



Education and Sport Development

Department of Education and Sport Development
Departement van Onderwys en Sport Ontwikkeling
Lefapha la Thuto le Tlhabololo ya Metshameko

NORTH WEST PROVINCE

PROVINCIAL ASSESSMENT

GRADE 10

AGRICULTURAL SCIENCES

JUNE EXAMINATION

MARKING GUIDELINE 2019

MARKS: 150

TIME: 2 Hours 30 Minutes

This marking guideline consists of 8 pages including cover page.

SECTION A**QUESTION 1****1.1**

- 1.1.1 C √√
- 1.1.2 B √√
- 1.1.3 A √√
- 1.1.4 A √√
- 1.1.5 B √√
- 1.1.6 D √√
- 1.1.7 A √√
- 1.1.8 D √√
- 1.1.9 C √√
- 1.1.10 D √√

(2X10) = [20]**1.2**

- 1.2.1 BOTH A AND B √√
- 1.2.2 A ONLY √√
- 1.2.3 B ONLY √√
- 1.2.4 A ONLY √√
- 1.2.5 NONE √√

(2 X 5) = [10]**1.3**

- 1.3.1 Processing/ Value adding √√
- 1.3.2 Urbanization/ Rural-urban exodus √√
- 1.3.3 Population dynamics √√
- 1.3.4 Broilers √√
- 1.3.5 Nguni breed √√

(2 X 5) = [10]**1.4**

- 1.4.1 Output √
- 1.4.2 Veld management √
- 1.4.3 Parasitism √
- 1.4.4 Draught horse breed √
- 1.4.5 Free range system √

(1 X 5) = [5]**[SUB TOTAL: SECTION A = 45 MARKS]**

SECTION B

QUESTION 2: AGRO- ECOLOGY AND AGRI-INDUSTRY

2.1

2.1.1 Farming practices which may cause overgrazing

- Overstocking√√
- Continuous grazing √√
- Selective grazing. √√ (2x3=6)

2.1.2 Farming practices which a farmer may apply to keep the veld in a good condition.

- Camps√
- Optimum stocking density/rate (-correct animal : land ratio) √
- Rotational grazing and resting√
- Zero grazing. √ (1x4=4)
[10]

2.2

2.2.1 The seven biomes of South Africa.

- A-Succulent Karoo / Mediterranean vegetation√
- B- Nama Karoo / Semi-desert- Grassland√
- C-Grassland √
- D- Savannah√
- E- Fynbos√
- F- Forest√
- G- Thicket. √ (1x7=7)

2.2.2 Biome A and E rainfall season

- Winter√ (1)

2.2.3 Abiotic factors that determine the type of plants in a biome.

- Climate [-rainfall and temperature] √
- Soil/Edaphic factor√
- Topography/ Relief / Terrain√
- Slope / Aspect / Orientation. √ any two (1x2=2)
[10]

2.3 Carbon cycle

2.3.1 Food components in which Carbon is an important element/atom

- Carbohydrates√
- Fats√
- Proteins√ (3)

2.3.2

- Photosynthesis√ (1)

2.3.3

- Respiration ✓
 - Decomposition ✓
 - Fossilisation ✓
 - Combustion ✓
- (Any 2) (2)
[6]

2.4. 2.4.1 **Importance of agriculture**

- Provide food. ✓
 - Provide raw material. ✓
 - Job creation. ✓
 - Provide economic stability ✓.
 - Provide foreign exchange. ✓
- (Any 3) (3)

2.4.2 **Ways of food processing.**

- Drying ✓
 - Canning ✓
 - Freezing ✓
 - Smoking ✓
- (any 3) (3)

Raw materials used to produce the food listed.

- a. Grapes (1)
 - b. Wheat (1)
 - c. Milk (1)
- [9]**
[35]

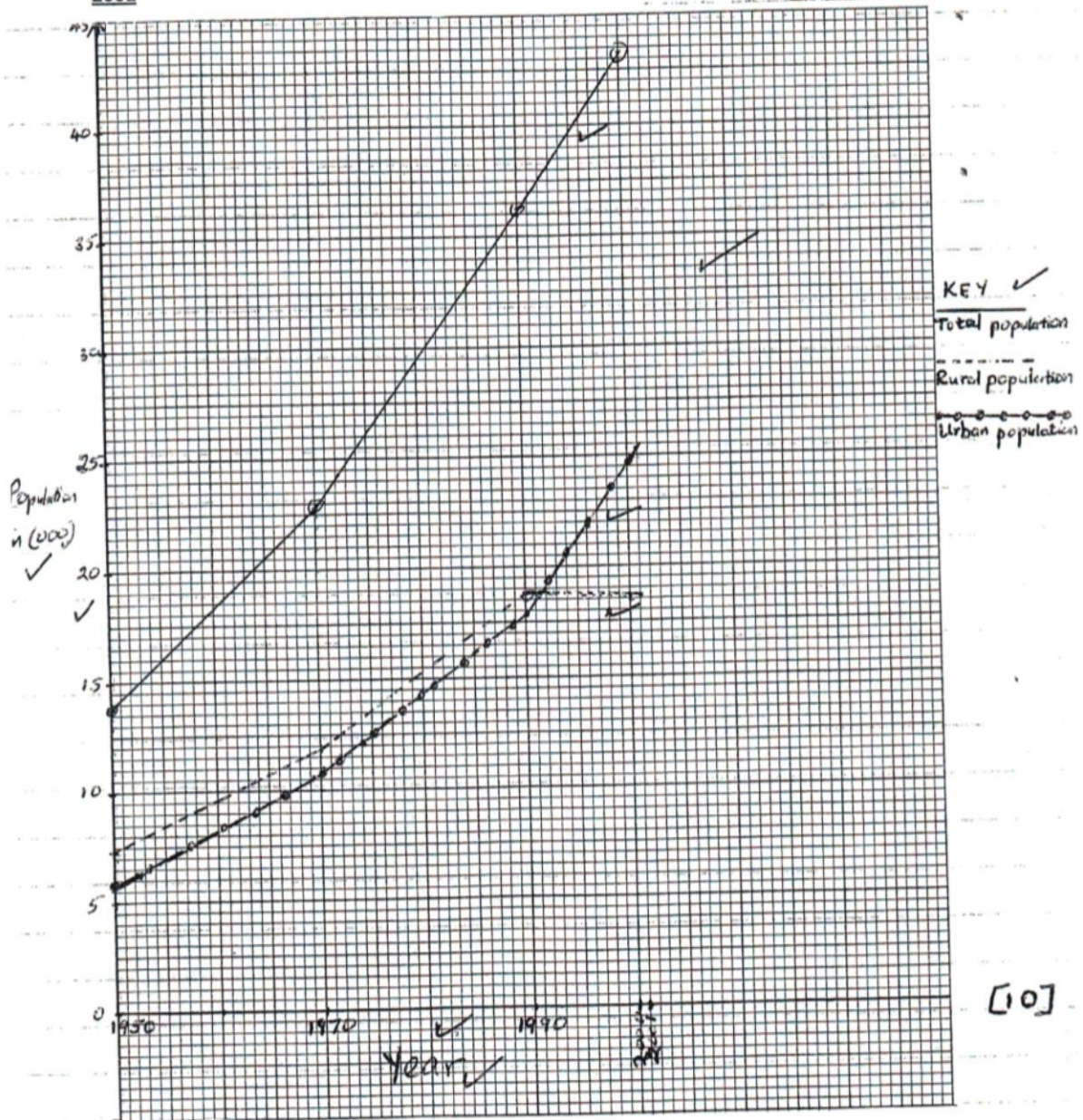
QUESTION 3

3.1

3.1.1 The negative effect of HIV/AIDS on the Agricultural industry.

- Reduced production- especially in the small scale enterprises. ✓✓
 - Reduced ability for rural families to grow their own food => poor nutrition and more ill-health. ✓✓
 - Increased demand for fresh foods to provide essential nutrients to the sick people. ✓✓
 - Loss of income and even homes for farm workers. ✓✓
 - Loss of indigenous knowledge about food production which has to be passed on to the next generation ✓✓.
 - Loss of skills ✓✓.
- [2x5=10]**

3.2.1 A Line graph showing South Africa's Total, Rural and Urban population from 1950 to 2001



6

CHECKLIST

- Correct heading ✓
- X- axis correctly calibrated and labelled ✓
- Y- axis correctly calibrated and labelled ✓
- Correct units ✓



- Correct plotting √√√
- Line graph√
- Key √
- Accuracy √

3.2.2

(a) No √ -there is a decline in rural population between 1990 and 2001√.
(2)

(b) Rural population. √ (1)

(c) After 1990. √ (1)

(d) **Reasons for an increase in urban population after 1990.**

- Unbanning of South African black political parties, apartheid was dismantled; this removed the restriction of movements. √
- After 1994—majority of the people (Blacks) gained power and so bought homes/houses in cities. √
- People were empowered – this led to the emergence of the middle class. √
- After the lifting of sanctions, South Africa became part of the global world and so, more tourists/Job seekers/foreign investors settled in urban areas.√

NB. Any sensible answer/ related to post-apartheid era. Any 3 (3)

[17]

3.3.1 Types of Land tenure system of South Africa.

- Communal land. √
- State land [State hold]. √
- Permission to Occupy [PTO].√
- Leasehold/Freehold/ Title deed/ Private ownership. √
- Labour tenancy [tied] occupation.√

[1x5=5]

3.3.2 The three [3] main Land Reforms

- Land restitution. √
- Land redistribution. √
- Tenure reform.√ (1x3=3)

[8]
[35]

QUESTION 4

4.1.

4.1.1. Brahman√ (1)

4.1.2. African type (Bos indicus) √

Reasons

- adapted for African conditions/ pigmentation on skin area√
- Large loose skin area for cooking√
- No fur on skin√
- Large hump/ large body size √

(Any One relevant reasons) (1 + 1 = 2)



4.1.3. Male/ bull✓

Supporting reasons

- Heavy animal/ large body/ prominent muscle formation✓
- Large head✓
- prominent male reproductive organs (Scrotum /testicles)✓
(Any three characteristics) (1 + 3 = 4) [7]

4.2 **Comparison:**

4.2.1 **Between beef cattle and dairy cattle**

Beef cattle	Dairy cattle
<ul style="list-style-type: none"> • Beef cattle have been bred for their high meat production✓ • Long productive lives and resistance to disease✓ • Block shaped✓ 	<ul style="list-style-type: none"> • Dairy cattle have been bred for their high milk yield✓ • They have high butter-fat percentage✓ • Wedge shaped✓

Award only One comparison: 1+1=2

Mutton sheep	Wool sheep
<ul style="list-style-type: none"> • Mutton sheep are bred for their flavour-some meat. ✓ • Have more frequent lambing ability and hardiness in harsh environment. ✓ 	<ul style="list-style-type: none"> • Wool sheep are bred for their wool quality and easy care✓ • Also bred for the combination of meat and wool✓

Award only One comparison: 1+1=2 [4]

4.3 **Characteristics of wool fibre that adds value in the textile industry**

- Unique fibre characteristics of wool✓
- Wool fibres have good isolation ability against cold✓
- Good staple length and strength✓
- Natural coloured fibre✓
- More crimp (natural waviness) per unit length. ✓

Any 3 [3]

4.4

	Main product	By-product
4.4.1 Pig	Pork/ Meat✓	Glue, Brushes, bone-meal✓✓
4.4.2 Poultry	Eggs & Meat✓	Dusters, Cushion/pillow fillers✓✓

Main product 1 } 3 x 2 = 6 [6]
 Any two By-products 2 }

4.5 **The purpose of breeding game animals**

- Tourism✓
- Meat✓
- Hides✓
- Trophy hunting✓

(any 3) [3]

4.6 Dorper sheep

4.6.1 The 2 breeds that were cross-bred to develop the Dorper sheep
Dorset Horn✓ and

- Blackhead Persian ewe.✓ (2)

4.6.2 Characteristics of Dorper ewes

- Are highly fertile (they begin breeding at 7 months old).✓
- Have good lambing and mothering abilities.✓
- Can lamb three times in two years if conditions are favourable.✓
- Have well-developed udders.✓
- Produce fast growing lambs (they normally have twins) ✓ and
- Produce lambs with a low mortality rate.✓

Mark any 2 (2)

4.7 Questions on pig breeds

4.7.1 Pork✓

4.7.2 Bacon (streaky or side)✓

4.7.3 Ham ✓

4.7.4 Gammon ✓

4.7.5 Porkers ✓

(1x5=5)

4.8 Differences between a Saanen goat’s milk and cow’s milk.

- Have finer globules of cream than cow’s milk ✓
- Has lower levels of lactose than cow’s milk ✓
- Is sweeter, smoother and creamier than cow’s milk

[35]

[TOTAL =150]

