



# education

Department:  
Education  
**REPUBLIC OF SOUTH AFRICA**

## **NATIONAL SENIOR CERTIFICATE**

**GRADE 12**

**AGRICULTURAL MANAGEMENT PRACTICES**

**FEBRUARY/MARCH 2009**

**MEMORANDUM**

**MARKS: 200**

**This memorandum consists of 42 pages.**

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**QUESTION 1: PIG PRODUCTION**

1.1 D ✓

1.1.2 F ✓

1.1.3 H ✓

1.1.4 B ✓

1.1.5 A ✓

1.1.6 G ✓

1.1.7 J ✓

1.1.8 I ✓

1.1.9 E ✓

1.1.10 C ✓

(10 x 1)

(10)

1.2.1 Internal parasites ✓/measles/ tape worm

External parasites ✓

Pneumonia ✓

Foot-rot disease ✓

Diseases ✓

Uncontrolled breeding

Low resistance

Any

(4)

1.2.2 rain ✓

high temperatures ✓

cold ✓

snow ✓

frost ✓

wind ✓

Any

(2)

1.3

CLASS	MASS
Porker	1.3.1. Less than 60 kg ✓
Light baconer	60 - 80 kg
Heavy baconer	1.3.2. 81 - 90 kg ✓
Sausager	1.3.3 Above 90 kg ✓

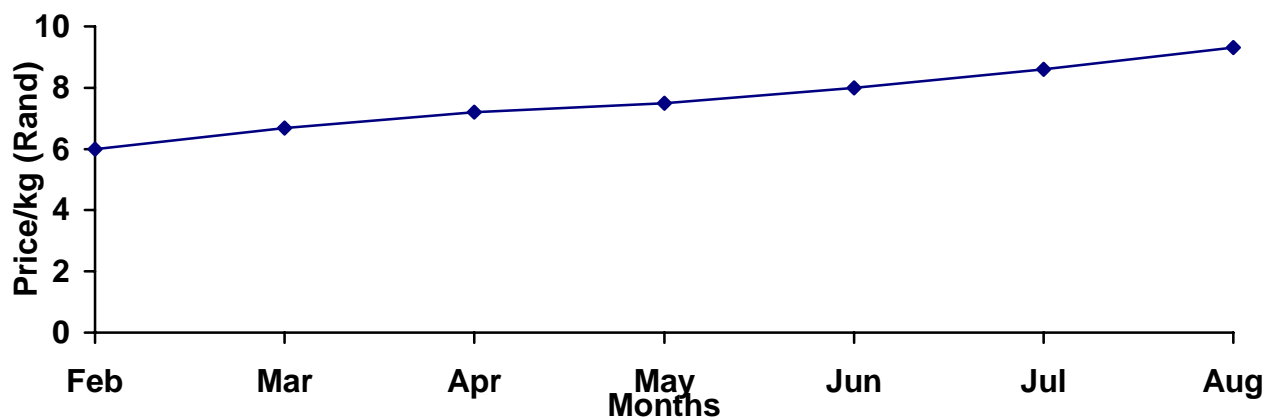
(3)

1.4

$$\begin{aligned}
 &777 - 532. \checkmark \\
 &= (245 / 777) \times 100. \checkmark \\
 &= 35.5 \%. \checkmark
 \end{aligned}$$

(3)

## 1.5.1

**PRICES OF PORK FOR 1998**

Heading ✓

Correct axis ✓

Correct graph/curve ✓

(3)

- 1.5.2 After December yellow maize is scarce and expensive therefore feed costs are high ✓  
Demand is low because consumers had spent most of their money during the December holidays ✓

(2)

- 1.5.3 August. ✓

(1)

- 1.6 Offcuts – polony etc. ✓  
Fat ✓ - used for edible cracklings or for making soap ✓  
Head and feet ✓ - eaten by some people ✓  
Skin ✓ - eaten or turned to leather ✓  
Pig manure ✓ - used for fertilizing the soil ✓  
Hair – bristle ✓

Any 3 x 2

(6)

- 1.7.1 feeding, ✓ watering, ✓ cleaning, ✓ checking for parasites, ✓ injuries or diseases. ✓  
Any

(3)

- 1.7.2 a) electronic time card, time register ✓  
b) register of work completed ✓  
c) production output measurements ✓

(3)

- 1.8.1 Costs of Sale = R2 500 + R450 + R200 = R3 150

(2)

- 1.8.2 Gross Profit = R18 000 – R3 150 = R14 850

(2)

- 1.8.3 Save money by sharing the costs of joint transport with co-operative members. ✓  
Discounts on administration and other costs. ✓  
More bargaining power. ✓

(2)

- |      |  |     |     |
|------|--|-----|-----|
| 1.9  | To avoid pain to / exciting the pigs ✓<br>Decrease stress ✓<br>Maintain good quality meat muscles ✓<br>Fast and effective ✓<br>More humane way to cull the animals ✓ | Any | (2) |
| 1.10 | Cysts develop into internal parasites / hook worms/ tape worms in humans. ✓<br>Many diseases can be transferred from pigs to humans. ✓                               |     | (2) |
- [50]

**QUESTION 2: BEEF PRODUCTION**

- 2.1.1 F✓  
 2.1.2 J✓  
 2.1.3 B✓  
 2.1.4 H✓  
 2.1.5 L✓  
 2.1.6 K✓  
 2.1.7 D✓  
 2.1.8 M✓  
 2.1.9 E✓  
 2.1.10 A✓ (10 x 1) (10)
- 2.2 A Fillet✓  
 B Shin/Shank✓  
 C Chuck✓  
 D Brisket✓  
 E "D" Rump✓ (5)
- 2.3 -feedlot✓  
 -abattoir  
 -processors of hides and skins✓  
 -wholesales ✓  
 -retailers✓/butchery any 3 + order (4)
- 2.4 -increased economic value  
 -tough meat from bulls can be processed  
 -preserving of nutritional value  
 - prevention of rotting of meat  
 -aesthetic value as a gift  
 - more compressed product ( no water) (4)
- 2.5 -declining per capita demand for red meat.✓  
 -increased competition from overseas producers, ✓  
 -institutional challenges.✓  
 -protective marketing laws has been terminated✓  
 -demand and supply influence prices leading to fluctuation✓  
 - competition with white meat industry✓ Any (3)
- 2.6.1 R3 000.00✓ (1)
- 2.6.2 R180 000.00✓ (1)
- 2.6.3  $R3\ 000 - 180\ 000 = R120\ 000.00$ ✓ and low weaning percentage✓  
 results in low profitability of weaner production.✓ (3)
- 2.7 -Quality or grading of the carcass✓  
 -Carcass mass✓ (2)

- 2.8.1** In 1970 = 550 000 tons and 2006 = 800 000 tons  
Total increase = 800 000 - 550 000 ✓ = 250 000 tons ✓ (2)
- 2.8.2** -price of meat ✓  
-inflation ✓  
-health risks of red meat/ heart diseases  
-competitive products, ✓ / cheaper alternatives  
-number of consumers ✓ and  
-real income of consumers ✓ Any (4)
- 2.9.1** -means taking a raw material and changing it ✓ or adding something to it  
to change it into a more marketable item ✓ that would be purchased by  
more customers at higher prices ✓ Any (2)
- 2.9.2** - ability to see opportunities  
- ability to be proactive  
-adapt to market changes. ✓  
-be open to exploring new ideas. ✓  
-operate more as a resource manager than a producer. ✓  
-realize the importance of networking ✓ and  
-the need to develop alliances. ✓ Any (4)
- 2.10.1** Given: Cost price of the Truck = R750 000  
Estimated salvage value = R50 000  
Estimated useful life = 10 years  
  
Therefore annual depreciation =  $\frac{R750\,000 - R50\,000}{10}$  ✓  
  
=  $\frac{R700\,000}{10}$  ✓  
= R70 000 ✓ (3)
- 2.10.2** R750 000 – R280 000 ✓ = R470 000 ✓ (2)

[50]

**QUESTION 3: DAIRY PRODUCTION**

- 3.1.1 R✓  
 3.1.2 N✓  
 3.1.3 S✓  
 3.1.4 K✓  
 3.1.5 G✓  
 3.1.6 O✓  
 3.1.7 I✓  
 3.1.8 J✓  
 3.1.9 A✓  
 3.1.10 P✓ (10 x 1) (10)
- 3.2.1 Yes it was the correct decision.✓  
 It is possible to transfer diseases through milk. ✓ (2)
- 3.2.2 Tuberculoses. ✓ (1)
- 3.2.3 No. ✓  
 Aids can not be transferred through milk from one person to another. ✓ (2)
- 3.3.1 Heat the milk up to 87 °C. ✓  
 Keep it at 87 °C for 30 min. ✓  
 Cooling of milk till 42 °C within ½ hour.✓  
 Adding of bacteria. ✓  
 Fermentation period for 4 – 8 hours. ✓  
 Cooling to 4 °C for 24 hours✓  
 Adding of ingredients. ✓  
 Filling of containers and store in cold storage room. Any (5)
- 3.3.2 Clean containers  
 Cooling facilities  
 Correct procedures  
 Correct clothing  
 Hygienic surfaces  
 Sterilisation liquids Any (3)
- 3.4.1  $R13 + R2 = R15$ ✓ (1)
- 3.4.2
- |                    | FRESH MILK | YOGURT      |
|--------------------|------------|-------------|
| Selling of product | R360 000✓  | R2 400 000✓ |
| Production cost    | R240 000✓  | R1 800 000✓ |
| Profit             | R120 000✓  | R600 000✓   |
- (6)
- 3.4.3 The profit will decrease with every increase in interest. ✓ (1)



- 3.5.1 Increase their salary level to at least the minimum payment as required by law. ✓  
Change their leave period that it adheres to labourer laws. ✓  
Salary increase must be 10% p.a. by law. ✓  
Pay the increase in salary despite of the milk price. ✓ (4)
- 3.5.2 Permanent labourers. ✓ (1)
- 3.6.1 More people will visit the farm. ✓ (1)
- 3.6.1 More people will visit the farm. ✓ (1)
- 3.6.2 More profit/ larger income in rand. ✓  
Because of a weaker rand, the income will increase. ✓  
With a higher income it becomes more possible to expand. ✓  
Less risk to finance the expansion ✓ (3)
- 3.6.3 To determine currency tendencies. ✓  
Know when to increase/decrease production according to rates ✓  
To optimise profit margins. ✓  
To determine volumes for export ✓ (3)
- 3.7 Keep the milking area dry. ✓  
Keep the grass of the milking area short or pebble milking area with stones. ✓  
Wash the udder. ✓  
Wash your hands just before milking. ✓  
Keep equipment clean and sterile. ✓/use sterilising agents ✓  
/ stainless steel equipment ✓  
Avoid contamination of milk with faeces, grass etc. ✓  
Filter the milk after milking. ✓ Any (5)
- 3.8 Pasteurised milk: lower temperature for longer time. ✓  
Long life milk: higher temperature for shorter time. ✓ (2)
- [50]

**QUESTION 4: SHEEP PRODUCTION**

4.1.1	G✓		
4.1.2	E✓/L		
4.1.3	H✓		
4.1.4	N✓		
4.1.5	B✓		
4.1.6	K✓		
4.1.7	D✓		
4.1.8	C✓		
4.1.9	M ✓		
4.1.10	L/ E ✓	(10 x 1)	(10)
4.2	1- thick rib✓ 2- rib✓ 4- chump✓ 5- leg(of mutton) ✓ 6- flank✓ 8- shoulder (of mutton) ✓		(6)
4.3	Planning✓ Organising✓ Motivation✓ Control. ✓		(4)
4.4	It causes discoloration and becomes grey ✓ It causes the accumulation of odour. ✓ It causes the loss of texture✓ It shows spots ✓ It is less palatable and nutritious. ✓	Any	(4)
4.5	As food - meat✓ For clothes - leather, fibre For religious rituals - lobola✓ Trade - bartering✓ As form of measuring prestige✓ For draught power - work✓	Any	(3)
4.6	The Climate✓ (rain, frost, hail) ✓ Biological elements✓ (diseases, death) ✓ Economical factors✓ (interest rates, inflation) ✓ Commercial factors✓ ( markets, input prices,) ✓ Management ✓ ( human element of decisions) ✓		(10)

- 4.7 Labour management involves:**  
**Recruiting, selection, appointment and dismissal of staff members ✓**  
**The drafting of specifications for each task ✓**  
**The distribution of duties between staff members ✓**  
**A training and skills development programme ✓**  
**Remuneration, medical and pension, promotion, measurement of achievements and motivation ✓**  
**Recreation, social and cultural aspects of labour management ✓** **Any (5)**
- 4.8.1 The plant potential of his farm. ✓**  
**Determine the carrying capacity of the farm ✓ (2)**
- 4.8.2 Achieve the densest plant growth. ✓**  
**Graze veld economically. ✓**  
**Achieve a climax plant growth. ✓ (3)**
- 4.8.3 His need to buy additional feed ✓ or make use of planted pastures in his enterprise would be less ✓. Therefore he would save on money. ✓ (3)**  
**[50]**

**QUESTION 5: BROILER PRODUCTION**

5.1.1 A✓			
5.1.2 B✓			
5.1.3 B✓			
5.1.4 C✓			
5.1.5 C✓			
5.1.6 B✓			
5.1.7 D✓			
5.1.8 B✓			
5.1.9 A✓			
5.1.10 D✓		(10 x 1)	(10)
5.2	Where to sell the chickens? ✓ At what price? ✓ In what form (live birds or slaughtered chickens) ✓ Who are the competitors? ✓ At what price are they selling their chickens✓		(5)
5.3.1	The rise in inflation also has an influence on wages✓ The implementation of minimum wages since 1994✓ Poor production in relation to amount paid ✓	Any	(2)
5.3.2	Make sure that you implement fair labour practices✓ Incentives for good work✓ Make the labour team part of the management process✓ Good working conditions✓ Realistic wages✓ Training✓	Any	(4)
5.4	-Number of chicks purchased✓ -Number of chicks sold✓ -Date of housing✓ -Feed intake✓ -Mortalities and culling✓ -Daily minimum and maximum temperatures✓ -Vaccination and dates✓ -Any change in management practice (date) ✓	Any	(4)
5.5	overall ✓ pair of boots ✓ gloves✓ goggles✓ apron✓ head covering ✓	Any	(5)

- 5.6**      **B- Giblets✓**  
**C- Chicken wing**  
**D- Neck**  
**E- Thigh**  
**F- Drumstick** (5)
- 5.7.1**    **Agri-tourism means people✓ and vehicles✓ on the farm that might cause a biohazard regarding diseases✓ to the chickens. It is impossible to have all the visitors cleaned up and wearing protective clothing✓. Bio-security is very important on an intensive broiler farm✓ Any** (3)
- 5.7.2**    **A farm stall next to ✓the road, where the farmer sells slaughtered chickens in different packaging✓ as well as live broilers for the informal market✓** (3)
- 5.8.1**    **Option A could be preferred in the case where the chickens are too small to package them as pieces as in option B. ✓ If there is a lot of off-cuts and other small pieces option A would be the preference✓** (2)
- 5.8.2**    **Chicken meat that otherwise could not be marketed are now processed and still earn an income✓- Probably higher than in case B, due to the value adding✓** (2)
- 5.9**      **The climatological factors- is it suitable for broiler farming✓**  
**The knowledge factors✓- Do he have the know-how or access to it**  
**The record holding capacity✓**  
**Does he have access to feed?✓**  
**Does he have the transport means?✓**  
**Does he have enough money to start his enterprise?✓**  
**Does he have a market for his product?✓**  
**Does he have access to infrastructure such as electricity?✓ Any** (5)  
**[50]**

**QUESTION 6: GAME FARMING**

- 6.1      6.1.1      C✓  
             6.1.2      C✓  
             6.1.3      D✓  
             6.1.4      A✓  
             6.1.5      A✓  
             6.1.6      D✓  
             6.1.7      C✓  
             6.1.8      C✓  
             6.1.9      A✓  
             6.1.10     B✓  
(10 x 1)      (10)
- 6.2      The vehicle must be licensed. ✓  
             Yellow markings must cover 80% of the vehicle. ✓  
             A plate indicating the Tare and BVM. ✓  
             Number plates must be attached to the vehicle. ✓  
             If the BVM exceeds 500 kg, then it must be equipped with a mechanical brake. ✓  
             If the BVM exceeds 2 tons, it must be equipped with a hydraulic brake. ✓  
             Reflectors must be placed as follows:  
             In front white. ✓  
             To the side yellow. ✓  
             At the back red✓  
             It must be equipped with red triangles. ✓  
(10)
- 6.3.1    1. Plato✓  
             2. Cliff✓  
             3. Middle slope✓  
             4. Plain✓  
(4)
- 6.3.2    Mountain veldt✓  
             Hill veldt✓  
             Plain veldt✓  
             Valley✓  
(4)
- 6.4      Choose the intervals.✓  
             Compile total budget for the period in which all the branches of  
             business budgets and farming plan will occur.✓  
             Note the estimated cash income.✓  
             Note the estimated cash expenditure.✓  
             Note the cash deficit or surplus for the period.✓  
             Consider adaptations.✓  
             Calculate the bank overdraft facility.✓  
             Practise control.✓  
Any      (6)

- |     |  |      |
|-----|--|------|
| 6.5 | Hunting cost per type of animal.✓<br>Daily fees✓<br>Number of compulsory days coupled to each package.✓<br>Number of clients for each package.✓<br>Procedures for reservations and payments.✓<br>Add a loose price list because prices can change suddenly.✓ | (6)  |
| 6.6 | Lay area out according to infrastructure and plant growth.✓<br>Evaluate the condition of the field.✓<br>Plan the infrastructure.✓<br>Compile a field management plan.✓<br>Compile a game management plan.✓<br>Compile a financial plan.✓                     | (6)  |
| 6.7 |  | (4)  |
|     |  | [50] |

**QUESTION 7: LAY-HEN PRODUCTION**

- 7.1.1 C ✓  
 7.1.2 G ✓  
 7.1.3 K ✓  
 7.1.4 I ✓  
 7.1.5 J ✓  
 7.1.6 M ✓  
 7.1.7 D ✓  
 7.1.8 L ✓  
 7.1.9 B ✓  
 7.1.10 F ✓ (10 x 1) (10)
- 7.2.1 Inflation ✓  
 The price of grain which is a main component of animal feed ✓  
 The rise in input costs ✓ (3)
- 7.2.2 Production records ✓  
 Financial records ✓ (2)
- 7.3.1 An intensive unit makes use of indoor housing with temperature and feed control ✓, while extensive is open air, and free range ✓ (2)
- 7.3.2 By tight control and measuring ✓ of feed and all controllable factors the intensive system would classify under precision farming ✓ (2)
- 7.3.3 The extensive system, which produces only a few eggs ✓ at almost no costs ✓ (2)
- 7.4 Eggs may only be marked FREE RANGE in the case where the animals have access to outdoor camps all the time ✓  
 These camps must be covered by vegetation ✓ and must be big enough to allow free movement ✓ and running for the animals (3)
- 7.5.1  $80/100 \times 2\,000 =$  ✓  
 1600 eggs/day ✓ (2)
- 7.5.2  $120\text{ g} \times 30 \times 2\,000 =$  7 200kg/month ✓ (2)
- 7.5.3  $7\,200\text{ kg}/50 = 144\text{ bags} \times 170 =$  R24 480/month ✓ (2)
- 7.6.1 The pores of the eggs must be sealed with cooking oil or butter ✓  
 The eggs must be stored in a cool clean place ✓  
 Prevent the penetration of micro-organisms and smells ✓ (3)
- 7.6.2 Examine the eggs on the exterior by pointing out dirty or cracked shells ✓  
 Interior determining of quality can be done by candeling ✓ (2)



- 7.7.1**    **The size of a market✓**  
              **Buying power✓**  
              **Stability✓**  
              **Satisfying the need✓**  
              **Risk evaluation ✓**  
              **Replacement products** **Any** **(4)**
- 7.7.2**    **To make sure that there is place for you in the market. ✓**  
              **To test the longevity and viability of the proposed market✓** **(2)**
- 7.8.1**    **Full-time labour✓**  
              **Part-time labour✓** **(2)**
- 7.8.2**    **According to law, labourers who work more than 48 hours per week**  
              **account for full time✓ and labourers who work on a regular basis but**  
              **for less than 48 hours a week accounts for part-time labour✓** **(2)**
- 7.8.3**    **Yes✓,**  
              **but it cannot be counted as part of the cash salary, thus cannot be**  
              **deducted from their cash payments✓** **(2)**
- 7.9**       **Grade A - Shell clean and whole✓**  
              **Grade B – Shell whole, may have spots on it✓**  
              **Grade C - Shell cracked, some spots✓** **(3)**
- [50]**

**QUESTION 8: SHEEP PRODUCTION**

- |            |  |                 |             |
|------------|--|-----------------|-------------|
| <b>8.1</b> | <b>8.1.1</b> <b>False ✓</b><br><b>8.1.2</b> <b>True ✓</b><br><b>8.1.3</b> <b>True ✓</b><br><b>8.1.4</b> <b>False ✓</b><br><b>8.1.5</b> <b>True ✓</b><br><b>8.1.6</b> <b>True ✓</b><br><b>8.1.7</b> <b>True ✓</b><br><b>8.1.8</b> <b>False ✓</b><br><b>8.1.9</b> <b>True ✓</b><br><b>8.1.10</b> <b>True ✓</b> | <b>(10 x 1)</b> | <b>(10)</b> |
|------------|--|-----------------|-------------|
- 
- |            |   |            |
|------------|---|------------|
| <b>8.2</b> | <b>The LOX and short pieces must be pulled off carefully ✓</b><br><b>Then the seedy and broken bits must be pulled off ✓</b><br><b>Remove all the short pieces from the fleece ✓</b><br><b>Remove all the hairy breeches from the fleece ✓</b><br><b>Make sure that no belly wool is still attached to the fleece ✓</b><br><b>Remove all the malted pieces if present ✓</b> | <b>(6)</b> |
|------------|---|------------|
- 
- |              |                          |            |
|--------------|--------------------------|------------|
| <b>8.3.1</b> | <b>Seasonal labour ✓</b> | <b>(1)</b> |
|--------------|--------------------------|------------|
- 
- |              |   |            |
|--------------|---|------------|
| <b>8.3.2</b> | <b>No✓, the food and housing cannot be counted as part of the cash payment ✓ and therefore cannot be deducted ✓</b> | <b>(3)</b> |
|--------------|---|------------|
- 
- |              |  |            |
|--------------|--|------------|
| <b>8.3.3</b> | <b>He must wear latex gloves✓ to protect himself from possible HIV infection ✓</b> | <b>(2)</b> |
|--------------|--|------------|
- 
- |            |   |            |
|------------|---|------------|
| <b>8.4</b> | <b>Lambs produced by each ewe ✓</b><br><b>Amount of wool produced by each ewe ✓</b><br><b>Quality of wool produced ✓</b><br><b>Production costs needed for the enterprise ✓</b> | <b>(4)</b> |
|------------|---|------------|
- 
- |              |   |            |
|--------------|---|------------|
| <b>8.5.1</b> | <b>CP - long belly wool ✓</b><br><b>BP - Short belly pieces ✓</b><br><b>Lox - The poorest quality of wool ✓</b> | <b>(3)</b> |
|--------------|---|------------|
- 
- |              |   |            |
|--------------|---|------------|
| <b>8.5.2</b> | <b>Strength ✓</b><br><b>Length ✓</b><br><b>Fineness ✓</b> | <b>(3)</b> |
|--------------|---|------------|
- 
- |              |                     |            |
|--------------|---------------------|------------|
| <b>8.6.1</b> | <b>110 – 180 kg</b> | <b>(1)</b> |
|--------------|---------------------|------------|
- 
- |              |   |            |
|--------------|---|------------|
| <b>8.6.2</b> | <b>-All marks on the bale must be at least 38 mm high</b><br><b>-It must be marked on the opposite side of the opening</b><br><b>-The marking must be clear with the name or registered mark of the owner as well as the address.</b><br><b>-The class of the wool must be indicated.</b> | <b>(4)</b> |
|--------------|---|------------|

- 8.7.1     **R150 000 – R60 000 = R90 000** (2)
- 8.7.2     **R90 000/1000 = R90** (2)
- 8.7.3     **Yes @ R90/sheep for wool.** (2)
- 8.8.1     (a) Credit to buy the land✓  
              (b) Credit to buy new sheep✓  
              (c) Credit to pay the new labour✓ (3)
- 8.8.2     **Profitability**  
              **Efficiency**  
              **Marketing options**  
              **Feed availability**  
              **Veld type** Any (4)  
[50]

**QUESTION 9: LUCERNE PRODUCTION**

- 9.1.1 E✓  
 9.1.2 C✓  
 9.1.3 D✓  
 9.1.4 I✓  
 9.1.5 F✓  
 9.1.6 G✓  
 9.1.7 A✓  
 9.1.8 N✓  
 9.1.9 J✓  
 9.1.10 L✓ (10 x 1) (10)
- 9.2.1 A. Cutter bar✓/cutting machine✓ /mower✓  
 B. Tedder✓ (2)
- 9.2.2 A - cutter bar cuts lucerne at a given height.✓  
 C - a tedder turns the lucerne over for it to dry quickly (2)
- 9.3.1 it means adding value to a raw product✓ by taking it to the next stage of production. ✓ (2)
- 9.3.2 - quality.✓  
 - functionality.✓  
 - place✓and time✓ Any 3 (3)
- 9.4 9.4.1 - Balance R2 900✓  
 9.4.2.- Accounts receivable R4 000✓  
 9.4.3.- Delivery van R6 000✓  
 9.4.4- Shared capital R10 000✓ (4)
- 9.5 -the taller the grass the higher the desired DM content✓ the longer pre-wilting will take.✓ (2)
- 9.6 -Hand gloves✓-used to protect the hands of the labourers against injuries from machinery and equipment. ✓  
 -Overall top✓-used to protect the body against injuries✓ (4)
- 9.7 -saves storage space✓  
 -saves capital expenditures on building new facilities✓  
 -.It gives an accurate count of fodder available✓  
 -It's easy to wrap/ convert to silage✓  
 -If left in the veld it presents less fire hazard ✓ (5)

- 9.8.1 The application of living organisms/use of biological processes✓to develop new products.✓ (2)**
- 9.8.2** -it can increase food production.✓  
 - provides increased yields. ✓  
 -reduced fungal toxins in food and ✓  
 -more efficient weed control; all these are delivered in the seeds of genetically improved crops ✓  
 -reduces the impact of monoculture on biodiversity✓ Any (4)
- 9.9.1** -Agritoursim is the practice of attracting travellers/tourists/visitors to an area used primarily for agricultural purposes. ✓  
 -Capitalize on the number of motorists travelling past his farm. ✓  
 -Draw guests with the natural serene qualities of a getaway destination. ✓ Any 3 (3)
- 9.9.2** Make use of an agent  
 Research the profile of certain media  
 Determine the target group  
 Use the media as broadly as possible (Television, radio, etc.) Any (2)
- 9.10** Drivers must be trained on:  
 -getting a driver's licence for the relative articulated trailer.✓  
 -product knowledge e.g. grain crop, fodder etc.✓  
 -securing of loads ✓  
 -first aid✓  
 -use of protective clothing✓and emergency procedures✓ Any (1)
- 9.11.1** Gross Profit=Selling Price - Cost Price✓  
 Therefore, GP=R1 240.00 - R840.00 = R400.00. ✓ (2)
- 9.11.2** Net Profit = GP-Expenses, ✓  
 which is R400.00 - R200.00 = R200.00 ✓ (2)

[50]

**QUESTION 10: CITRUS PRODUCTION**

	10.1.1	A✓		
	10.1.2	B✓		
	10.1.3	C✓		
	10.1.4	D✓		
	10.1.5	A✓		
	10.1.6	A✓		
	10.1.7	C✓		
	10.1.8	D✓		
	10.1.9	B✓		
	10.1.10	A✓	(10 x 1)	(10)
10.2	Psychological pricing✓ Optional product pricing✓ Captive product pricing✓ Product bundle pricing✓ Promotional pricing✓ Value pricing✓ Loss leading✓ Price lining✓		Any	(6)
10.3	Desktop ✓ Laptop/notebook ✓ I-pod ✓ Cellphone ✓			(4)
10.4.1	Return of land✓ or provision of compensation ✓ to those who had land taken away in the past✓			(3)
10.4.2	To address previous discriminatory policies ✓ And ensure that poor previously disadvantaged people✓ Have access to land. ✓			(3)
10.4.3	To improve the security of tenure of people✓ Occupying rural and pre-urban land. ✓			(2)
10.5	Agronomical perspective.✓ Technical perspective.✓ Environmental perspective.✓ Economical perspective.✓			(4)
10.6	She must know there will be disciplinary action if there is transgression.✓ Action is against transgression and not the person.✓ Must be as quickly as possible after transgression.✓ Actions must be consequent.✓ Restore relationship after disciplinary action.✓ All actions must be recorded for further reference. ✓			(6)

- 10.7.1** Land area planted.✓  
Labour costs.✓  
Capital. ✓  
Equipment. ✓ (4)
- 10.7.2** Break-even point =  $\frac{14\ 500}{15}$ ✓  
= 966,67  
= 967 bags✓ (2)
- 10.8** Citrus are picked and placed in large bins.✓  
They are cleaned.✓  
In packing houses, citrus are air-cooled.✓  
Released onto conveyor belts for sorting,✓  
Grading,✓  
Sizing,✓  
Packaging.✓ Any (6)  
[50]

**QUESTION 11: MAIZE PRODUCTION**

- 11.1.1 A✓  
 11.1.2 B✓  
 11.1.3 D✓  
 11.1.4 B✓  
 11.1.5 A✓  
 11.1.6 D✓  
 11.1.7 A✓  
 11.1.8 C✓  
 11.1.9 B✓  
 11.1.10 A✓ (10 x 1) (10)
- 11.2.1 White Maize ✓ and Yellow Maize. ✓ (2)
- 11.2.2 White Maize ✓ (1)
- 11.2.3 Yellow Maize ✓ (1)
- 11.3.1 Farmer Jama ✓. No irrigation costs✓ (2)
- 11.3.2 Irrigation equipment ✓  
 Pipes ✓  
 Pumps ✓  
 Diesel / fuel ✓  
 Electricity ✓  
 Labour ✓ Any (2)
- 11.4.1 (a) ploughing / soil cultivation ✓  
 lime / fertilizer application ✓ (2)
- 11.4.2 (b spraying pesticides ✓ (1)

11.5

**TYPES OF LOANS IN MAIZE PRODUCTION**

	Long-term loan	Medium-term loan	Short-term loan
Duration	5 - 20 years✓	3 - 5 years✓	12 months✓
Uses of capital	land✓	machinery✓	fertilisers✓

(6)



11.6

Invoice number 2		
DATE: 2008- 07- 01✓		
ITEMS	QUANTITY	PRICE
Maize bags	13	R1 490.00 ✓
Empty bags	40	R112.00 ✓
Total amount		R1 602.00 ✓
Cash tendered		R1 700.00 ✓
Change		R98.00 ✓

(6)

11.7.1 Temporal worker – worker employed temporarily on the farm. ✓

11.7.2 Seasonal worker– worker employed temporarily on the farm for purposes of performing duties that are associated with what is done on the farm during that season e.g. harvesting, hand weeding. ✓

11.7.3 Casual worker - worker employed temporarily on the farm for tasks which need to be completed urgently e.g. digging irrigation canals, storm drains or erecting fences.✓

(3)

11.8.1  $15+184 = 199$  ✓  
 $= 184 / 199 \times 100 = 92\%$  ✓

(2)

11.8.2 Decrease / reduced / go down ✓

(1)

11.8.3 (a) On social justice:  
Unemployment / job losses ✓(b) On environmental justice:  
air pollution / land pollution / water pollution ✓

(2)

11.9.1  $R39\ 000.00$  ✓ –  $R28\ 000.00$  ✓ =  $R11\ 000.00$  ✓

(3)

11.9.2 Diesel ✓  
Petrol ✓  
Oil ✓  
Crude oil ✓

Any 2

(2)

11.10.1 Dust ✓  
light stones ✓  
weed seeds ✓  
insects ✓  
plant material / leaves / stalks ✓

Any 2

(2)

11.10.2 Cracked kernels ✓  
Odours / smell ✓  
Animal excretion✓

Any 1

(1)

11.10.3 Drying the maize too quickly ✓

(1)

[50]

**QUESTION 12: WHEAT PRODUCTION**

12.1.1	K		
12.1.2	I		
12.1.3	B		
12.1.4	F		
12.1.5	J		
12.1.6	O		
12.1.7	M		
12.1.8	H		
12.1.9	C		
12.1.10	A	(10 x 1)	(10)
12.2	-financial purpose✓ -a permanent record of the farm business✓ -analysing the business✓ -monitoring day-to-day activities✓ -future planning✓	Any 4	(4)
12.3	-for use in feed or food products.✓ -can be harvested, processed and then turned into building materials,✓ hats and bags.✓ -to graze with stocker cattle.✓ -converted into organic natural foods and sold to health food stores.✓	Any 3	(3)
12.4.1	-AIDS awareness training.✓ -access to condoms.✓ -access to treatment for sexually-transmitted infections.✓ -access to anti-retroviral drugs through government programmes.✓	Any	(3)
12.4.2	-they become breadwinners/play parental role.✓ -they look after their sick parents.✓ -they don't attend school regularly.✓ -they look for part-time piece jobs.✓ - lack of educators	Any	(2)

- (5)  
[50]

**QUESTION 13: SUNFLOWER PRODUCTION**

- 13.1.1 C✓  
 13.1.2 D✓  
 13.1.3 D✓  
 13.1.4 C✓  
 13.1.5 A✓  
 13.1.6 B✓  
 13.1.7 D✓  
 13.1.8 C✓  
 13.1.9 D✓  
 13.1.10 A✓ (10 x 1)
- 13.2 -both parties must be identified✓  
 -the nature of the offence must be stated and ✓  
 -the date, time and place of the offence is stated. ✓ (3)
- 13.3 -marketing✓  
 -skills training✓  
 -access to finance✓  
 -production✓  
 -processing✓  
 -input supply✓  
 -distribution/transport✓ Any 4 (4)
- 13.4.1 it is a science based on biology✓ which uses biological systems, living organisms or derivatives to make or modify products or processes for a specific use✓ (2)
- 13.4.2 -micro-propagation✓  
 -designing of transgenic plants✓  
 -pest resistant crops✓  
 -environmentally friendly crops/product Any (3)
- 13.5.1 -is a result of an act that adds value to agriculture related goods✓and services.✓ (2)
- 13.5.2 -on industry level processing,✓  
 -specialised packaging and marketing  
 -by retaining ownership of an item beyond the commodity stage✓  
 -converting the initial product into a speciality product✓ (4)
- 13.6 -seed shattering✓  
 -lodging✓and  
 -birds✓ (3)

- |         |  |       |     |
|---------|--|-------|-----|
| 13.7    | <ul style="list-style-type: none"> <li>- farm vacation have farm stays, feeding animals, picking fruit/vegetables✓</li> <li>-bird watching✓</li> <li>-hiking✓</li> <li>-nature education programmes: wildlife, trees✓</li> <li>-demonstrations: apple butter making wine making✓</li> <li>- sell herbal/organic products: potpourri, wool, candles and any other relevant activity taking place in a farm.✓</li> </ul> | Any 4 | (4) |
| 13.8.1  | <ul style="list-style-type: none"> <li>-degumming✓</li> <li>-refining/neutralising✓</li> <li>-bleaching✓</li> <li>-deodorisation✓</li> </ul>   |       | (3) |
| 13.8.2  | <ul style="list-style-type: none"> <li>-to achieve economically viable improvements in the product quality✓</li> <li>-contribute to the reduction of production costs✓</li> <li>-to obviate the occurrence of defects in a product during the manufacturing process✓</li> <li>-to ensure high standard products to the satisfaction of the customers. ✓</li> </ul>   | Any 3 | (3) |
| 13.9.1  | <ul style="list-style-type: none"> <li>-frying oil/food industry✓</li> <li>-cosmetics✓</li> <li>-health✓</li> </ul>  |       | (3) |
| 13.9.2  | <ul style="list-style-type: none"> <li>-diet and cardiovascular benefits✓</li> <li>-restaurant and food industry uses✓</li> <li>-skin protection✓</li> </ul>   |       | (3) |
| 13.10.1 | <ul style="list-style-type: none"> <li>-South African Futures Exchange.✓</li> <li>-it is responsible for the marketing of sunflower products.✓</li> </ul>  |       | (2) |
| 13.10.2 | <ul style="list-style-type: none"> <li>-local demand and supply factors and demand and supply of the international market</li> </ul>   |       | (1) |
- [50]

**QUESTION 14: VEGETABLE PRODUCTION**

14.1.1 business plan ✓

14.1.2 tunnels ✓

14.1.3 proteins ✓

14.1.4 integrated control ✓

14.1.5 zero / no tillage ✓

14.1.6 safety period ✓

14.1.7 precision farming ✓

14.1.8 financial records ✓

14.1.9 lubricating ✓

14.1.10 security / collateral ✓

(10 x 1)

(10)

14.2 Vitamins ✓

Minerals ✓

Proteins ✓

Carbohydrates ✓/Sugars ✓/Starch ✓

Any

(3)

14.3 loose texture ✓

non sticky soil ✓

more sandy soil ✓

less clayey soil ✓

loamy soil ✓

Any 3

(3)

14.4

FEATURES	FREE MARKET	CONTRACT MARKET
Bargaining power of the farmer	14.4.1 less bargaining power ✓	14.4.4 High bargaining power ✓
Marketing costs	14.4.2 high marketing costs ✓	14.4.5 Low market costs ✓
Consumer protection against exploitation	14.4.3 less protection ✓	14.4.6 More protection ✓

(6)

14.5.1	Plastic bags ✓ Brown paper ✓		(2)
14.5.2	High temperature ✓ Sun ✓ Wind ✓ Dust ✓	Any 2	(2)
14.6	Freezing ✓ Drying ✓ Canning or bottling ✓ Steam ✓		(4)
14.7	To avoid rotting caused by high temperature ✓ To keep away micro- organisms e.g. fungi, and bacteria that may cause rotting. ✓ To preserve moisture ✓	Any 2	(2)
14.8.1	Soil preparation ✓ Planting depth ✓ Spacing ✓ Seed treatment ✓	Any 2	(2)
14.8.2	Irrigation ✓ Weed control ✓ Pest control ✓ Disease control ✓	Any 2	(2)
14.8.3	Determining readiness of crop for harvesting ✓ Harvesting time ✓ Method ✓ Handling / care / precautions ✓	Any 2	(2)
14.9	<u>ASSETS</u> 50 unused packaging boxes ✓ 10 garden forks ✓ 2 wheelbarrows ✓ R15 000 in business account bank account ✓	<u>LIABILITIES</u> labourers' wages ✓ office stationary debt ✓	(6)
14.10.1	July because during this time of the year there is less rain, there are more winds and the soil loses moisture quickly		(3)
14.10.2	May because most pests hide away in winter when it is cold		(2)
14.10.3	mulching		(1)

[50]

**QUESTION 15: PEACH PRODUCTION**

- 15.1.1 A✓  
 15.1.2 A✓  
 15.1.3 A✓  
 15.1.4 C✓  
 15.1.5 A✓  
 15.1.6 C✓  
 15.1.7 D✓  
 15.1.8 A✓  
 15.1.9 C✓  
 15.1.10 C✓ (10 x 1) (10)
- 15.2 Soil degradation✓ – erosion, acidification, water logging, and loss of fertility. ✓  
 Vegetation degradation✓ – loss of vegetation cover, alien plant invasion. ✓  
 Water degradation✓ – pollution of water with fertilisers, agricultural chemicals, and overuse or depletion of ground water. ✓ (6)
- 15.3 Ability to employ and manage workers. ✓  
 Negotiation skills to deal with customers. ✓  
 Legal expertise to sign contracts. ✓  
 Financial skills. ✓  
 Peach production skills. ✓  
 Peach packaging skills. ✓  
 Processing skills if necessary. ✓ Any (6)
- 15.4.1 Saving of pesticides✓  
 Open spaces between trees would not be sprayed✓  
 Saving the farmer money✓ (3)
- 15.4.2 Global positioning✓ system✓ (2)
- 15.4.3 Precision farming✓ (1)
- 15.5 Changes in the pattern of resources✓ - Labourers resign✓  
 Changes in technological and biological relationships✓ - New insecticides on market✓  
 Changes in prices✓ - Price of certain inputs rise, e.g. fertiliser✓  
 Risks and uncertainties✓ - Rainfall influence on the yield✓  
 (any other correct example) (8)



- 15.6**     **Records the number of containers harvested.✓**  
**Inspects for improperly harvested fruit.✓**  
**Are also responsible for ensuring that the entire crop is of proper size or colour harvested from a particular orchard or area of an orchard✓** (3)
- 15.7**     **Costs✓ – determine the minimum price that one can sell produce to make a profit. ✓**  
**Demand ✓– there must be a demand for the product no matter what the price is. ✓**  
**The higher the demand for a specific product is, the higher the price will be. ✓**  
**Competition✓ – competitive products will have an influence on the price. ✓** (7)
- 15.8.1**   **Price increase =  $(12,50 - R11)/R11 \times 100$ ✓ = 13,6%✓** (2)
- 15.8.2**   **It will not be cost effective. ✓**  
**The price increase is below the inflation rate which means his profit will decrease. ✓** (2)
- [50]

**QUESTION 16: HYDROPONICS**

- 16.1.1 Yield✓
- 16.1.2 Market requirements✓
- 16.1.3 Growth medium✓
- 16.1.4 Value adding✓
- 16.1.5 Seasonal worker✓
- 16.1.6 Natural resources✓
- 16.1.7 Fixed capital✓
- 16.1.8 Precision farming✓
- 16.1.9 Informal market✓
- 16.1.10 Organic fertiliser✓ (10 x 1) (10)
- 16.2.1 Wear the appropriate protective clothing. ✓  
 Ensure that the labourer knows the principles of using poisonous sprays. ✓  
 Ensure that labourer follows the instructions as set out in the leaflet. ✓  
 Ensure that labourer adheres to the precautionary methods as set out in the leaflet. ✓  
 Make washing facilities available to labourers. ✓  
 Train the labourers in the handling of poisons. ✓  
 Labourers must undergo blood tests yearly. ✓ Any (5)
- 16.2.2 All poisons must be locked away. ✓  
 Keep out of reach of children and animals. ✓  
 Keep record of poisons and usage. ✓  
 Disregard empty containers in a properly manner. ✓  
 Clean equipment thoroughly after use. ✓  
 Adhere to instructions in storing and mixing different poisons. ✓  
 Do not pour in unlabelled containers. ✓  
 Obtain address of nearest call centre. ✓ Any (5)
- 16.3.1  $A = 30\,000 \times R2,50 = R75\,000$ ✓  
 $B = 1\,400 \times 45 = R63\,000$ ✓  
 $C = R40\,000 + R75\,000 + R80\,000 + R63\,000 + R90\,000 + R8\,000$ ✓  
 $= R356\,000$ ✓ (6)
- 16.3.2 Income =  $30\,000 \times R15 = R450\,000$ ✓ (2)
- 16.3.3 It may not be possible to expand. ✓  
 Profit is R94 000 per cycle✓  
 and must increase to expand. ✓ (3)

- 16.4.1 Phase III greenhouses
- 16.4.2 Dispatch and deliveries
- 16.4.3 Support facilities
- 16.4.4 Phase I greenhouses
- 16.4.5 Irrigation channel (5)
  
- 16.5 Cleaning. ✓
  - Take off all excessive material and leaves. ✓
  - Chop / shred the vegetables. ✓
  - Get rid of excess water. ✓
  - Place in packaging material. ✓
  - Quick-freeze packed vegetables. ✓ (6)
  
- 16.6.1 Own savings. ✓
  - Credit. ✓ (2)
  
- 16.6.2 Medium term: capital used over a period of 5 – 10 years. ✓
  - Buying equipment like sprayers pumps etc. ✓
  - Long term: capital used over a period of more than 10 years. ✓
  - Erecting fixed assets like buildings and expensive machinery. ✓ (4)
  
- 16.7 To ensure that there is enough money to buy the day to day necessities. ✓
  - Ensure enough money available if something goes wrong and needs to be fixed. ✓ (2)

[50]

**QUESTION 17: VITICULTURE**

- 17.1.1 True✓  
 17.1.2 False✓  
 17.1.3 True✓  
 17.1.4 True✓  
 17.1.5 True✓  
 17.1.6 True✓  
 17.1.7 False✓  
 17.1.8 False✓  
 17.1.9 False✓  
 17.1.10 True✓ (10 x 1) (10)
- 17.2 It should be well planned✓ to accommodate all equipment and facilities to do the packaging✓  
 It should be cooled✓ to prevent heat damage to the fruit, and keep the environment pleasant to work in✓  
 Aeration is important to prevent the build-up of gasses✓ which leads to deterioration (rotting) of fruit✓  
 Good lighting✓ so that the shaping of the bunches ✓ can be done properly  
 The store should be clean✓ to prevent rotting or sources of contamination✓ Any 4 x 2 (8)
- 17.3.1 Lesions/damage✓, sunburnt✓, poor form of bunches✓, dirty bunches✓ Any (3)
- 17.3.2 Extra class✓  
 Class 1✓  
 Class 2✓ (3)
- 17.4 The full name and address of the employer✓  
 The name and occupation of the employee✓  
 The date of commencement of services✓  
 Working day and working hours✓  
 Remuneration and overtime remuneration✓  
 Leave conditions✓ Any other applicable answer (5)
- 17.5.1 -Cost of transport to Pretoria 150 x R1 x R2 = R300✓  
 -Cost of transport to Durban 750 x R1 x R2 = R1 500✓ (5)
- 17.5.2 It is viable✓, especially if its done only during peak season and more than once a week✓ (2)
- 17.6 Input costs✓  
 Running costs✓  
 Labour✓  
 Marketing cost✓  
 Debt✓ Any (4)

- |      |  |                     |             |
|------|--|---------------------|-------------|
| 17.7 | Visitors can come and harvest their own grapes per basket✓<br>Picnic baskets can be made available on the farm✓<br>Walking/ adventure trails can be set out on the farm✓<br>Overnight lodging can be made available✓       | Any suitable answer | (4)         |
| 17.8 | The applicant✓<br>The ability to pay back the loan✓<br>The security made available by the applicant✓<br>The conditions of the loan✓<br>The type of investment credit is needed for✓<br>The risk related to the investment✓ |                     | (6)<br>[50] |

**QUESTION 18: POTATO PRODUCTION**

18.1.1	K ✓		
18.1.2	E ✓		
18.1.3	I ✓		
18.1.4	A ✓		
18.1.5	H ✓		
18.1.6	F ✓		
18.1.7	J ✓		
18.1.8	B ✓		
18.1.9	C ✓		
18.1.10	D ✓	(10 x 1)	(10)
18.2.1	(a) 10 – 15 °C ✓ Cool ✓ not hot, not cold ✓	Any 1	(1)
	(b) sufficient air circulation ✓ enough oxygen ✓ low carbon dioxide levels ✓	Any 1	(1)
18.2.2	transport ✓ storage ✓ grading ✓ risk management ✓ market information ✓	Any 2	(2)
18.2.3	for transport costs ✓ for storage costs ✓ for labour costs ✓	Any 2	(2)
18.3.1	Greening ✓ Sprouting ✓ Malformation ✓ growth cracks ✓ mechanical / physical damage ✓ cut tubers ✓ soiled ✓ insect / nematode damage ✓ black scurf ✓ scab ✓ dry rot brown fleck ✓	Any 4	(4)
18.3.1	Greening ✓ Sprouting ✓ Malformation ✓ growth cracks ✓ mechanical / physical damage ✓ cut tubers ✓ soiled tubers ✓ insect / nematode damage ✓		

black scurf ✓  
scab ✓  
dry rot brown fleck ✓

Any 4

(4)

18.3.2 No ✓  
the tubers are damaged / have defects ✓

(2)

18.4.1  $100 - 43.9 \checkmark = 56.1 \% \checkmark$

(2)

18.4.2 – fresh French fries ✓  
– crisps ✓  
– mixed vegetables ✓

(3)

18.5.1 Themba's Potato  
 $R80\ 000 - R40\ 980 = R39\ 020 \checkmark$   
Fana Potato Investments  
 $R134\ 400 - R56\ 360 = R78\ 040 \checkmark$

(2)

18.5.2 Fana Potato Investments ✓

(1)

18.5.3 Use of certified seeds ✓  
Irrigation in potato production ✓  
growing potatoes all year round ✓

(3)

18.6 When the worker has agreed in writing ✓  
When the deduction is for a collective agreement law e.g. U.I.F. ✓  
When the employer overpaid the worker by mistake ✓  
Not more than 10 % of the worker's salary may be deducted for each of the following: accommodation, food, loans and advance payment, pension fund or union subscriptions ✓

Any (3 x 2)

(6)

18.7	BALANCE SHEET		YEAR 2006	
	Assets	Rands ✓	Liabilities	Rands ✓
	Cash at hand.	60 540	Loan for fertilisers and chemicals.	54 000
	Machinery.	<u>193 000</u>	Wages for workers.	<u>85 600</u>
				193 600
			Net Capital ✓	59 940
		<u>253 540</u> ✓		<u>253 540</u>

(4)

- 18.8.1**    **Add to the county's exports income / GDP ✓**  
              **Reduce unemployment ✓**  
              **Food security ✓**  
              **Reduce poverty ✓** **Any 2** **(2)**
- 18.8.2**    **Provide employment ✓**  
              **Reduce poverty ✓**  
              **Contribute towards recreation e.g. sports and culture ✓**  
              **Contribute towards education e.g. by supporting schools ✓** **Any 2** **(2)**
- 18.9**        **It is best to supply the market with potatoes when demand for the product is high ✓ and supply from other producers is low ✓ in order to collect the highest possible market price. ✓** **(3)**  
**[50]**



**QUESTION 19: VINICULTURE**

19.1.1	F✓		
19.1.2	T✓		
19.1.3	T✓		
19.1.4	T✓		
19.1.5	T✓		
19.1.6	F✓		
19.1.7	F✓		
19.1.8	F✓		
19.1.9	T✓		
19.1.10	T ✓	(10 x 1)	(10)
19.2.1	Origin✓		(1)
19.2.2	Alcohol content✓		(1)
19.2.3	Volume indication✓		(1)
19.2.3	Country of origin✓		(1)
19.3	Soil preparation✓ Tilling✓ Planting✓ Growing✓ Trellising✓ Pruning✓ Combating disease✓ Fertilization✓ Harvesting✓ Press✓	Any	(5)
19.4	Planning of the farming activities. ✓ Exposition of the daily work.✓ Use of task work. ✓ Acknowledgement of performance. ✓ Supervision. ✓		(5)
19.5.1	Cultivation of different crops✓ On the same piece of soil✓ At the same time. ✓		(3)
19.5.2	Main crop is the most important. ✓ May not compete for water and nutrients. ✓ Easy to grow. ✓ May not attack/house pests/insects/diseases of main crop. ✓ If possible add nutrients like nitrogen to soil. ✓		(5)

19.6	<p>Choose 130 vines randomly. ✓  Vines must be distributed evenly. ✓  If vineyard is very big divide into smaller blocks. ✓  Choose three bunches of grapes randomly on each vine. ✓  Choose five grapes on each bunch randomly from the middle. ✓  All grapes are placed into one container and crushed. ✓  Place juice onto refractor meter and take reading. ✓  Adjust to the relevant temperature of juice. ✓  Assizes apparatus regally. ✓</p>	Any	(5)
19.7	<p>Supply of enough sulphur to prevent fermentation ✓  Cool the tank down to 15°C ✓  To speed up the process of clarifying ✓  Before clarifying add enzymes with pectolite ✓  To help breaking down peptides ✓  And releasing more juice. ✓</p>		(6)
19.8	<p>Cost plus pricing. ✓  Competition-orientated or going rate pricing. ✓  Market orientated pricing.</p>		(3)
19.9	<p>Long-term planning: planning for the next year and longer. ✓  Medium-term planning: planning for the next season. ✓  Short-term planning: planning for the month/week. ✓  Daily planning. Planning for the net day. ✓</p>		(4)
			[50]
		TOTAL:	200