

SMARTWIZ

GRADE11 GEOGRAPHY EXAM

MARKS: 100

TIME: 2 HOURS

SCHOOL _____

CLASS (eg. 4A) _____

SURNAME _____

NAME _____

| MARKS | |
|-------|--|
|-------|--|

Instructions for Learners:

- Read all instructions carefully before you begin the exam.
- Write your full name and student number clearly on the answer sheet/book.
- Answer all questions unless otherwise instructed.
- Show all your work/calculations where necessary.
- Write neatly and clearly.
- Use only a blue or black pen. Do not use correction fluid or tape.
- Electronic devices (calculators, cell phones, etc.) are not allowed unless explicitly permitted.
- Raise your hand if you have any questions.
- Do not talk to other learners during the exam.
- Any form of dishonesty will result in immediate disqualification from the exam.

This exam consists of five pages, including the cover page.

QUESTION 1: WEATHER IN SOUTH AFRICA – LOCAL CLIMATES (15 MARKS)

1.1 Define a **microclimate**.

(2)

1.2 Give an example of a microclimate in an urban environment.

(1)

1.3 Name and explain **two differences** between urban and rural temperatures.

1.

2.

 (4)

1.4 What is a **temperature inversion**?

(2)

1.5 State **two effects** of temperature inversion on air quality.

1.

2.

 (2)

1.6 Draw a simple diagram to illustrate a valley experiencing a temperature inversion.
(Draw and label clearly) (4)

QUESTION 2: PLATE TECTONICS AND VOLCANOES (20 MARKS)

2.1 Define the term **plate tectonics**.

(2)

2.2 Identify the type of plate boundary at each of the following:

a) Plates moving apart:

b) Plates sliding past one another:

 (2)

2.3 State **two major tectonic plates**.

1. _____
2. _____ (2)

2.4 Explain the difference between a shield volcano and a composite volcano.

 _____ (3)

2.5 Name one **benefit** and one **hazard** of volcanic activity.

Benefit: _____
 Hazard: _____ (2)

2.6 Study the diagram of a volcano provided and label the following:

- a) Crater
- b) Magma chamber
- c) Vent
- d) Lava flow (4)

2.7 Explain how volcanoes can affect climate.

 _____ (3)

2.8 What type of volcano is found at constructive plate margins?

_____ (2)

QUESTION 3: DEVELOPMENT GEOGRAPHY (20 MARKS)

3.1 Define **development** in a geographical context.

_____ (2)

3.2 Explain the difference between **economic** and **social** development.

_____ (2)

3.3 Name one **indicator** of each:

- a) Economic development: _____
- b) Social development: _____ (2)

3.4 Study the following development indicators:

| Country | GDP per capita (USD) | Literacy Rate (%) |
|---------|----------------------|-------------------|
| X | 1,200 | 65 |

| | | |
|---|--------|----|
| Y | 18,000 | 98 |
|---|--------|----|

- a) Which country is more developed? _____ (1)
 b) Give one reason for your answer: _____ (1)

3.5 State **two challenges** faced by developing countries.

1. _____
 2. _____ (2)

3.6 What is the Human Development Index (HDI)?

_____ (2)

3.7 List **two ways** that sustainable development can be achieved.

1. _____
 2. _____ (2)

3.8 What is the digital divide?

_____ (2)

3.9 Explain how **education** can promote development.

_____ (2)

QUESTION 4: MAPWORK AND GEOGRAPHICAL SKILLS (25 MARKS)

Use the attached topographic and orthophoto maps to answer the following



4.1 What is the scale of a 1:50 000 map?

_____ (1)

4.2 Explain the meaning of the word “contour”.

_____ (2)

4.3 If two points are 6 cm apart on the map, how far are they in real life?

(Scale: 1:50 000)

Show your working.

_____ (3)

4.4 What does the blue line on a topographic map usually represent?

_____ (1)

4.5 Calculate the area (in km²) of a rectangular section measuring 4 km by 2 km.

_____ (2)

4.6 Identify the following from the map:

a) A human-made feature: _____ (1)

b) A natural feature: _____ (1)

4.7 What is the general direction from the dam in B3 to the school in D5?

_____ (2)

4.8 Explain the difference between true north and magnetic north.

_____ (2)

4.9 Define a **river catchment area**.

_____ (2)

4.10 State two ways humans can impact a catchment area.


1. _____
2. _____ (2)

4.11 Mention one advantage of using orthophoto maps.

_____ (1)

4.12 What is the purpose of a legend on a map?

_____ (2)

 **TOTAL: 100 MARKS**

MEMO

QUESTION 1: WEATHER IN SOUTH AFRICA – LOCAL CLIMATES (15 MARKS)

1.1 A microclimate is a small-scale, local climate that differs from the surrounding regional climate. (2)

1.2 Example: Between tall buildings in a city / a city park / a shaded alley (1)

1.3

1. Urban areas are usually warmer due to heat absorption by buildings (urban heat island). (2)
2. Rural areas cool down faster due to vegetation and less human activity. (2)

1.4 A temperature inversion occurs when warmer air traps cooler air near the ground. (2)

1.5

1. Traps pollutants close to the ground
2. Causes poor air quality and health issues (2)

1.6 Diagram must show a valley with cool air at the bottom, warmer air above, and labels (valley floor, inversion layer, etc.) (4)

QUESTION 2: PLATE TECTONICS AND VOLCANOES (20 MARKS)

2.1 Plate tectonics is the theory that the Earth's crust is divided into large, moving plates. (2)

2.2

- a) Divergent boundary (1)
- b) Transform boundary (1)

2.3

1. African Plate
2. Eurasian Plate / Pacific Plate / North American Plate (Any two valid = 2)

2.4

Shield volcanoes have gentle slopes and runny lava; composite volcanoes have steep sides and explosive eruptions. (3)

2.5

Benefit: Fertile soils, geothermal energy

Hazard: Lava flows, ash clouds, loss of life ($1 + 1 = 2$)

2.6 Labelled diagram:

- a) Crater
- b) Magma chamber
- c) Vent
- d) Lava flow ($4 \times 1 = 4$)

2.7 Volcanic ash and gases like sulphur dioxide can reflect sunlight, leading to temporary cooling of the Earth's surface. (3)

2.8 Shield volcano (2)

QUESTION 3: DEVELOPMENT GEOGRAPHY (20 MARKS)

3.1 Development refers to the improvement in people's quality of life and standard of living. (2)

3.2 Economic = financial growth (e.g., income); Social = access to education, healthcare, etc. (2)

3.3

- a) GDP per capita (1)
- b) Literacy rate (1)

3.4

- a) Country Y (1)
- b) Higher GDP and literacy rate (1)

3.5

- 1. Poverty
- 2. Poor healthcare / low education / inequality / unemployment (2)

3.6 HDI is a composite measure of development using income, education, and life expectancy. (2)

3.7

- 1. Renewable energy
- 2. Education and health investment / responsible resource use (2)

3.8 The digital divide is the gap between people who have access to digital technology and those who do not. (2)

3.9 Educated people are more likely to be employed, earn income, and contribute to economic growth. (2)

QUESTION 4: MAPWORK AND GEOGRAPHICAL SKILLS (25 MARKS)

4.1 1 cm on the map = 50 000 cm (or 500 m) in real life (1)

4.2 Contour: A line on a map joining points of equal elevation above sea level. (2)

4.3

6 cm \times 0.5 km = **3 km** (1 for working, 2 for correct answer) (3)

4.4 River or stream (blue line) (1)

4.5 Area = $4 \times 2 = \mathbf{8 \text{ km}^2}$ (2)

4.6

a) Dam / road / powerline

b) River / hill / forest (1 + 1 = 2)

4.7 Example: South-East (Direction must match map) (2)

4.8 True north points to the geographic North Pole; magnetic north is where the compass needle points (Earth's magnetic field). (2)

4.9 A catchment area is the area from which rainfall flows into a river, lake, or reservoir. (2)


4.10

1. Deforestation

2. Urbanisation / farming near rivers / pollution (2)

4.11 Clear real-world visuals for land use, structures, vegetation (1)

4.12 A legend explains the meaning of map symbols and colours. (2)

 **TOTAL: 100 MARKS**