



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 2019

MARKS: 150

TIME: 2 Hours 30 minutes

This question paper consists of 9 pages including cover page.



NW/JUNE/AGRSC/EMIS/6*****

INSTRUCTIONS AND INFORMATION

1. Answer ALL the questions
2. SECTION A (QUESTION 1) and SECTION B must be answered on the answer sheets provided.
3. Start each question from SECTION B on a NEW page.
4. Read ALL questions carefully and answer only what is asked.
5. Number the answers correctly according to the numbering system used in this question paper.
6. Write neatly and legibly



SECTION A

QUESTION 1

1.1 Various possible answers are provided to the following questions.

Choose the correct answer and write it next to the question number
(1.1.1.-1.1.10).

1.1.1 The two most important factors that determine the type of biome are _____ and _____.

A. wind and humidity.

B. latitude and daylight.

C. rainfall and temperature.

D. soil and wind.

(2)

1.1.2 Grassland in South Africa is known as a _____

A. prairies

B. veld

C. pampas

D. steppes.

(2)

1.1.3 Mutualism is when

A both organisms benefit in a win – win situation

B one organism benefit

C one organism quickly kills the other

D there is competition for resources between members of the same species

(2)

1.1.4 The relationship of what eats what in the ecosystem

A Food web

B Food pyramid

C Food chain

D Food cycle

(2)

1.1.5 Statutory tenure is governed by .

A unwritten traditional rules

B modern law and legally documented

C unwritten and legally documented

D unwritten modern laws and illegally document

(2)

1.1.6 Small-scale farming, usually carried out by family members to produce food for only the family is...

traditional farming.

commercial farming.

family farming

subsistence farming.

(2)



1.1.7 The Act that applies to all employees and employers and aims to advance economic development, social justice, labour peace and democracy in the workplace is known as.....

- A Labour Relations Act
 - B Occupational Health and Safety Act
 - C Employment Equity Act
 - D Communal Property Act
- (2)

1.1.8 This breed is the most suited for extensive farming with no environmental control measures

- A. Saddle horse
 - B. South African landrace
 - C. Leghorn
 - D. Dorper breed
- (2)

1.1.9 One of the following species of animals is not domesticated.

- A. Friesland
 - B. Boer goat
 - C. Buffalo
 - D. Merino sheep
- (2)

1.1.10 The meat produced by a sheep is called

- A. Red meat
 - B. White meat
 - C. Pork
 - D. Mutton
- (2) 2x10 (20)

1.2 Indicate whether each of the following statements in COLUMN B applies to **A ONLY**, **B ONLY**, **BOTH A AND B** or **NONE** of the items in COLUMN A. Write **A ONLY**, **B ONLY**, **BOTH A AND B** or **NONE** next to the question number (1.2.1–1.2.5) , for example 1.2.6 **A ONLY**.

COLUMN A		COLUMN B
1.2.1	A Fynbos	Northern Cape
	B Nama-Karoo	
1.2.2	A Goats	Ruminants
	B Pigs	
1.2.3	A Fresh fish	Adding value (Food processing)
	B Biltong	
1.2.4	A Land reform	Changing the ownership of the land to rectify the injustices of apartheid
	B Competition	
1.2.5	A Overgrazing	Increase(s) the palatability and digestibility of poor roughage
	B Game farming	

(2X5) = [10]

- 1.3** Give the correct term for each of the following description. Write only the term next to the question number (1.3.1. - 1.3.5.) on the answer sheet
- 1.3.1 The transforming of raw fresh food into other forms that can be consumed by humans or animals
- 1.3.2 The movement of people from rural to urban areas
- 1.3.3 The study of the interaction between biotic and abiotic factors that leads to changes in the size of a population
- 1.3.4 Poultry breeds that are reared for meat production
- 1.3.5 An indigenous African cattle breed developed through indigenous knowledge over many years (2X5) = (10)
- 1.4** Change the underlined word(s)/phrases to the correct one. Write only the correct word(s)/phrases next to the question number on the ANSWER SHEET.
- 1.4.1 Input industry refers to all those industries to which farmers sell their produce. (1)
- 1.4.2 Crop rotation is the practice of keeping the veld in a good condition suitable for livestock production. (1)
- 1.4.3 Symbiosis between cattle and ticks is commensalism. (1)
- 1.4.4 The Hackney is an example of a dual-purpose goat breed. (1)
- 1.4.5 With the Intensive production system chicken are allowed to roam around freely. (1)(5 X 1 = 5)

TOTAL SECTION A: 45

SECTION B

QUESTION 2: AGRO-ECOLOGY AND AGRI-INDUSTRY

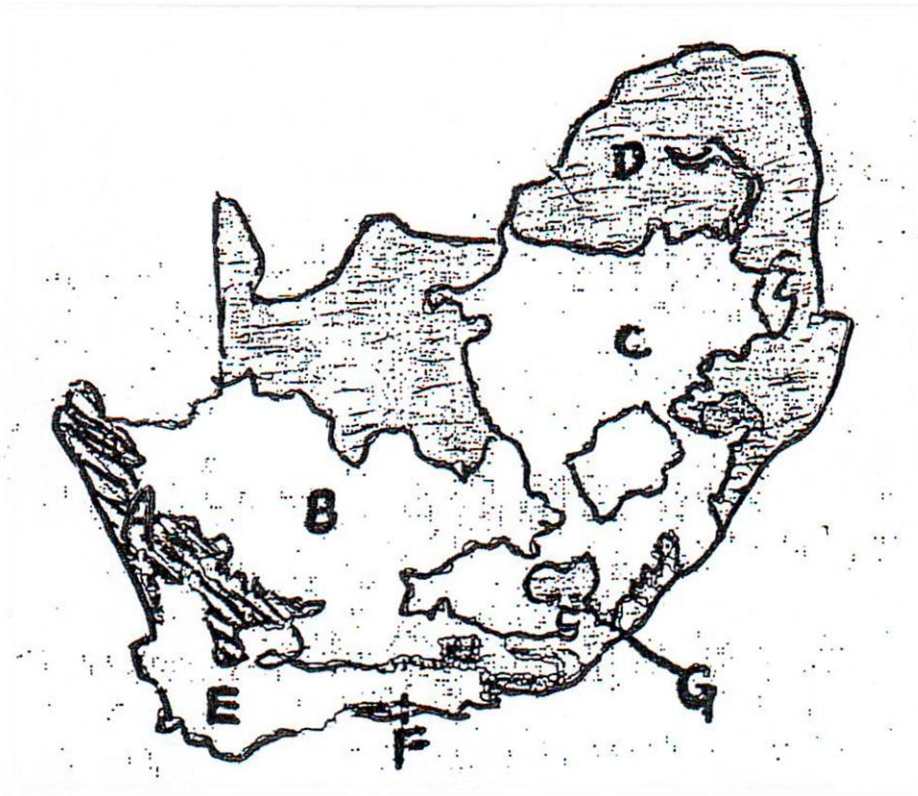
START THIS QUESTION ON A NEW PAGE

- 2.1** Overgrazing is said to be the main cause of poor veld condition.
- 2.1.1 Name three farming practices which may cause overgrazing. (6)
- 2.1.2 Give at least four farming practices which a farmer can apply to keep veld in a good condition (4)

[10]



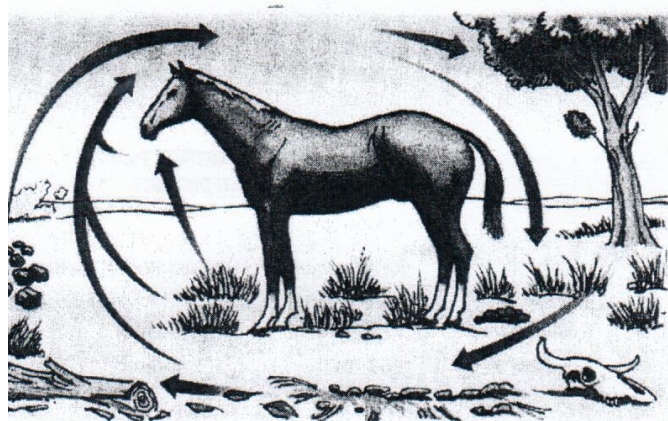
2.2 Study the map of the biomes of South Africa and answer the questions that follow.



2.2.1 From the map above, deduce seven biomes labelled A to G. (7)
 Name the season in which biome A and E receive rainfall. (1)

2.2.3 State two abiotic factors that determine the type of plants that exist in a biome (2)
 [10]

2.3 Study the diagram illustrating the carbon cycle below and answer the questions that follow.



2.3.1 State three food components in which carbon is an important element / atom. (3)

2.3.2 Name the process whereby carbon dioxide in green plants and algae is utilized to synthesize carbohydrates. (1)

- 2.3.3 Give two ways of how carbon dioxide is replaced back into the atmosphere. (2)
[6]
- 2.4
- 2.4.1 List THREE key importance of agriculture. (3)
- 2.4.2 Name THREE ways of food processing. (3)
- 2.4.3 Developing secondary industry is a natural process in meeting the demand of communities. Name the raw materials used to produce each of the following products.
- a. Wine (1)
- b. Bread (1)
- c. Yoghurt (1)
- [35]

QUESTION 3: AGRICULTURE AND SOCIETY

START THIS QUESTION ON A NEW PAGE.

- 3.1 HIV/AIDS affect people in both rural and urban areas, and is having a major impact on the working population in these areas.
- 3.1.1 Briefly discuss the negative effects which will be caused by the loss of most skilled people in agricultural industries as a result of HIV/AIDS. (10)
- 3.2 There have been changes in the population of South Africa from 1950 to-date. The table below indicates the population figures since 1950

Year	Total South African Population in (000)	% increase since 1950	South African's rural population in (000)	% of total population [Rural]	South African's urban population in(000)	% total population [Urban]
1950	13683		7785	56	5898	44
1970	22656	65	11825	52	10831	48
1990	36376	60	18613	51	17763	49
2001	43792	20	18521	42	25304	58

From the data above between 1950 and 2001 the total population of South Africa grew by more than three times. The growth (65%) was between 1950 and 1970. The balance between the rural and urban population has almost completely reversed since 1950. In 1950 more people lived in rural areas, and in 2001 more people lived in urban areas. The biggest change took place between 1990 and 2001.

- 3.2.1 Using the figures in the table of South Africa's population, plot 3 line graphs on the same graph for:
- (a) The total population.
- (b) The rural population.
- (c) The urban population. (10)



3.2.2

- (a) State whether your line graphs show an increase or decrease in all populations groups. (2)
- (b) Identify the population group, rural or urban, that stayed almost exactly the same between 1990 and 2001. (1)
- (c) State the year when the urban population became bigger than the rural population. (1)
- (d) Explain why the urban population in South Africa increased faster from 1990 onwards. (3)

[17]

3.3 AGRIBEE addresses the injustice due to apartheid. This is through Land Reform.

- 3.3.1 List five main types of land tenure that are in existence in South Africa. (5)
- 3.3.2 Name the three different aspects of the Land Reform. (3)

[8]**[35]****QUESTION 4: ANIMAL STUDIES****START THIS QUESTION ON A NEW PAGE.**

4.1 The photo below is of a cattle breed reared in South Africa



- 4.1.1 Name the cattle breed shown in the photo above (1)

- 4.1.2 State whether this breed is an African (Bos indicus) or European type (Bos Taurus). Give a reason, that you can see in the photo, to support your answer. (2)
- 4.1.3 Identify the gender of this breed. Support your answer by referring to three characteristics visible in the photo. (4) **[7]**
- 4.2 Compare the biggest differences between the characteristics of the following ruminant breeds;
- 4.2.1 Beef cattle and dairy cattle (2)
- 4.2.2 Mutton sheep and wool sheep (2)**[4]**
- 4.3 Discuss three characteristics of a wool fibre that adds to its value in the textile industry. [3]
- 4.4 Name at least one main product and two by-products or uses for each of the following animals
- 4.4.1 Pigs (3)
- 4.4.2 Poultry (3)
- [6]**
- 4.5 List three purposes for breeding game animals. **[3]**
- 4.6 Answer the following questions on the Dorper sheep.
- 4.6.1 Name the two breeds that were cross-bred to give birth to the Dorper lambs. (2)
- 4.6.2 List two characteristics of Dorper ewes (2) **[4]**
- 4.7 Answer the following questions on pig breeds.
- Give one word for each of the following:
- 4.7.1 The meat produced by pigs. (1)
- 4.7.2 The product produced from the pork belly. (1)
- 4.7.3 The meat cuts, prepared from the pig's thigh. (1)
- 4.7.4 Cured ham. (1)
- 4.7.5 The pig breeds according to production purpose that are slaughtered at lowest weight. (1)
- [5]**
- 4.8 List three differences between the milk of a Saanen goat and that of a cow. **[3]**

[35]**[TOTAL =150]**