BERGVLIET HIGH SCHOOL
GEOGRAPHY
GRADE 9

FINAL EXAMINATION
NOVEMBER 2024

MARKS: 75	TIME: 1½ HOURS

EXAMINER: MR B. JOHNS

MODERATORS: MR S. PATTENDEN
MRS V. SINGARUM

INSTRUCTIONS AND INFORMATION

1. Answer ALL the questions on this question paper.
2. Write your NAME, SURNAME and GRADE 9 CLASS on this cover.
3. Answer in FULL sentences except when asked to name, identify, or list.
4. Use the MARK ALLOCATION as a guide to how much to write.
5. Write neatly and legibly in BLUE or BLACK ink only.
6. Drawings and sketches can be done in PENCIL and labels in PEN.
7. The question paper consists of TWELVE pages including this cover page.

SURFACES FORCES THAT SHAPE EARTH



RESOURCE USE AND SUSTAINABILITY



MARKING GUIDELINES

QUESTION 1 SURFACE FORCES THAT SHAPE THE EARTH

1.1 Match each term (in 1.1.1 to 1.1.5) with the letter of the correct image.
Write only the letter (**A** to **F**) in space provided next to each term.



A: Rust



B: Limestone Cave



C: Tree Roots



D: Rock in Snow



E: Weathered Rock



F: Feature of Wind Erosion

1.1.1 Freeze Thaw Action **D** ✓

1.1.2 Oxidation **A** ✓

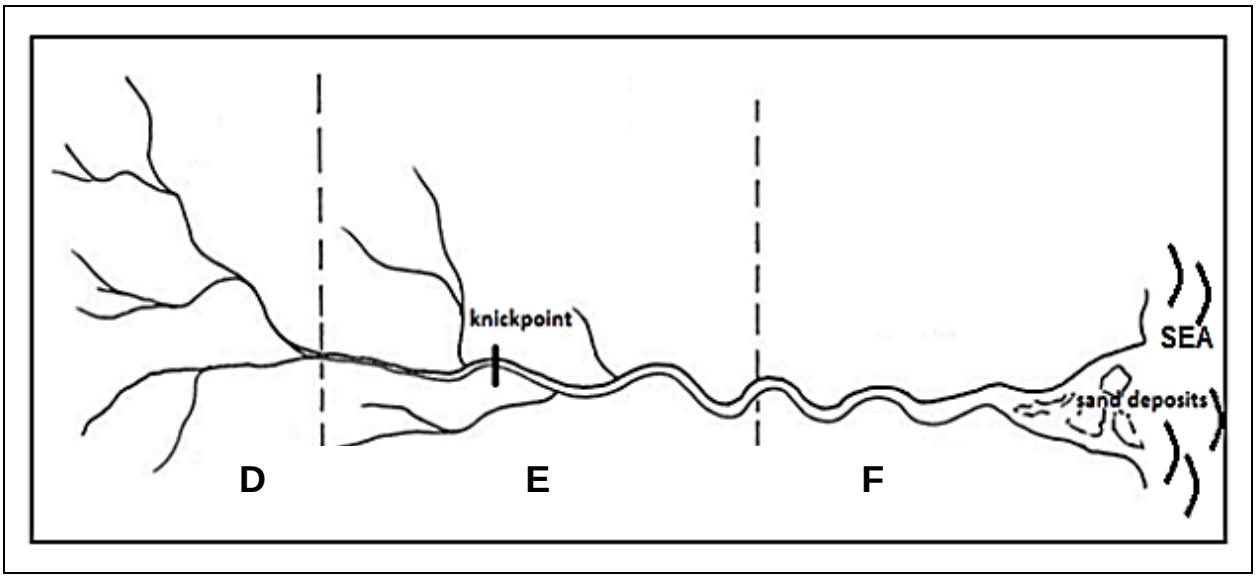
1.1.3 Carbonation **B** ✓

1.1.4 Biological **C** ✓

1.1.5 Exfoliation **E** ✓

(5 x 1) (5)

1.2 Study the diagram of a river system.



1.2.1 In which course (**D**, **E** or **F**) of the river system is the source found?

D ✓

(1 x 1) (1)

1.2.2 Describe the dimensions of the river channel in the course of the river identified in QUESTION 1.2.1.

Deep ✓

Narrow ✓ **[NB: Give 1 mark for V-shaped]**

(2 x 1) (2)

1.2.3 A knickpoint marks a sudden change (drop) in the gradient of a river. Which fluvial landform is likely to develop at the knickpoint?

Waterfall ✓

(1 x 1) (1)

1.2.4 Name the course of the river marked **F**.

Lower ✓

(1 x 1) (1)

1.2.5 Discuss why the sand deposits are formed as the river enters the sea.

The river slows down ✓✓ so deposits are dropped.

(1 x 2) (2)

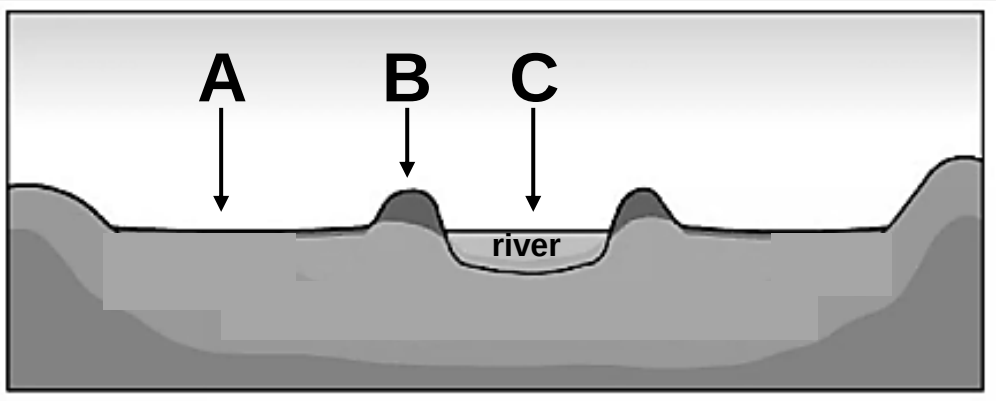
1.2.6 Give the name the fluvial landform created by the sand deposits at the place where the river enters the sea.

Delta ✓

(1 x 1) (1)

1.3 Refer to the diagram of a levee and a description of its formation.

DIAGRAM OF LEVEE



DESCRIPTION OF LEVEE FORMATION

Floodplains and levees are formed by (1.3.2). When a river (1.3.3), the river water overflows the banks of the river and immediately slows down due to friction. The river's (1.3.4) is composed of different sized particles. The (1.3.5) are dropped first, building up a raised riverbank called a levee. The silt is carried further away from the river to form the fertile floodplain.

1.3.1 Match the terms *levee* and *floodplain* with either **A**, **B** or **C**.

Levee: **B** ✓ Floodplain: **A** ✓

(2 x 1) (2)

1.3.2 Identify the fluvial process.

Deposition ✓

(1 x 1) (1)

1.3.3 Name the natural disaster.

Flood (flooding) ✓

(1 x 1) (1)

1.3.4 The term for all the material carried (transported) by a river.

Load ✓

(1 x 1) (1)

1.3.5 Choose the correct word: largest **or** smallest.

Largest ✓

(1 x 1) (1)

1.3.6 Discuss the value of the floodplain for human activity.

Agriculture (**crop farming**) ✓✓ benefits from the fertile soil.

(1 x 2) (2)

1.4 Read the extract, and then answer the questions that follow.

SOIL DEGRADATION IN SOUTH AFRICA

Environmental conditions in the former homelands of South Africa, such as in Transkei and Ciskei, can contribute positively to the development of agriculture. However, a number of factors have caused the land to become eroded and the soil to become infertile. Environmental, climatic, historical, political and socio-economic factors have interacted with each other to effect land degradation. Steep slopes, low rainfall and high temperatures contribute to the poor carrying-capacity of the land. Land degradation is highest where poverty is most extreme, than where there is virtually no poverty.

1.4.1 List ONE climatic and ONE socio-economic cause of soil erosion and land degradation from the extract.

Climatic: **Low rainfall** ✓
High temperatures.

Socio-economic: **Poverty** ✓

(2 x 1) (2)

1.4.2 Describe ONE way in which steep slopes contribute to soil infertility.

Steep slopes encourage movement of soil down the slope. ✓✓

Rain will wash soil down a slope more easily.

(1 x 2) (2)

1.4.3 Suggest ONE reason why land degradation is highest in impoverished areas.

The need for food causes over-use of land for farming. ✓✓

The poor are often not aware of better soil management practices.

[NB: Evaluate learner responses and award marks if deemed valid]

(1 x 2) (2)

1.4.4 In a paragraph of approximately EIGHT lines discuss how agriculture contributes to increased weathering and erosion.

Farming requires the land to be cleared of natural vegetation. ✓✓

Ploughing loosens the soil (weakens the soil). ✓✓

Grazing/stepping by livestock depletes the natural vegetation. ✓✓

Soil and rock become exposed when natural vegetation is removed. ✓✓

Agents of erosion (wind; water; temp) impact the soil.

Use of chemical fertilisers increases chemical weathering.

[Any FOUR] (4 x 2) (8)

[35]

QUESTION 2 RESOURCE USE AND SUSTAINABILITY

2.1 Various options are provided as possible answers to the following questions. Choose the answer and write only the letter (A–D) in the block next to each question.

2.1.1 Those things that we need and use daily are called …

A appliances.
B resources.
C utilities.
D sources.

B ✓

2.1.2 … resources are extracted from the physical environment.

A Human
B Mineral
C Natural
D Synthetic

C ✓

2.1.3 Which of the following energy sources does not produce carbon?

A Biomass
B Coal
C Oil
D Natural gas

A ✓

2.1.4 Resources with a limited supply that can run out if used unwisely.

A Renewable
B Non-renewable
C Sustainable
D Unusable

B ✓

2.1.5 In South Africa, electricity is mainly generated using … as an energy source.

A biomass
B coal
C oil
D natural gas

B ✓

(5 x 1) (5)

2.2 Study the illustration of an energy-efficient home.



2.2.1 Explain why it is important for a home to be energy efficient.

Home owners reduce their carbon footprint/use of electricity/impact on the natural environment/impact on natural resources/use of water. ✓✓

Homeowners can reduce the cost of paying for electricity/water. ✓✓

(2 x 2) (4)

2.2.2 Quote a phrase from the illustration that indicates a water saving measure.

Low-flow showerhead. ✓

(1 x 1) (1)

2.2.3 Suggest ONE benefit of planting indigenous trees instead of alien species.

Indigenous trees generally use less water than alien species. ✓✓

Alien species threaten local biodiversity.

Alien species can disrupt natural ecosystems.

[**NB**: Assess learner responses and accept alternative suggestions]

(1 x 2) (2)

2.2.4 Identify the alternative (renewable) energy source used by the homeowners.

Solar power ✓

(1 x 1) (1)

2.2.5 With reference to QUESTION 2.2.4, suggest ONE reason why more South Africans are not using the alternative energy source.

Solar power (solar panels) is costly to install. ✓✓

Coal as a source is more readily available/cheaper.

(1 x 2) (2)

2.2.6 Describe how each of the following measures make a positive contribution to sustainable resource use.

Using energy efficient lightbulbs.

Decreases use of electricity / need to mine for coal / need to generate electricity. ✓

(1 x 1) (1)

Sealing ductwork and air leaks, and installing double glazing windows.

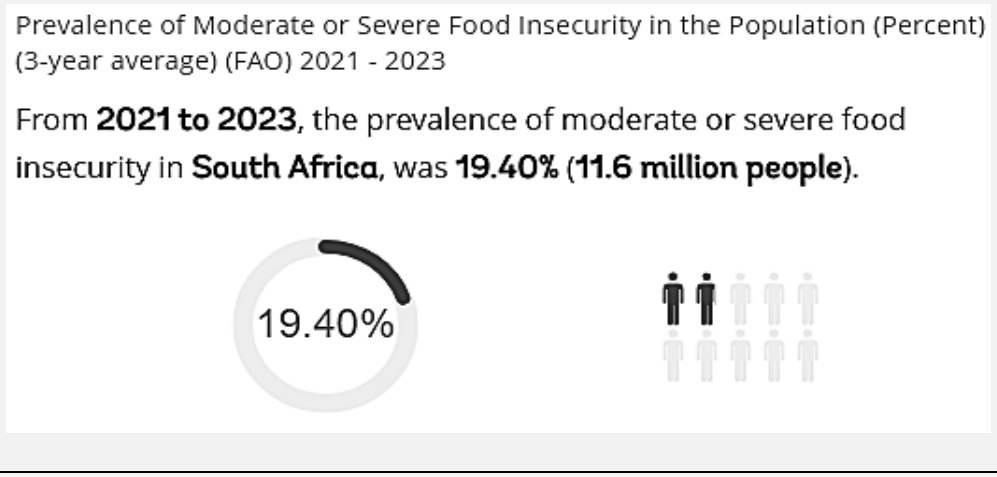
Sealing ductwork/air leaks helps prevent heat loss (more energy-efficient). ✓✓

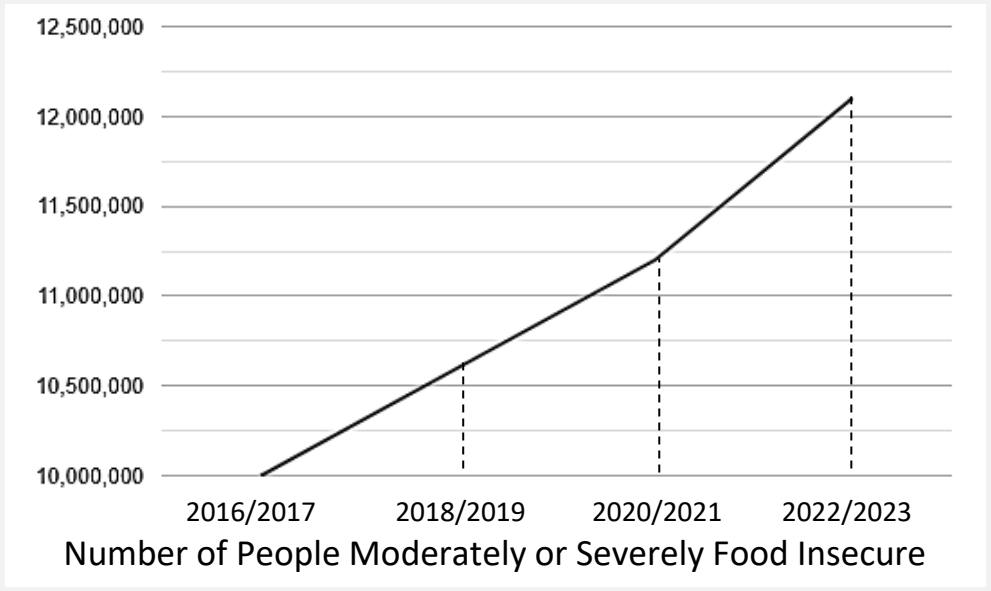
Double glazing windows keeps heat inside home (energy is saved on heating/cooling.) ✓✓

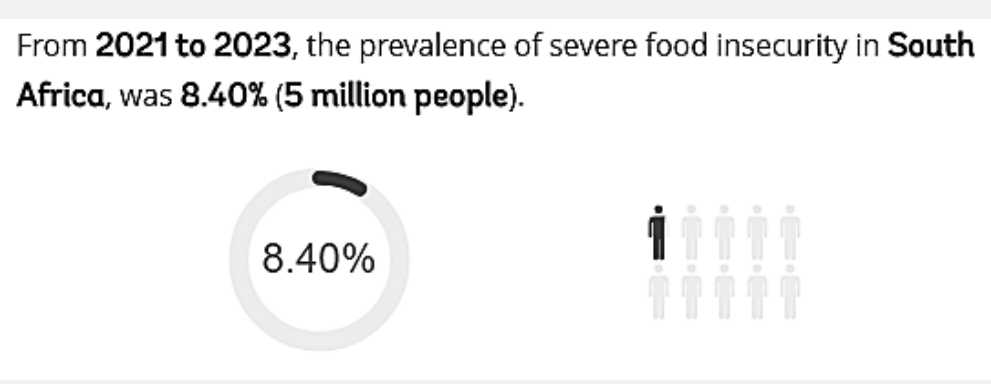
[**NB**: Emphasis is on prevention of heat loss and eliminating the need to use additional electricity to heat or cool]

(2 x 2) (4)

2.3 Refer to the statistics on food security and food insecurity in South Africa.







2.3.1 Choose the correct word from inside the brackets to complete the definition:

Food (insecurity / security) is defined as all people, at all times, having physical and economic access to sufficient safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life.

Security ✓

(1 x 1) (1)

2.3.2 List the THREE elements of food security.

Food **availability** ✓ Food **access** ✓ Food **use** ✓

[**NB**: The word food can be omitted]

(3 x 1) (3)

2.3.3 What percentage of South Africans experienced moderate and/or severe food insecurity between 2021 and 2023?

19.4% ✓

(1 x 1) (1)

2.3.4 South Africa had an average unemployment rate of 28% between 2021 and 2023.

Does unemployment increase **or** decrease food security?

Increase ✓

(1 x 1) (1)

Explain the reason why unemployment impacts on food security.

Unemployed people are unable to buy/afford food (no access). ✓✓

Unemployment leads to poverty which makes food inaccessible.

(1 x 2) (2)

Refer to the graph showing the number of people who are moderately or severely food insecure, and consider the statistics below showing population growth in South Africa.

2023	2022	2021
60.4 million	59.9 million	59.4 million

2.3.5 In which year did the number of food insecure people in South Africa first exceed 10.5 million?

2018 ✓ [Accept: **2018/2019**]

(1 x 1) (1)

2.3.6 Did South Africa's population decrease or increase between 2021 and 2023?

Increase ✓

(1 x 1) (1)

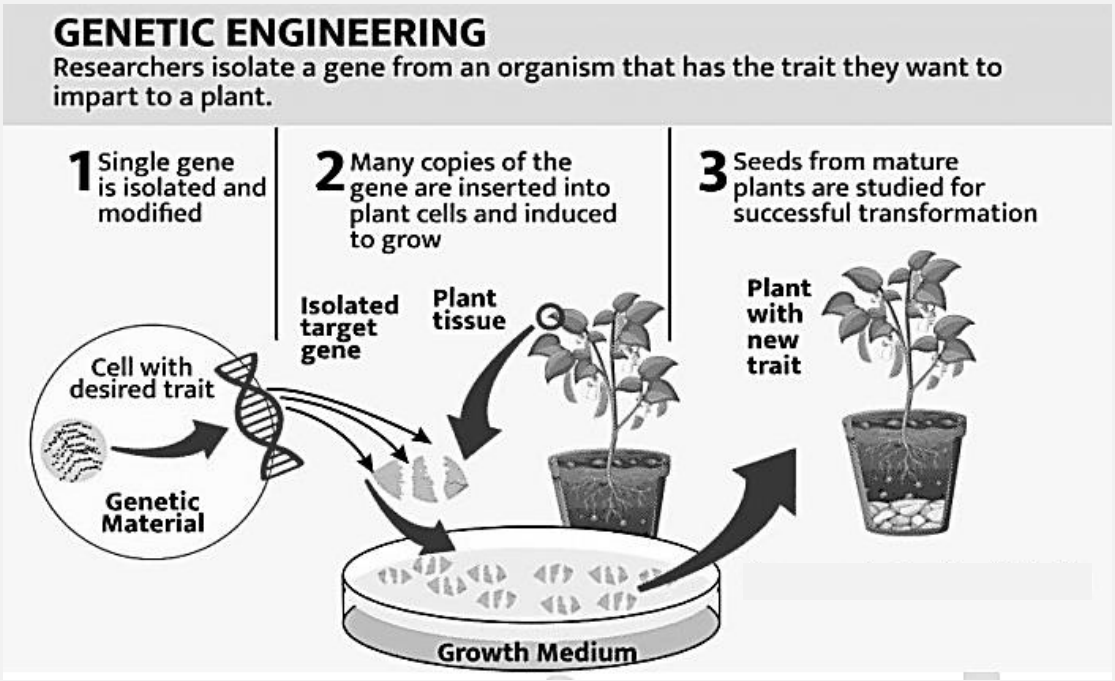
2.3.7 Describe the impact of population growth on food security in South Africa.

An increase in population can potentially cause greater food insecurity/shortages. ✓✓

The more people there are, the more food is required so shortages may occur.

(1 x 2) (2)

2.4 Study the infographic on GM.



South Africa ranks among the top ten countries globally for adoption of GM crops. About 2.74 million hectares are dedicated to GM crop production each year. GM cotton, soybean and maize are commercialised in South Africa. South Africa's cotton area is 100% GM, soybean production is 95% GM, and maize production is greater than 85% GM. These crops either have insect resistance or tolerance to herbicides.



South African Staple: Mealie Pap

2.4.1 What do the letters *GM* stand for?

Genetic modification ✓

(1x 1) (1)

2.4.2 Which agricultural product (crop) is used to produce mealie pap?

Maize ✓ [Accept: **Mealies**]

(1 x 1) (1)

2.4.3 Discuss how drought in South Africa can potentially decrease the ability of South Africans to enjoy mealie pap with their meals.

Drought (water shortages) will destroy the maize cops thus decreasing availability. ✓✓

Drought is likely to decrease maize production/yields.

(1 x 2) (2)

2.4.4 Explain the positive contribution that GM makes to food security in South Africa.

GM makes the crops more resistant to drought/pesticide/herbicides. ✓✓

GM helps with food production/food availability. ✓✓

GM ensures that crop yields are consistent and sufficient.

Income is generated if crops are harvested (ensures access).

(2 x 2) (4)
[40]

TOTAL: 75