SUPPLY AND DEMAND**

The higher the price the higher the supply the lower the demand
OR
The lower the price the lower the supply the higher the demand.

3.4.3 **FACTORS AFFECTING SUPPLY OF WATERMELONS**

- Labour cost/labour strikes
- Natural disasters/floods/droughts
- Input costs
- Technology
- Legislation
- Seasonality
- Availability/price of similar products

(Any 3)

3.4.4 **CONCEPT OF MARKET EQUILIBRIUM**

The quantity supplied is equal to the quantity demanded.

3.4.5 **DATE IN WHICH MARKET EQUILIBRIUM IS REACHED**

The week of 04/01/19

3.4.6 **CALCULATE BREAK-EVEN POINT**

$$\text{Break-even point} = \frac{\text{Fixed cost}}{\text{Price} - \text{Variable cost}}$$

$$= \frac{\text{R16,00}}{\text{R30,00} - \text{R10,00}}$$

$$= \frac{\text{R16,00}}{\text{R20,00}}$$

$$= 0{,}80 \text{ of a watermelon is required to break even}$$

$$\text{THEREFORE} = 0{,}80 \times \text{R30,00} = \text{R24,00} \text{ is breaking even and R6,00 is profit.}$$

3.4.7 **MARKETING METHOD**

Free marketing

3.4.8 **MARKETING CHANNEL**

Fresh-produce market

3.4.9 **DISADVANTAGE OF MARKETING CHANNEL IN TABLE**

Oversupply may result in losses, for example 15/12/18.

3.4.10 **ADVANTAGES OF FRESH-PRODUCE MARKET**

- Receive higher prices if they have product available when it is scarce.
- The market serves as an outlet for a large part of the farmer's product.
- Agents/middlemen handle marketing – therefore farmer is able to spend time on production.
- Money is available to the farmer immediately after sales.

(Any 3)

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

4.1 4.1.1 **STEPS OF BOOKKEEPING IN CORRECT ORDER**

1. Source documents (business transactions)
2. Journal entries
3. Ledger entries
4. Trial balances
5. Balance sheets

4.1.2 **COMPLETE FINANCIAL STATEMENT**

A1	ASSET ITEMS	VALUE (R)
	Balance in bank	112 045,00
	Farm and buildings	4 600 000,00
	Livestock on farm	458 000,00
	Vehicles	980 000,00
	Implements	765 567,00
A2	TOTAL	6 915 612,00
B1	LIABILITY ITEMS	VALUE (R)
	Cooperative account (seed)	280 000,00
	Owing to fertiliser company	86 054,00
	Owing on repair of machinery	15 365,00
	Veterinary account	32 026,00
	Mortgage loan	1 250 000,00
B2	TOTAL	1 663 445,00
C	NET CAPITAL	5 252 167,00

Mark allocation: Correct redrawing of statement
Correct transfer of any 3 assets with values
Correct transfer of 2 other assets with values
Correct transfer of any 3 liabilities with values
Correct transfer of 2 other liabilities with values

4.1.3 **CALCULATE NET CAPITAL**

Net capital = Assets – Liabilities
= R6 915 612,00 – R1 663 445,00
= R5 252 167,00

4.1.4 **IDENTIFY STATEMENT**

Balance sheet

4.1.5 **INTERPRET ENTERPRISE'S NET VALUE**

- The enterprise's net capital is very positive/healthy and offers very good collateral/security. Is creditworthy.
- The enterprise is very viable as a result of the positive net capital.
- The enterprise is in a good liquidity position as a result of positive net capital.

4.2 4.2.1 **DEFINE TERMS**

(a) **COMMERCIAL FARMER**
A commercial farmer is someone whose sole purpose is to sell/market his/her agricultural products and to make a profit.

(b) **PROCESSED**
Processing involves the conversion of a primary/raw agricultural product into a processed/edible product.

4.2.2 **WHY GRADING IS IMPORTANT**
Price fixing takes place according to the grade of the grain/ determines income of farmer.

4.2.3 **SLOW DOWN OR STOP POPULATION GROWTH**
- Grain moisture content must be lower than 12%/below 8% contamination does not take place.
- Temperature must be reduced to below 20 °C – slows down growth.
- Relative humidity must be reduced to below 20% – slows down growth.

4.2.4 **PREVENTION OF CONTAMINATION**
- Avoid contact with contaminated material.
- Hygienic conditions in granaries before storage.

4.2.5 **WHY PROCESSING IS IMPORTANT FOR CONSUMER**
- Products available not only in season/available throughout the year/steady market/available in non-producing areas.
- Products are available in the form as required/ready for use. Products have a longer shelf life.
- Products are healthier as a result of fewer microorganisms.
- Products available in a more uniform quality.
- Products easier to handle/more transportable etc.

(Any 3)

4.2.6 **IDENTIFY WORD/TERM**

(a) grain/grain farmer

(b) processing/transport/grading/sorting/millers

(c) seed distributors

4.3 PACKAGING

4.3.1 REASONS FOR PACKAGING

- Protects product from dirt, light, insects and contamination by microbes.
- Facilitates handling.
- Can transfer information.
- Extends shelf life.
- Marketing/brand/identification etc.

(Any 4)

4.3.2 REASONS FOR MILK PROTEIN PACKAGING

- It is edible and cling film is not.
- It is healthier than cling film.
- It blocks oxygen and prevents food from rotting, whereas cling film does not.
- It does not pollute the environment, whereas cling film does.

(Any 3)

4.4 MANAGEMENT FUNCTIONS

STEPS OF PLANNING

D, C, E, F, A, B

4.5 BUDGET

4.5.1 DEFINITION OF BUDGET

It is the expected income and expenses of an enterprise for a specified period.

4.5.2 PURPOSE OF MAINTENANCE BUDGET

It provides for the maintenance of all infrastructure, implements, etc.

Total: 200 marks