education

Department:
Education
North West Provincial Government
REPUBLIC OF SOUTH AFRICA

PROVINCIAL ASSESSMENT

GRADE 10

AGRICULTURAL SCIENCES P1
NOVEMBER 2024
MARKING GUIDELINES

MARKS: 150

These marking guidelines consist of 11 pages.

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SECTION A

QUESTION 1

1.1	1.1.1	C ✓✓		
	1.1.2	D ✓✓		
	1.1.3	C ✓✓		
	1.1.4	D ✓✓		
	1.1.5	A ✓✓		
	1.1.6	A ✓✓		
	1.1.7	B ✓✓		
	1.1.8	C ✓✓		
	1.1.9	D ✓✓		
	1.1.10	B ✓✓	(10 x 2)	(20)
1.2	1.2.1	A only ✓✓		
	1.2.2	B only ✓✓		
	1.2.3	B only ✓✓		
	1.2.4	None ✓✓		
	1.2.5	Both A and B ✓✓	(5 x 2)	(10)
1.3	1.3.1	Stocking rate ✓✓		
	1.3.2	Indigenous knowledge ✓✓		
	1.3.3	Non-ruminants ✓✓		
	1.3.4	Battery ✓✓		
	1.3.5	Improved breeds ✓✓	(5 x 2)	(10)
1.4	1.4.1	Biome ✓		
	1.4.2	State land ✓		
	1.4.3	Milk ✓		
	1.4.4	Draught ✓		
	1.4.5	Poaching ✓	(5 x 1)	(5)

TOTAL SECTION A: 45

SECTION B

QUESTION 2: AGRO-ECOLOGY

2.1 2.1.1 **Type of energy flow illustrated in the diagram**
Food chain ✓ (1)

2.1.2 **The number of trophic levels in the diagram**
4 trophic levels ✓ (1)

2.1.3 **Identification of the letter**
(a) B ✓ (1)
(b) C ✓ (1)
(c) E ✓ (1)

2.1.4 **Explanation**
The animals in letter D are predators/hunters. They kill and consume/eat ✓ the animals in letter C. ✓ (2)

2.1.5 **THREE abiotic components required by plants**
- Water ✓
- Air/Carbon dioxide ✓
- Soil ✓
- Sunlight ✓ (Any 3) (3)

2.2 2.2.1 **The nutrient cycle in the diagram**
Water cycle ✓ (1)

2.2.2 **Processes A, C and E in the diagram**
A – Precipitation ✓
C – Transpiration ✓
E – Percolation ✓ (3)

2.2.3 **Main source of water**
Rain/Precipitation ✓ (1)

2.2.4 **THREE ways in which water is returned to the atmosphere**
- Evaporation ✓
- Transpiration ✓
- Sublimation ✓ (3)

2.2.5 **Explanation**
Deforestation reduces plant cover, ✓ leading to less transpiration and potentially impacting rainfall patterns. ✓ (2)

2.3 **Completing the table**

2.3.1 More than 625mm per year ✓ (1)

2.3.2 250-500mm per year ✓ (1)

2.3.3 Less palatable ✓ (1)

2.3.4 More palatable ✓ (1)

2.3.5 Only good in the growing season ✓ (1)

2.3.6 Good all year round ✓ (1)

2.4 **Biomes**

2.4.1 B ✓ (1)

2.4.2 A ✓ (1)

2.4.3 D ✓ (1)

2.4.4 C ✓ (1)

2.4.5 E ✓ (1)

2.5 2.5.1 **TWO causes of climate change**

- Changes in the amount of energy released by the sun ✓
- Volcanic eruptions ✓
- Changes in ocean currents ✓
- Changes in the level of greenhouse gases in agriculture ✓

(Any 2) (2)

2.5.2 **TWO agricultural adaptation measures**

- Water conservation ✓
- Planting trees ✓
- Changing tillage operations ✓
- Changing planting dates ✓
- Soil conservation ✓
- Portfolio diversification ✓
- Improved breeding programmes ✓
- Sustainable agriculture ✓

(Any 2) (2)

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QUESTION 3: AGRI-INDUSTRY

3.1 3.1.1 **Identification of the levels of agricultural economic activities**

A – Tertiary agriculture ✓
B – Secondary agriculture ✓
C – Primary agriculture ✓ (3)

3.1.2 **Examples of the levels of agricultural economic activities**

Primary agriculture
- Growing crops ✓
- Rearing livestock ✓ (Any 1)

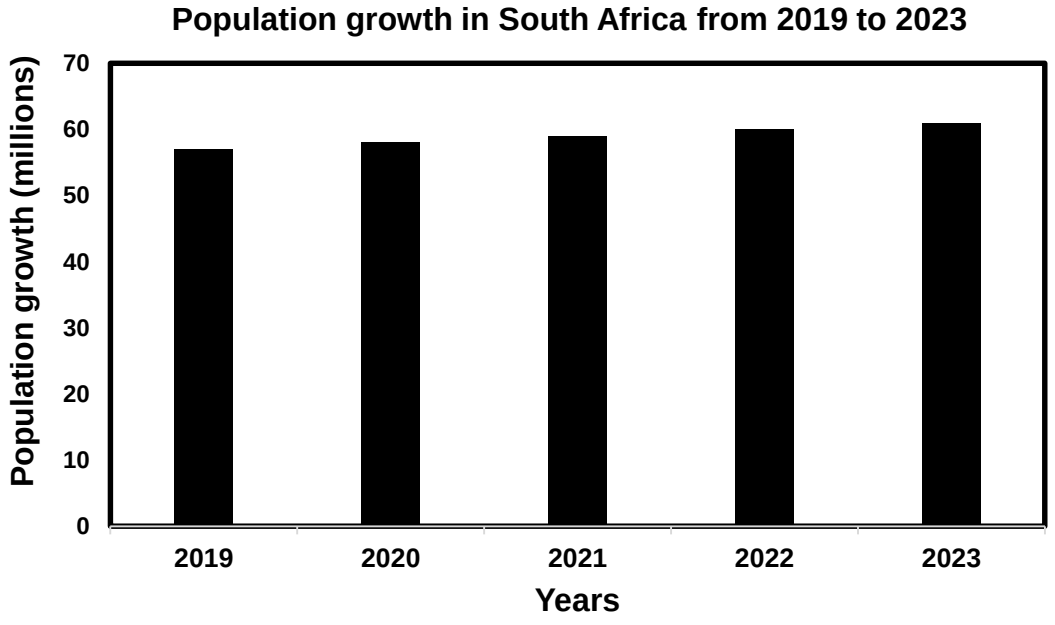
Secondary agriculture
- Producing sugar from sugar cane ✓
- Producing flour from wheat ✓ (Any 1)

Tertiary agriculture
- Making syrup from sugar ✓
- Making bread from flour ✓ (Any 1) (3)

3.1.3 **THREE ways the production of agricultural goods contributes to the economy of the country**
- Provide food and useful material such as cotton and wood ✓
- To Provide jobs ✓
- To earn foreign exchange ✓ (3)

3.2 3.2.1 **Calculation of the difference in population between 2019 and 2022**
- 60 - 57✓
- 3 million ✓ (2)

3.2.2 **Bar graph**



CRITERIA/RUBRIC/MARKING GUIDELINES

- Correct heading ✓
- X-axis: correct calibrations and labelled (Years) ✓
- Y-axis: correct calibrations and labelled (Population growth) ✓
- Correct unit (millions) ✓
- Bar graph ✓
- Accuracy (80% + correctly plotted) ✓ (6)

3.3 3.3.1 **Identification of the process**
Processing / Value Adding ✓ (1)

3.3.2 **Name of the product**
- Cheese ✓
- Ice cream ✓ (Any 1) (1)

3.3.3 **Advantages of processed foodstuffs**:
- Makes food safer to eat ✓
- Makes it easy to market and distribute ✓
- Increases seasonal availability ✓
- Makes transportation of delicate perishable foods possible ✓
- Reduces the incidents of food-borne diseases/Treated to prevent the growth of bacteria and other micro-organisms ✓
- Makes many foodstuffs easier and more convenient than unprocessed food ✓
- Often involves the addition of nutrients such as vitamins ✓
- Increases shelf life (Any 2) (2)

3.3.4 **Distinction between fresh food and staple food**
Fresh food – Foods that farmers harvest and the sell just as they are ✓
Staple food – Foods that the people in a country eat regularly and which makes up bulk of their diet ✓ (2)

3.4 3.4.1 **Agricultural legislation**
(a) Resource protection laws ✓ (1)
(b) Disease and chemical laws ✓ (1)
(c) Labour laws ✓ (1)
(d) Resource protection laws ✓ (1)
(e) Land and land reform laws ✓ (1)

3.4.2 **TWO aims of agricultural legislation**
- Conserve agricultural resources ✓
- Protect the environment ✓
- Ensure consumer safety ✓
- Protect the rights of farm workers ✓ (Any 2) (2)

3.5 3.5.1 **Name of the underlined abbreviation**
National Agricultural Marketing Council ✓ (1)

3.5.2 **The role of the NAMC from the scenario**
It plays a crucial role in supporting a vibrant agricultural marketing system ✓ by providing advisory services to key stakeholders ✓ (2)

3.5.3 **Benefits of nationally recognised agricultural organisations**
- Provides rural and farm protection plan ✓
- Negotiate prices of products and services ✓
- Acts as mouth piece of farmers both on national and international level ✓
- Give feedback to farmers on national agricultural aspects ✓
- Keeps farmers informed about policy, legislation and agricultural programmes that are of interest to them ✓
- Supply market information in our country as well as on export opportunities ✓
- Assist with court cases affecting farmers ✓ (Any 2) (2)

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QUESTION 4: ANIMAL STUDIES

4.1 4.1.1 **Economic importance of animals**
- For income ✓
- For raw materials like hides and skins ✓
- For clothing ✓
- For export/foreign exchange ✓
- Symbol of wealth ✓ (Any 3) (3)

4.1.2 **TWO examples of the traditional importance of cattle**
- Lobola ✓
- Traditional ceremonies ✓
- Draught ✓ (Any 2) (2)

4.2 4.2.1 **Completing the table**
A – Bone meal ✓
B – Pigs ✓
C – Manure ✓
D – Toys for dogs ✓
E – Feathers ✓ (5)

4.2.2 **Definition of by-product**
An incidental or secondary product ✓ made in the manufacture or synthesis of something else ✓ (2)

4.2.3 **TWO main products of chickens**
- Meat ✓
- Egg ✓ (2)

4.3 4.3.1 **Classification of the components of ecosystem**
- **GROUP A –** Dairy breeds ✓
- **GROUP B –** Beef breeds ✓ (2)

4.3.2 **Explanation of 4.3.1.**
- **GROUP A –** Dairy breeds are kept to supply milk ✓
- **GROUP B –** Beef breeds are kept for meat production ✓ (2)

4.3.3 **TWO indigenous beef breeds in the table**
- Nguni ✓
- Bonsmara ✓ (2)

4.3.4 **Identification of the breed**
(a) Jersey breed ✓ (1)
(b) Friesland/Holstein breed ✓ (1)

4.3.5 **Types of beef breeds not mentioned in the table**
- Sussex ✓
- Charolais ✓
- Aberdeen angus ✓
- Drakensberger ✓
- Afrikaner ✓ (Any 3) (3)

4.4 4.4.1 **Identification of the product**
(a) Veal ✓ (1)
(b) Lamb ✓ (1)
(c) Pork ✓ (1)
(d) Broiler ✓ (1)
(e) Capon ✓ (1)

4.5 4.5.1 **Identification of the animal**
Mule ✓ (1)

4.5.2 **Identification of the gender of horse**
Female ✓ (1)

4.5.2 **Characteristics of mules**
- Higher and better adaptability than horses ✓
- They are bigger and stronger than donkeys ✓
- Can survive harsh environments ✓
- Perform better under difficult conditions ✓
- Higher disease resistances ✓
- Sterile ✓ (Any 3) (3)

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TOTAL SECTION B: 105
GRAND TOTAL: 150

SUBJECT:	Agricultural Sciences			ASSESSMENT				Nov exam		
GRADE:	10			TASK:				Nov. 2024		
QUESTION ANALYSIS GRID										
	Cognitive Levels			Topics and Difficulty Levels						
QUESTION	1	2	3					Easy	Moderate	Difficult
QUEST. 1										
1.1.1	2							2		
1.1.2	2							2		
1.1.3	2							2		
1.1.4			2							2
1.1.5	2							2		
1.1.6			2							2
1.1.7	2							2		
1.1.8	2							2		
1.1.9	2							2		
1.1.10	2							2		
1.2.1	2							2		
1.2.2		2							2	
1.2.3	2							2		
1.2.4	2							2		
1.2.5		2							2	
1.3.1	2							2		
1.3.2	2							2		
1.3.3	2							2		
1.3.4		2							2	
1.3.5	2							2		
1.4.1			1							1
1.4.2	1							1		
1.4.3	1							1		
1.4.4	1							1		
1.4.5	1							1		
TOTAL	34	6	5					34	6	5
QUESTION 2	1	2	3					Easy	Moderate	Difficult
2.1.1		1							1	
2.1.2	1							1		
2.1.3(a)		1							1	
2.1.3(b)		1							1	
2.1.3(c)		1							1	
2.1.4			2							2
2.1.5	3							3		
2.2.1		1							1	
2.2.2		3							3	
2.2.3	1							1		
2.2.4			3							3
2.2.5			2							2
2.3.1		1							1	
2.3.2		1							1	
2.3.3		1							1	
2.3.4		1							1	
2.3.5		1							1	
2.3.6		1							1	

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2.4.1		1							1	
2.4.2		1							1	
2.4.3		1							1	
2.4.4		1							1	
2.4.5		1							1	
2.5.1	2							2		
2.5.2			2							2
TOTAL	**7**	**19**	**9**					**7**	**19**	**9**
QUESTION 3	**1**	**2**	**3**					Easy	Moderate	Difficult
3.1.1		3							3	
3.1.2		3							3	
3.2.1		2							2	
3.2.2			6							6
3.3.1		1							1	
3.3.2		1							1	
3.3.3	2							2		
3.3.4			2							2
3.4.1(a)		1							1	
3.4.1(b)		1							1	
3.4.1(c)		1							1	
3.4.1(d)		1							1	
3.4.1(e)		1							1	
3.4.2	2							2		
3.5.1	1							1		
3.5.2		2							2	
3.5.3	2							2		
TOTAL	**7**	**17**	**11**					**7**	**17**	**11**
QUESTION 4	**1**	**2**	**3**					Easy	Moderate	Difficult
4.1.1	3							3		
4.1.2	2							2		
4.2.1		5							5	
4.2.2	2							2		
4.2.3	2							2		
4.3.1		2							2	
4.3.2			2							2
4.3.3		2							2	
4.3.4(a)		1							1	
4.3.4(b)		1							1	
4.3.5			3							3
4.4.1(a)		1							1	
4.4.1(b)		1							1	
4.4.1(c)		1							1	
4.4.1(d)		1							1	
4.4.1(e)		1							1	
4.5.1		1							1	
4.5.2		1							1	
4.5.3	3							3		
TOTAL	**12**	**18**	**5**					**12**	**18**	**5**

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SUMMARY										
QUESTION 1	34	6	5							
QUESTION 2	7	19	9							
QUESTION 3	7	17	11							
QUESTION 4	12	18	5							
Total marks	60	60	30							
Norm marks	60	60	30					60	60	30
Total %	40	40	20					40	40	20
Norm %	40	40	20					40	40	20

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