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	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

1.2	1.2.1	I
	1.2.2	E
	1.2.3	J
	1.2.4	C
	1.2.5	G

1.2.6	D
1.2.7	L
1.2.8	K
1.2.9	H
1.2.10	A

1.3	1.3.1	Mixed veld
	1.3.2	Monoculture
	1.3.3	Small-scale
	1.3.4	Dryland/Natural irrigation
	1.3.5	Seasonal labourer
	1.3.6	Budget
	1.3.7	Receipt
	1.3.8	Controlled marketing
	1.3.9	Meat inspection
	1.3.10	Sterilisation

SECTION B

QUESTION 2   FARM PLANNING (PHYSICAL AND FINANCIAL)

2.1   2.1.1   **Advantages and disadvantages of using high levels of technology**
        Advantages:
        • More precise application of inputs
        • Less wastage
        • Better production
        • Time saving
        • Better management
        • Better returns
        • Collection and storage of data
        Disadvantages:
        • Expensive technology
        • Higher levels of management required
        • Risk of mechanical failure
        • Reduces employment – increased unemployment

        2.1.2   **FOUR factors a farmer should consider when deciding on the level and type of technology**
        • Farm size
        • Capital available
        • Production objectives
        • Machinery costs
        • Availability of backup service
        • Labour costs
        • Increase in production and/or returns
        • Available knowledge and skills
        • Work capacity of machines
        • Skills of workers
        • Terrain
        • Type of enterprise

        2.1.3   **THREE important aspects in staff training**
        • Maintaining the equipment
        • Safety requirements
        • Correct operating procedures
        • Preventing and handling problems
        • Computer literacy

2.2   2.2.1   **FOUR main types of resource information included on a farm map**
        • Types of soils
        • Vegetation
        • Water sources
        • Topography

2.2.2 **FOUR factors that determine soil arability, plus their significance**
- Soil depth – shallow soils are not arable
- Soil texture – affects water holding capacity of the soil
- Rockiness – few to no rocks is ideal
- Slope – flat to gentle slope is arable
- Drainage or water-holding capacity – waterlogged soils are generally not arable

2.3   2.3.1 **FOUR advantages of a mixed farming system**
- Dilution of risk/diversifying of risk
- Sharing of resources
- Products or by-products of one enterprise can support another
- Optimal use of land
- Greater opportunities for income generation
- Greater distribution of income throughout the year
- More products to sell

2.3.2 **TWO enterprises for a mixed farming system, with explanation**
Examples: beef and maize; beef and pastures; dairy and pastures
- Enterprises should suit given conditions (veld, arable land)
- Enterprises should complement one another

2.4   2.4.1 **Relationship between temperature and plant growth**
- At very low temperatures, plant growth is reduced
- At very high temperatures, plant growth is reduced
- Growth is highest at the optimal temperature
- Each type of plant has its own optimal temperature for growth

2.4.2 **Optimal temperature for growing broccoli and maize**
- Broccoli = 15 °C
- Maize = 25 °C

2.4.3 **Time of the year to plant broccoli and maize, with explanations**
- Broccoli – plant in cool season, e.g. autumn, since it requires cooler temperatures
- Maize – plant in warm season, e.g. spring and summer, since it requires warmer temperatures

2.4.4 **Impact of temperature rise on production of broccoli and maize, with explanation**
- Broccoli will suffer more due to its preference for lower temperatures
- Maize will do better since it has to withstand higher temperatures, although growth will be reduced
- Change planting dates
- Broccoli may not be grown in certain areas
- General decrease in production due to higher temperatures

2.5   2.5.1   **Whole-farm budget and an enterprise budget**

Whole-farm budget	Enterprise budget
• Contains the expected income, expenses, and profit of a given farm plan • Used to estimate the profitability of an entire farm	• Contains the expected income and expenses related to a particular enterprise (both fixed and variable costs)

2.5.2   **Definition for a cash flow budget**
  - An estimate of all cash receipts and all cash expenditures that are expected to occur during a certain time period
  - Estimates can be made monthly, bi-monthly, or quarterly, and can include non-farm income and expenditures as well as farm items

2.5.3   **Reasons for poor cash flow in a farm business**
  - Seasonal marketing and income
  - Unexpected expenses
  - Non-payment for goods sold
  - Poor financial planning
  - Theft
  - Poor harvest yield

QUESTION 3   ENTREPRENEURSHIP, RECORDING, MARKETING, BUSINESS PLANNING AND ORGANISED AGRICULTURE

3.1   3.1.1   **Net profit for FARMER A**
- Total income   = R124 000
- Total expenses = R84 000
- Net profit = R124 000 – R84 000
         = R40 000

3.1.2   **Net profit for FARMER B**
- Total income   = R137 000
- Total expenses = R81 000
- Net profit = R137 000 – R81 000
         = R56 000

3.1.3   **More successful farmer, with THREE reasons**
- FARMER B
- Higher income due to higher wool and manure sales
- Lower expenses due to less expenditure on feed
- Spent more money on maintenance
- Spent more on veterinary and animal health

3.2   3.2.1   **Definition of depreciation**
- The reduction in the value of an asset over time, usually due to wear and tear

3.2.2   **Calculation of average depreciation value per year**

- $\text{Depreciation} = \dfrac{(\text{Cost price} - \text{Salvage value})}{\text{Lifespan}} = \dfrac{(800\,000 - 80\,000)}{10}$

= R72 000 per year

3.3   3.3.1   **Balance sheet 12 September 2017**

| ASSETS	VALUE
Fixed assets	
Farm	R1 300 000
Farm house and sheds	R870 000
Current assets	
Cash in hand	R60 000
Stock of seeds	R100 000
Balance in the bank	R32 000
TOTAL ASSETS	R2 362 000
LIABILITIES	**VALUE**
Long-term liabilities	
Outstanding bank loan	R450 000
Current liabilities	
Seeds loaned from neighbour	R50 000
Account at local cooperative	R28 000
TOTAL LIABILITIES	R528 000
NET WORTH	R1 834 000

3.3.2 **Reasons for paying debt**
- Debt reduced net worth
- Affects ability to grow business and obtain loans
- Debt incurs interest and costs more
- Assets are more secure

3.4   3.4.1 **Description of relationship between product price, product demand and product supply**
- At low product prices, demand is high but supply is low. Hence a shortage of product which should drive prices higher
- At high product prices, demand is low, but supply is high. Hence a surplus of product which drives product prices down

3.4.2
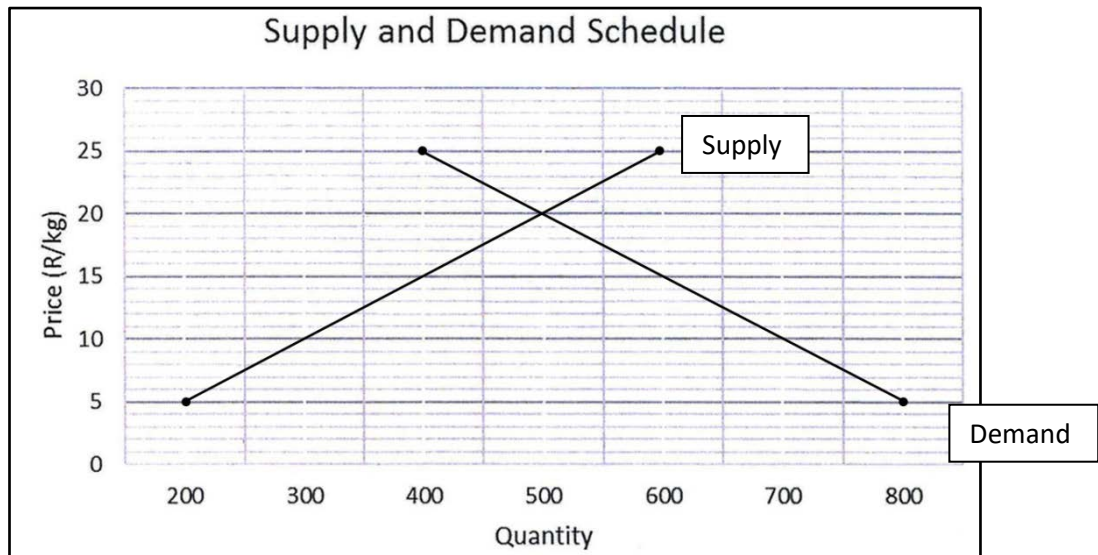
Mark allocation:
- Chart title
- X-axis label
- Y-axis label
- Supply curve
- Demand curve

3.4.3 **Product price at the point of market equilibrium**
R20/kg

3.4.4 **TWO reasons for product shortage**
- Drought
- Pests and diseases
- Damage due to fire
- Theft
- Low prices – farmers did not plant
- Seasonal shortage

3.4.5 **Free-market system or controlled marketing and explanation**
Free-market – prices are controlled by market elements, i.e. supply and demand, not set by government

3.5   3.5.1   **SIX main sections or components of a business plan**
- Executive summary
- Company description
- Description of products/services
- Market analysis and marketing plan
- Production and implementation plan
- Organisation and management team
- Financial plan and projections

3.5.2   **Necessity to compile a business plan when applying for a loan**
- Helps to determine funding requirements
- Demonstrates the entrepreneur's knowledge of the business
- Demonstrates the financial feasibility of the business
- Clarifies the legal ramifications of the business

QUESTION 4   HARVESTING, PROCESSING, MANAGEMENT AND AGRITOURISM

4.1   4.1.1   **SIX characteristics of an entrepreneur**
- Risk taker
- Business-minded/Profit-driven
- Sees opportunities
- Motivated
- Enthusiastic
- Decisive/Decision maker
- Open-minded
- Flexible
- Hard working

4.1.2   **Comparison of informal marketing and formal marketing**

(a)   **Volume of product marketed**
Formal marketing can handle greater volumes of product due to broader distribution channels

(b)   **Value of product**
Usually formal markets can charge higher prices than informal markets

(c)   **Profitability**
Formal markets tend to be more profitable due to greater market share and distribution opportunities

4.1.3   **FIVE management roles as packhouse manager**
- Control of packhouse stock
- Coordination of daily and occasional activities
- Motivation of staff
- Organisation of packhouse functions
- Planning current and future activities

4.1.4 **FIVE pieces of equipment or infrastructure used in the agro-processing business**
- Delivery vehicle
- Cold room
- Vegetable cutter
- Dryer
- Peeler
- Washing machine

4.1.5 **Product labelling**

(a) **Importance of labelling processed goods**
- Legal requirement
- Opportunity for branding
- Ensures customer satisfaction

(b) **FOUR types of information on a product label**
- Ingredients
- Allergens
- Expiry date
- Name of producer

4.1.6 (a) **TWO reasons to maintain a quality assurance system**
- Maintain contracts and customers
- Ensure product safety

(b) **FOUR types of quality assurance measures in the article**
- HACCP
- Protective clothing
- Regular auditing
- Good agricultural practices

4.1.7 **Classified as an AgriBEE enterprise? Explain.**
Yes
- Received support from DAFF
- Black-owned
- Received tenders for state contracts – preference points

4.2 4.2.1 **Calculation of the land price (rand per ha) for FARM A and FARM B**

$$\text{Farm A} = \frac{\text{R21 000 000}}{\text{1 155 ha}} = \text{R18 181,82 / ha}$$

$$\text{Farm B} = \frac{\text{R2 960 000}}{\text{1 400 ha}} = \text{R2 114,29 / ha}$$

4.2.2 **Reasons for the different land values for the two farms**
- Location
- Fixed improvements
- Water supply
- Value of livestock and production units
- Inclusion of agritourism
- Electricity supply
- Grazing potential

4.2.3 **Farm is developed for agritourism, with THREE reasons**
Farm A
- Established guesthouse
- Game drive vehicle
- Conference facilities
- Range of game animals

Total: 200 marks