These marking guidelines consist of 9 pages.
SECTION A

QUESTION 1

1.1 1.1.1 D ✓ ✓
     1.1.2 C ✓ ✓
     1.1.3 B ✓ ✓
     1.1.4 D ✓ ✓
     1.1.5 A ✓ ✓
     1.1.6 C ✓ ✓
     1.1.7 A ✓ ✓
     1.1.8 D ✓ ✓
     1.1.9 D ✓ ✓
     1.1.10 B/C/D ✓ ✓ (10 x 2) (20)

1.2 1.2.1 E ✓ ✓
     1.2.2 J ✓ ✓
     1.2.3 C ✓ ✓
     1.2.4 D ✓ ✓
     1.2.5 B ✓ ✓ (5 x 2) (10)

1.3 1.3.1 Fixed price/cost/price fixing/hedging ✓ ✓
     1.3.2 Management ✓ ✓
     1.3.3 Inversion ✓ ✓
     1.3.4 Polygenic ✓ ✓
     1.3.5 Cross breeding/out crossing ✓ ✓ (5 x 2) (10)

1.4 1.4.1 Market segment ✓
     1.4.2 Closing balance ✓
     1.4.3 Continuous ✓
     1.4.4 Biometrics ✓
     1.4.5 Heterosis/hybrid vigour ✓ (5 x 1) (5)

TOTAL SECTION A: 45
SECTION B

QUESTION 2: AGRICULTURAL MANAGEMENT AND MARKETING

2.1 Market functions

2.1.1 The letter representing the functions of marketing

(a) C ✓ (1)
(b) B/D ✓ (1)
(c) D ✓ (1)
(d) A ✓ (1)

2.1.2 THREE advantages of processing agricultural products

• Prevents spoilage/perishability/increases shelf life/increases storage period ✓
• The product is available throughout the year ✓
• Improves food safety ✓
• Easy to transport ✓
• Adds/increases value/quality/usefulness of product ✓
• It provides job/business opportunities ✓
• Reduces wastage of excess produce ✓
• It is a way of overcoming over-supply of products ✓
• It allows for easier packing and handling of products ✓
• Higher price of products/higher income/profit ✓ (Any 3) (3)

2.2 Marketing channels

2.2.1 Farm gate marketing ✓ (1)
2.2.2 Stock auction ✓ (1)
2.2.3 Contract market ✓ (1)
2.2.4 Fresh produce market ✓ (1)
2.2.5 Internet marketing ✓ (1)

2.3 Graph on price equilibrium

2.3.1 Identification of curves

• A Demand ✓ (1)
• B Supply ✓ (1)

2.3.2 THREE factors affecting demand

• Price of the product ✓
• Quality of products/usefulness of product ✓
• Consumer preferences/fashion/taste of consumers ✓
• Range of products available/substitute/complimentary products ✓
• Season/time/period of production ✓
• Income/status of consumers/buying power of consumers ✓
• Number of consumers ✓ (Any 3) (3)
2.3.3 **Definition of equilibrium**
The price where the supply ✓ is equal to the demand ✓ (2)

2.3.4 **Relationship between the price and the quantity demanded**
The higher the price, the lower the quantity demanded ✓ ✓
OR
The lower the price the higher the quantity demanded ✓ ✓ (2)

2.4 **The number of potatoes bought at different prices per week**

2.4.1 **Line graph showing the quantities of potatoes bought at different prices**

![The quantity of potatoes bought at different prices](image)

**Criteria/rubric/memorandum**
- Correct heading ✓
- X axis: Correctly calibrated and labelled (Quantity) ✓
- Y axis: Correctly calibrated and labelled (Price) ✓
- Correct units (R and bags) ✓
- Line graph ✓
- Accuracy ✓ (6)

2.4.2 **The price when most potatoes were bought**
R10 ✓ (1)

2.4.3 **Reason**
400 bags of potatoes were bought when the price was R10/the highest quantity was bought at R10/lowest price/highest quantity bought at the lowest price ✓ (1)
2.5 THREE problems encountered when drawing up a business plan
- Insufficient research done ✓
- Vague business plan ✓
- Insufficient cash flow allocated ✓
- Unrealistic assumption and projections ✓
- Hiding weaknesses and risks ✓
- Not highlighting potential competition ✓
- Using the incorrect format ✓
- Inconsistent information on supplies ✓

(Any 3) (3)

2.6 THREE elements of the SWOT analysis
- Strengths ✓
- Weaknesses ✓
- Opportunities ✓
- Threats ✓

(Any 3) (3)

[35]

QUESTION 3: PRODUCTION FACTORS

3.1 The budget of a small-scale farmer for a year

3.1.1 ONE cost item that can be repaid over a period of five years
Loan (tractor) ✓

(1)

3.1.2 Reason for the answer
A tractor is a medium term asset ✓

(1)

3.1.3 Calculation of the highest income generated
- R200 000 + R120 000 ✓
- = R320 000 ✓

(2)

3.1.4 TWO problems associated with a medium term asset
- Interest rate on loan ✓
- Depreciation ✓

(2)

3.1.5 The profit of the enterprise
- Profit = income – expenditure ✓
- R320 000 – R252 500 ✓
- Profit = R67 500 ✓

(3)

3.2 Labour legislation

3.2.1 Basic Conditions of Employment Act, 1997 (Act 75 of 1997) ✓

(1)

3.2.2 Skills Development Act, 1998 (Act 97 of 1998) ✓

(1)

3.2.3 Occupational Health and Safety Act, 1993 (Act 85 of 1993) ✓

(1)
3.3 Scenario on labour as a production factor

3.3.1 Identification of the type of labourers
Seasonal labourers ✓

3.3.2 Distinction between a permanent and a seasonal labourer
Seasonal labourer
- Employed only for harvesting/specific time/peak period of the year/season ✓
Permanent labourer
- Permanently employed throughout the year ✓

3.4 THREE challenges of labour as a production factor
- Shortages/scarcity of labour ✓
- High cost of labour ✓
- Lack of skills/training ✓
- Competition from other industries/economic migrants ✓
- Poor labour management/working conditions ✓
- Social problems/HIV and AIDS ✓
- Industrial action/strikes ✓

(Any 3)

3.5 Calculation of the wage of the labourer working on a public holiday
- R150 x 2/R150 + R150 ✓
- = R300 ✓

3.6 Management principles

3.6.1 Association of the statement with the management principles
- A Control/supervision ✓
- B Organization/co-ordination ✓
- C Planning ✓

(3)

3.6.2 THREE business managerial skills of a manager to perform duties at C
- Conceptual ✓
- Analytical ✓
- Planning ✓
- Problem solving ✓
- Application skills ✓
- Financial management skills ✓
- Implementation ✓
- Decision making ✓

(Any 3)

3.7 Scenario on the increasing of land productivity

3.7.1 Consolidation/consolidating uneconomic units/mechanisation ✓

3.7.2 Scientific methods/improve soil fertility/crop rotation/inter cropping ✓
3.7.3 Restoring land potential ✓

3.7.4 Improving water management ✓

3.8 Explanation with an example the law of diminishing return
- As the quantity of an input is increased, the yield (output) will increase ✓
- until a specific point, thereafter it will increase at a decreasing rate ✓
- Example (fertilizer application and maize yield) ✓

3.9 TWO functions of land as a production factor
- Source of minerals ✓
- Used as a collateral ✓
- Provides physical space for production ✓
- Provides raw materials ✓
- Food production ✓

QUESTION 4: BASIC AGRICULTURAL GENETICS

4.1 Crossing of yellow and white flowers

4.1.1 Provision of the labels (a) - (e)
(a) Yy ✓
(b) Yellow ✓
(c) Yy ✓
(d) 3:1 (Yellow to white) ✓
(e) 1:2:1 ✓

4.1.2 Type of dominance
Complete dominance ✓

4.1.3 Justification
- Yellow colour (Y) is dominant over white colour (y) ✓
- No intermediate/new colour in the offspring ✓

4.2 TWO crosses in F1 generation

4.2.1 Indication of the type of crossing
Monohybrid ✓

4.2.2 Reason
Crossing involving only one characteristic/trait ✓

4.2.3 Prediction of the genotype of parents in the first crossing
- Parent 1 Bb ✓
- Parent 2 bb ✓
- OR
- Bb ✓ x bb ✓
4.2.4 Punnet square determining the genotypic percentage of the offspring in the second crossing

<table>
<thead>
<tr>
<th>♀</th>
<th>B</th>
<th>B ✓</th>
</tr>
</thead>
<tbody>
<tr>
<td>b</td>
<td>Bb</td>
<td>Bb ✓</td>
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<td>b</td>
<td>Bb</td>
<td>Bb</td>
</tr>
</tbody>
</table>

Punnet square with gametes and offspring ✓

Genotypic percentage of the offspring is 100% ✓

**Marking guidelines**
Complete Punnet square with gametes and offspring ✓
Correct gametes ✓
Correct offspring ✓
Correct percentage ✓ (4)

4.2.5 Calculation of the phenotypic percentage of the offspring in the second crossing

Phenotypic % = \( \frac{4}{4} \times 100 \ ✓ \\
= 100\% \text{ black ✓} 

(2)

4.3 Scenario on Genetic Modification

4.3.1 Identification of the advantage of GM seed over the traditional seed
- Yield doubled during the first harvest ✓
- Spraying against bollworm is reduced/less costs ✓ (Any 1) (1)

4.3.2 TWO possible techniques used to modify the cotton seed
- Bacterial carriers/Agrobacterium tumefaciens ✓
- Gene gun/ biolistic ✓
- Electroporation ✓
- Micro - injection ✓
- Lipofection ✓
- Viral carriers ✓
- Gene silencing ✓
- Gene slicing ✓
- Gene recombination ✓
- Calcium-phosphate precipitation ✓ (Any 2) (2)

4.3.3 TWO economic benefits of using genetically modified seed to the farmer
- Reduced cost for pesticides ✓
- Higher yield/ more income ✓ (2)
4.3.4 **TWO impacts of using the GM cotton seed**

(a) **Environment**
- Less spraying leads to reduced pollution of environment ✓
- Leads to herbicide resistant crops/super weeds ✓
- Beneficial insects/pests are killed when feeding on insect resistant crops ✓
- Biodiversity is reduced ✓ (Any 2) (2)

(b) **Economic**
- Seeds are expensive/farmers have to buy new seed yearly/ famers may not retain seeds for breeding purposes ✓
- High input costs as farmers must pay a technology fee ✓ (2)

4.4 **Breeding systems**

4.4.1 Cross breeding/upgrading ✓ (1)

4.4.2 Inbreeding ✓ (1)

4.4.3 Upgrading ✓ (1)

4.4.4 Species crossing ✓ (1)

4.5 **Breeding Value (BV)**

4.5.1 **Calculation of the weaning weight of the progeny in kilograms**

\[
\begin{align*}
16 + 6 &= 22 \checkmark \\
22 &\div 2 \checkmark \\
= 11 \text{ kg} \checkmark \\
\end{align*}
\]

OR

\[
\begin{align*}
(16 \div 2) + (6 \div 2) &= 8 + 3 \checkmark \\
= 11 \text{ kg} \checkmark \\
\end{align*}
\]

(3)

4.5.2 **Interpretation of the figure**

The offspring of these parents will be 11 kg heavier ✓ than the average of the herd ✓ (2) [35]

TOTAL SECTION B: 105
GRAND TOTAL: 150

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