This memorandum consists of 10 pages.
SECTION A

QUESTION 1

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

1.2
1.2.1 D ✔✔
1.2.2 G ✔✔
1.2.3 F ✔✔
1.2.4 C ✔✔
1.2.5 E ✔✔ (5 x 2) (10)

1.3
1.3.1 Planning ✔✔
1.3.2 Advertising/marketing/promotion ✔✔
1.3.3 Income statement ✔✔
1.3.4 Inbreeding depression ✔✔
1.3.5 Homozygosity ✔✔ (5 x 2) (10)

1.4
1.4.1 Demand ✔
1.4.2 Productivity ✔
1.4.3 Working/floating ✔
1.4.4 Conceptual/business/entrepreneurial/adaptability ✔
1.4.5 Atavism ✔ (5 x 1) (5)

TOTAL SECTION A: 45
SECTION B

QUESTION 2: AGRICULTURAL MANAGEMENT AND MARKETING

2.1 Marketing of agricultural produce

2.1.1 Type of marketing
Free marketing ✓

(1)

2.1.2 Reason for the type of marketing in QUESTION 2.1.1
• Produce sold anywhere✓/produce is directly sold to consumers ✓
• Direct contact ✓ between producer and consumer ✓ (Any 1)

(2)

2.1.3 Channel illustrated
Direct to consumers/public ✓

(1)

2.1.4 TWO advantages of channel to consumers
• Consumers can compare/negotiate the price ✓
• Consumers pay less/no expenditure to intermediaries ✓
• Consumer confidence/get higher quality ✓ (Any 2)

(2)

2.1.5 THREE problems that may hamper free marketing
• Perishability ✓
• Competition ✓
• Seasonal fluctuation ✓
• Diversity in production ✓
• Safety/security of the producer ✓
• Risk/quantity of consumers ✓ (Any 3)

(3)

2.2 Demand and supply

2.2.1 Relationship between price, supply and demand
• The higher the price ✓, the higher the supply ✓ and the lesser the demand ✓

OR

• The lesser the price ✓, the lesser the supply ✓ and the higher the demand ✓

(3)
2.2.2  Graph on the supply and demand of oranges

![Graph on supply and demand of oranges](image)

Criteria/rubric/markig guidelines
- Correct heading ✓
- X axis - correctly calibrated and labelled (Quantity of oranges) ✓
- Y axis - correctly calibrated and labelled (Price) ✓
- Correct units (Rand and pockets) ✓
- Accuracy for both graph for demand ✓
- Line graph for supply and demand ✓

(6)

2.2.3  Reason for higher demand
- Price for pocket of oranges was low (R10) in week 1 ✓
- but higher (R30) in week 5 ✓

(2)

2.3  THREE problems encountered when drawing up a business plan
- Insufficient research/lack of knowledge ✓
- Leaving gaps, being vague or providing too much information ✓
- Insufficient technical detail ✓
- Unrealistic assumptions and projections ✓
- Using incorrect format ✓
- Hiding weaknesses and risks ✓
- Too generic ✓
- Not authentic ✓
- Not highlighting potential competition ✓
- Budget/cash flow errors/Calculation errors/incomplete financial data ✓
- Incompetency ✓

(Any 3)  (3)
2.4 Marketing legislation

2.4.1 Agricultural Product Standards Act (No. 119 of 1990) ✓ (1)
2.4.2 Meat Safety Act (No. 40 of 2000) ✓ (1)
2.4.3 Consumer Protection Act (No. 68 of 2008) ✓ (1)
2.4.4 Perishable Products Export Control Act (No.9 of 1983) ✓ (1)

2.5 Entrepreneurial qualities

2.5.1 FOUR entrepreneurial qualities

- Creativity ✓
- Innovation ✓
- Risk taking ✓
- Leadership ✓
- Hard working ✓
- Perseverance ✓

(Any 4) (4)

2.5.2 Explanation of entrepreneurial qualities

- Creativity - starting a cooking and catering business ✓
- Innovation - use of available human/financial resource/learners/ catering for the community activities ✓
- Risk taking - using donation money to start a new business/Start business with few learners ✓
- Leadership - leading a group of learners/the business grew into a training centre ✓
- Hard working - starting/Managing a successful business in only two years ✓
- Perseverance - starting/Managing a successful business in only two years ✓

(Any 4) (4) [35]
QUESTION 3: PRODUCTION FACTORS

3.1 Farm labour

3.1.1 Types of labour
A - Permanent/full time/skilled/semi-skilled ✓
B - Seasonal/temporary/skilled/semi-skilled ✓

3.1.2 Justification for QUESTION 3.1.1
A - Task done on regular and repetitive basis/trained ✓
B - Task done seasonally/trained ✓

3.1.3 Challenges causing permanent labour to leave the agricultural
• Low wages/search for better wages/opportunities ✓
• Competition ✓
• Lack of training ✓
• Long working hours/✓
• Ill-health/non-conducive/unfavourable working conditions ✓
(Any 2)

3.1.4 Addressing challenges associated with permanent labour
• Improve on labour utilisation ✓
• Improve economic conditions of labourers ✓
• Ensure that labourers are trained ✓
• Adherence to basic conditions of service ✓
• Provision of health education ✓
• Giving praise and recognition to labourers/motivation ✓
• Provision of appropriate tools/equipment/cloths for the job ✓
(Any 2)

3.1.5 Legislation regulating safety
Occupational Health and Safety Act (No.85 of 1993) ✓

3.1.6 Types capital in the photograph A
• Fixed capital ✓
• Movable capital ✓
• Floating/working capital ✓
(Any 2)

3.2 Land as a production factor

3.2.1 Economic characteristics
(a) Agricultural land is limited/has economic value/urban development affects availability ✓
(b) Land is subject to the law of diminishing return ✓
(c) Land is durable/indestructible ✓
(d) Land is indestructible/of a permanent nature/production capacity varies ✓
(4)
3.2.2 **TWO ways of improving productivity of land**
- Adapting to scientific methods/technology of production/ changing cropping/animal practices ✔
- Infrastructure ✔
- Diversification ✔
- Water provision/irrigation ✔
- Consolidation of uneconomic units ✔
- Ensuring that the type of farming is suitable to the area ✔
- Education/training ✔

(Any 2) (2)

3.3 **Market risk**

3.3.1 **External force leading to the situation**
- Competition ✔

(1)

3.3.2 **Type of risk encountered by the manager**
- Market/price/financial risk ✔

(1)

3.3.3 **Motivation of market risk**
- Increase in the supply of the product ✔
- resulted in a price decrease ✔

(2)

3.3.4 **TWO risk management strategies**
- Future contract/hedging ✔
- Value adding/processing ✔
- Flexibility ✔
- Good understanding of past price trends ✔
- Diversification/specialisation ✔
- Effective control ✔

(Any 2) (2)

3.3.5 **TWO components of management**
- Planning/setting goals ✔
- Implementation/coordinating ✔
- Control ✔
- Decision making ✔
- Organsation ✔

(Any 2) (2)

3.4 **Capital items and costs**

3.4.1 **Classification of items**
(a) Income - Cattle sales ✔, sheep sale ✔

(2)

(b) Variable costs - Marketing ✔, grain feed ✔, electricity 
phone bills ✔

(Any 2) (2)

(c) Overhead costs - Telephone bills ✔, electricity ✔

(2)
3.4.2 Calculation of net income with the formula

Income = R110 500 + R80 900 = R191 400
Expenditure = R42 350 + R22 500 + R20 000 + R12 500 = R97 350
Net income = Income – expenditure
= R191 400 – R 97 350 = R 94 050

OR

Net income = Income – expenditure
= R191 400 – R 97 350
= R 94 050

(4)

QUESTION 4: BASIC AGRICULTURAL GENETICS

4.1 Crossing between a brown ewe and white ram

4.1.1 Phenotype of parents

P1
- Brown coloured ewe
- White coloured ram

OR

P2
- Brown coloured ewe
- Brown/white coloured ram

(Any 1)

4.1.2 Genotype of parents

P1
- Ewe - AA
- Ram - aa

OR

P2
- Ewe - Aa
- Ram - Aa/aa

(Any 1)

4.1.3 Type of dominance

Complete dominance

(1)

4.1.4 Motivation

- Brown colour is dominant over the white colour
- No intermediate colour

(Any 1)

(2)
4.1.5

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**OR**

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**Marking criteria**

- Male gametes ✔
- Female gametes ✔
- Offspring ✔
- Punnet square ✔

4.2 **Breeding system**

4.2.1 **Type of breeding system**

- Upgrading ✔

4.2.2 **TWO disadvantages of upgrading**

- Time consuming ✔
- Bulls must always be bought from outside to reduce inbreeding/ it is expensive ✔
- The commercial value of the first few generation is low ✔
- The offspring can never be bred 100% pure ✔

(Any 2)

4.2.3 **Determination of the number of crossings**

- 5 crosses ✔

4.2.4 **Calculation of the percentage characteristic**

- Cow: \( \frac{1}{2} \times 75\% = 37,5\% \)
- Bull: \( \frac{1}{2} \times 100\% = 50\% \)
- \( 37,5\% + 50\% \)
- \( = 87,5\% \)

**OR**

- \( \frac{1}{2} \times (75\% + 100\%) \)
- \( = 87,5\% \)

**OR**

- \( \frac{(75\% + 100\%)}{2} \)
- \( = 87,5\% \)
4.3 Heritability of the characteristics in sheep

4.3.1 Determination of the EBV for birth weight
\[
EBV = (\text{Lamb weight} - \text{average weight}) \times \% \text{ heritability} \\
= (3\text{kg} - 1.8\text{kg}) \times 60\% \\
= 0.72
\]

4.3.2 Implication of the calculated value
- The offspring will be 0.72kg heavier ✓ than the average flock ✓
- The average flock will be 0.72kg smaller ✓ than the offspring of the lamb ✓
- An increase in birth weight ✓ above the average of the flock by 0.72kg ✓

4.3.3 Heritability of the fleece weight
50 % ✓

4.3.4 TWO reasons the post-weaning weight gain cannot be recommended for breeding purposes
- Environment has a huge influence in the outcome of the characteristics ✓
- Low heritability/33% heritable ✓

4.4 Genetic modification of lettuce

4.4.1 Difference in yield of GM lettuce and non-GM lettuce
GM lettuce produce better under different conditions ✓ than non-GM plants under the same conditions ✓

4.4.2 One advantage of GM lettuce in both conditions
Higher yield/ produce better ✓

4.4.3 Benefits of genetic engineering over traditional methods
- Precise/desired genes are transferred ✓
- Not limited to crossing of the same species ✓
- More convenient ✓
- Faster/requires only one generation to complete ✓
- More resistant to pests/drought/diseases/herbicides ✓
- Higher yields ✓

4.4.4 TWO environmental risks of genetically modified plants
- Creation of herbicide resistant ‘superweeds’/harmful pesticide resistant plants ✓
- Indiscriminate use of herbicides pollute the environment ✓
- Beneficial insects can be killed ✓

TOTAL SECTION B: 105
GRAND TOTAL: 150