AGRICULTURAL MANAGEMENT PRACTICES

NOVEMBER 2011

POSSIBLE ANSWERS

MARKS: 200

This memorandum consists of 14 pages.
**SECTION A**

**QUESTION 1.1**

<table>
<thead>
<tr>
<th>1.1.1</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1.2</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
</tr>
<tr>
<td>1.1.3</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
</tr>
<tr>
<td>1.1.4</td>
<td>A</td>
<td>C</td>
<td>C</td>
<td>D</td>
</tr>
<tr>
<td>1.1.5</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>B</td>
</tr>
<tr>
<td>1.1.6</td>
<td>A</td>
<td>Y</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>1.1.7</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
</tr>
<tr>
<td>1.1.8</td>
<td>A</td>
<td>Y</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>1.1.9</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
</tr>
<tr>
<td>1.1.10</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
</tr>
</tbody>
</table>

(10 x 2) (20)

**QUESTION 1.2**

| 1.2.1 | J | Y |
| 1.2.2 | D | Y |
| 1.2.3 | G | Y |
| 1.2.4 | F | Y |
| 1.2.5 | E | Y |
| 1.2.6 | I | Y |
| 1.2.7 | L | Y |
| 1.2.8 | A | Y |
| 1.2.9 | B | Y |
| 1.2.10 | H | Y |

(10 x 2) (20)

**QUESTION 1.3**

1.3.1 Soil erosion ✓
1.3.2 Closer/Nearer/lesser ✓
1.3.3 Optimum /deal/best ✓
1.3.4 Calibration ✓
1.3.5 Short-term/production loan ✓
1.3.6 Loss ✓
1.3.7 Control/monitoring ✓
1.3.8 Organic/Biological/perma culture ✓
1.3.9 Depreciation ✓
1.3.10 Marketing ✓

(10 x 1) (10)

TOTAL SECTION A: 50
SECTION B

QUESTION 2: ANIMAL AND CROP PRODUCTION

2.1.1 Explain basic procedure of farm planning
a) Collection of recent data:
   - To analyse the present situation. ✓
   - Any data that is relevant to enterprise – climate, soil, markets ✓ (Any 1)

b) Classification and evaluation of data
   - To determine the land capability and determine field layout. ✓
   - Data has to be classified in different categories and the influence that this aspect will have on the enterprise ✓ (Any 1)

c) Actual plan on utilisation of resources
   - To coordinate farm activities and/or determine the soil and water management. ✓
     - Final planning for the year/season/day to ensure that objectives are reached. ✓
     - Setting of business plan ✓ (Any 1) (3)

2.1.2 Two important aspects
   - Finances/capital needed ✓
   - Farm activities/work for the day ✓
   - Advertising/Marketing of the products ✓
   - Availability of resources/water ✓ (Any 2) (2)

2.1.3 Four ways to improve soil structure
   - Add organic material/compost/manure/organic fertilisers/green manuring ✓
   - Practise crop rotation ✓
   - Conservation cultivation methods ✓
   - Correct cultivation methods ✓
   - Add lime/gypsum to soils ✓
   - Organic/Biological farming methods ✓ (Any 4) (4)

2.2 Classify type of capital
   - A – Movable capital: ✓
   - B – Fixed capital ✓
   - C – Working (floating) capital/fixed capital ✓
   - D – Working (floating) capital ✓
   - E – Fixed capital ✓ (5)

2.3 Four factors for soil to produce
   - Agricultural/production capacity of the soil/grazing capacity of pastures ✓
   - Vulnerability of the soil to change or total destruction ✓
   - Climate ✓
   - Correct management practices ✓ (4)

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2.4 Type of farming system AND one reason

- A = Subsistence farming system – ✓
  - AND
  - Hand tools/no mechanisation ✓ Small area planted for family ✓
  - When a farmer is growing enough food to feed the family. ✓
  - But not selling much at all / there is no profit. ✓
  - A farmer does not spend more than they need on inputs. ✓ (Any 1) (2)

- B = Commercial farming system – ✓
  - AND
  - More expensive technology/Mechanisation ✓
  - When a farmer produces products mainly for sale. ✓
  - It is aimed at profit making. ✓
  - They spend more on inputs. ✓ (Any 1) (2)

2.5 Describe procedure of caring

- Clean the implements/Remove the mud ✓ Wash it thoroughly with clean water ✓
- Service the implement/Grease the equipment if applicable ✓
- Releasing the tension of all belts and chains. ✓
- Replacing/repair all broken or worn out parts. ✓
- Protect it from rusting/ensure it is dried ✓
- Keep in a safe/sheltered place ✓ (4)

2.6 Name perspective

2.6.1 Science perspective ✓ (1)

2.6.2 Technical perspective/labour perspective ✓ (1)

2.6.3 Environmental perspectives ✓ (1)

2.6.4 Economic perspective ✓ (1)

2.7 Differentiate two groups of labourers

2.7.1 Skilled labourers

- Are those labourers who are trained and provided with certificates ✓
- Know how to do specific tasks in the farm ✓

2.7.2 Unskilled labourers

- Are not trained ✓
- Perform common tasks/tasks which can be learned and done by most people quickly. ✓ (4)
2.7.2 **Explain advantages of skilled labourers**
- Higher income possibilities for farm ✓
- Skilled agricultural workforce ✓
- Increased productivity / Commitment for better work ✓
- Better quality product produced ✓
- Less damages/longer use of implements/equipment ✓
- More efficient use of equipment ✓
- More stable workforce ✓

(4)

2.8.1 **Identification from graph**
(a) Week 2 ✓
(b) Week 5 ✓

(2)

2.8.2 **Higher yield – verification**
- No ✓
- The temperatures during week 5 and week 6 are too low for maximum production. ✓

(2)

2.8.3 **Two practices to solve problem**
- Plant the crop earlier ✓
- Make use of a cultivar with a shorter growing season ✓
- Produce the crop in a green house / environmental controlled enclosure ✓
- Cover the plants when temperature decreases ✓
- Burning of material next to the field when temperatures drop below the optimum temperature ✓
- Plant crop on a northern slope ✓

(Any 2) (2)
2.9 Organogram

Footnote
- Schematic representation ✓
- Straight line chain of command = 3 marks – farm owner, farm manager, any one of the foreman. Thereafter no marks
- Placing the worker under wrong foreman = 5 marks

(6)

[50]
QUESTION 3: RECORDING, FINANCIAL STATEMENTS AND ENTREPRENEURSHIP

3.1.1 Name four agricultural budgets
- Enterprise budgets/production budget √
- Partial budgets √
- Break-even budgets √
- Capital budget √
- Whole farm budget √
- Cash flow budget √
- Mechanisation budget √
- Budget for maintenance of infrastructure √ (Any 4) (4)

3.1.2 Redraw partial budget
Rubric for marking:

Expected income:
- The name of the product / item to be sold √
- Amount √
- Unit price √
- Total √ (Correct)

Expected expenses:
- Name of item √
- Amount √
- Unit price √
- Total √ (Correct) (8)

3.2 Five types of records
- Financial record √
- Labour record √
- General record √
- Grazing and fodder record √
- Livestock record √
- Mechanisation record √
- Production record/weaning records √
- Medicine records √
- Pedigree records √

Footnote: Any relevant agricultural livestock records (Any 5) (5)
3.3 Copy and complete forms of loans

<table>
<thead>
<tr>
<th>DURATION</th>
<th>LONG-TERM LOAN</th>
<th>MEDIUM-TERM LOAN</th>
<th>SHORT-TERM LOAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Period</td>
<td>10 yrs and longer ✓</td>
<td>2 to 10 years (not only 2 or 10 years) ✓</td>
<td>2 years and less ✓</td>
</tr>
<tr>
<td>Use of capital</td>
<td>Purchase of land ✓</td>
<td>Purchase of machinery ✓</td>
<td>Purchase of fertilisers ✓</td>
</tr>
</tbody>
</table>

3.4 Complete balance sheet

3.4.1
(a) Cash - R2 000 ✓ or Stock - R100 000 ✓
(b) Stock - R100 000 ✓ or Cash - R2 000 ✓
(c) Creditors - R11 613 ✓
(d) Total liabilities - R392 795 ✓ (CA apply Mark positively) (4 x 1)

3.4.2 Calculate net worth (incorrect calculation must be mark positively)
- R442 000 – R392 795 ✓ = R49 205 ✓
- If only answer: Net worth = R49 205 ✓ ✓ (CA apply)

3.5 Identify source documents
3.5.1 Cash invoice / Invoice ✓
3.5.2 Cash/account deposit slip ✓
3.5.3 Credit note / Account / VAT invoice ✓
3.5.4 Receipt / Proof of payment ✓

3.6 Differentiate cash flow and income statement
- Cash flow is the movement of funds through the business ✓ during a specific period and is represented by receipts and payment. ✓
- Income statement is the record of financial transactions ✓ and the resulting profit/loss on a farm. ✓

3.7.1 Indicate equal month
February ✓

3.7.2 Two reasons for sudden drop in price
- The farmer doesn't have many livestock or livestock products to sell so the income is less ✓
- The demand for the specific livestock products was lower and therefore less were sold ✓
- There was an over supply on the market and prices drop suddenly ✓
- A sudden loss of animals (diseases / natural disaster / theft / predators / problem animals) thus less to sell ✓
- Restrictions on export / quarantine ✓ (Any 2)
3.7.3 Calculate profit/loss

Calculations
Income = 200 000 + 75 000 + 60 000 + 50 000 + 40 000 + 40 000 + 50 000
+ 60 000 + 100 000 + 150 000 + 250 000 + 350 000
= R1 425 000✓
Expenditure = 70 000 + 75 000 + 80 000 + 85 000 + 90 000 + 95 000
+ 100 000 + 100 000 + 90 000 + 80 000 + 70 000 + 80 000
= R995 000✓

And determine
Farmer had made a profit✓ of R430 000. ✓ (Mark positively/CA apply) (4)

3.8 Redraw and categorise in appropriate column in business plan

SECTION OF A BUSINESS PLAN

<table>
<thead>
<tr>
<th>MARKETING</th>
<th>FINANCIAL PLANNING</th>
</tr>
</thead>
<tbody>
<tr>
<td>What are the set quality standards for selling my product? ✓</td>
<td>Where am I going to get the capital? ✓</td>
</tr>
<tr>
<td>Where am I going to sell my product? ✓</td>
<td>When will I reach the break even point? ✓</td>
</tr>
<tr>
<td>What are the customers’ needs? ✓</td>
<td>How much are business registration fees and taxes? ✓</td>
</tr>
</tbody>
</table>

(6) [50]
QUESTION 4: HARVESTING, VALUE-ADDING, MARKETING, AGRITOURISM AND INDUSTRY

4.1 Explain importance of grading
- To ensure quality control/better quality of product ✓
- Grading is necessary to determine the appropriate use of the product/to ease marketing ✓
- The higher the quality of the raw product, the higher the quality of the processed product/motivation for farmer to produce better product ✓
- To group harvested products in prescribed classes ✓
- To guide the consumer in the available categories ✓
- Improved price of product ✓

(Any 3) (3)

4.2 Aims of processing
- To increase the value of the product/increased income ✓
- To increase the shelf/storage life of the product/To preserve the product ✓
- To meet consumer taste/consumer friendly ✓
- To cope with over supply of products ✓
- Easier packaging/handling of product ✓

(Any 3) (3)

4.3 Three non-chemical methods to control micro-organisms
- Heating ✓
- Pasteurisation ✓
- Sterilisation ✓
- Blanching ✓
- Smoking ✓
- Sugaring ✓
- Salting ✓
- Refrigeration/cooling/cold storage/freezing/chilling ✓
- Filtration ✓
- Ultraviolet light (uv)/radiation ✓
- Vacuum packaging ✓
- Drying/spray drying/sun-drying/air-drying ✓
- Tinning ✓

(Any 3) (3)

4.4 Role of producer organisations
- Do market research/Marketing ✓
- Advertise the produce/Promote the product/Promotion ✓
- Assist farmers on regulatory/policy issues and market trends ✓
- Advisory service to farmers ✓
- Financial advice ✓

(Any 3) (3)
4.5 **Five requirements of packaging material for meat**
- Non-toxic ✓
- Transparent ✓
- Cleanable ✓
- Easily disposable ✓
- Suited for meat ✓
- Impermeable to gases and odours ✓
- Resistant to mechanical and temperature damage ✓
- Recyclable
- Cheap
- Lightweight
- Appealing
- Strong ✓

(Any 5) (5)

4.6 **Aims of Agri-BEE**
- Ensure equal, fair income distribution ✓
- Participation of previous disadvantage people in the economy ✓
- Economic empowerment of previous disadvantage people ✓
- Correcting inequalities of past ✓
- Gender equity ✓
- Land reform targets ✓

(Any 3) (3)

4.7.1 **Define Agri-tourism**
- Attracting travellers, visitors/ tourists ✓
- To an area that is used for farming/agricultural purposes (agrarian activities) ✓
- With conservation in mind and buildings with agrarian function ✓

(Any 2) (2)

4.7.2 **Three benefits of Agri-tourism**
- Efficient use of resources ✓
- Increase in income generated by farm workers/farm workers produce articles to sell ✓
- Increased job creation ✓
- Beneficiary to the community involved ✓
- Uplifting the quality of life for the people involved ✓
- Protection/Conservation of environment ✓
- Diversification extra income ✓
- Marketing tool ✓

(Any 3) (3)
4.8 Six factors to consider before harvesting

- Size of the farm ✓
- Crop/cultivars ✓
- Weather/climate/ soil conditions ✓
- Harvesting method✓
- Time frames/when to start when to finish ✓
- Storing facilities ✓
- Condition and availability of harvesting tools/equipment/ machinery ✓
- Availability of labour ✓
- Option of hiring harvesting contractors ✓
- Service harvesting equipments ✓
- Employment of seasonal labour ✓
- Transportation of harvested product ✓
- Measurement of the readiness of crop to be harvested ✓
- Sorting and grading
- Market research

(Any 6) (6)

4.9.1 Define agricultural market

- A place where the supply of agricultural products ✓
- Will meet the demand to the product by the consumer ✓

OR

- Any place where an agriculturist ✓
- Can sell his/her produce to a consumer ✓

(2)
4.9.2 GRAPH SUPPLY AND DEMAND

SUPPLY AND DEMAND

![Graph showing supply and demand with price in R (0 to 1500) and quantity in million tons (5 to 10).]

Check list:
Heading ✓ Label Y-axis ✓ X-axis ✓ Supply curve ✓ Demand curve ✓ (5)

4.9.3 Ideal point of supply and demand
At R1 100 per ton or at 8 million tons ✓ (1)

4.9.4 Term ideal point
Market equilibrium ✓ (1)

4.9.5 Explain ideal point
This is the point where the quantity of the crop supplied to the market is equal to the quantity of the crop demanded from the market ✓✓ (2)

4.10.1 Reason why farm equipment is dangerous
- Sharp ✓
- Fast moving ✓
- Mechanical ✓
- Open machinery ✓
- Heavy ✓ (Any 1) (1)

4.10.2 State legislation
OHS Act/(ACT 85 OF 1993)/Safety act ✓ (1)
4.11 REPORT FOR SMALL SCALE FARMER

A. Agritourism
   • Donkey cart rides for tourists✓
   • Demonstrations of oxen at work✓

B. Irrigation
   • Borehole to supply water✓
   • Dam to store water✓
   • Land to irrigate✓

C. Mechanisation
   • Mules work✓
   • Sale of products to buy tractor. ✓
   • Sale of mules to buy tractor✓
   • Selling of donkey cart to buy a wagon
   • Contractor to cultivate soil✓

(Any 2) (Any 2) (6)

[50]

TOTAL SECTION B: 150
GRAND TOTAL: 200