education

Department:
Education
North West Provincial Government
REPUBLIC OF SOUTH AFRICA

PROVINCIAL ASSESSMENT

GRADE 10

GEOGRAPHY P2
NOVEMBER 2024

MARKS: 150

TIME: 3 hours

This question paper consists of 15 pages.

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INSTRUCTIONS AND INFORMATION

1. This question paper consists of TWO sections.

   SECTION A
   QUESTION 1: POPULATION (60)
   QUESTION 2: WATER AND WATER RESOURCES (60)

   SECTION B
   QUESTION 3: GEOGRAPHICAL SKILLS AND TECHNIQUES (30)

2. Answer ALL THREE questions.

3. All diagrams are included in the QUESTION PAPER.

4. Leave a line between the subsections of questions answered.

5. Start EACH question at the top of a NEW page.

6. Number the answers correctly according to the numbering system used in this question paper.

7. Do NOT write in the margins of the ANSWER BOOK.

8. Draw fully labelled diagrams when instructed to do so.

9. Answer in FULL SENTENCES, except when you have to state, name, identify or list.

10. Units of measurement MUST be indicated in your final answer, e.g. 1 020 hPa, 14 °C and 45 m.

11. You may use a non-programmable calculator.

12. You may use a magnifying glass.

13. Write neatly and legibly.

SPECIFIC INSTRUCTIONS AND INFORMATION FOR SECTION B

14. A 1 **:** 50 000 topographic map 3126DD QUEENSTOWN and a 1 **:** 10 000 orthophoto map 3126 DD 1 NOOITGEDACHT are provided.

15. The area demarcated in RED/BLACK on the topographic map represents the area covered by the orthophoto map.

16. Show ALL calculations. Marks will be allocated for steps in calculations.

17. You must hand in the topographical and orthophoto map to the invigilator at the end of this examination.

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SECTION A: POPULATION AND WATER RESOURCES

QUESTION 1: POPULATION

1.1 Choose the term/concept in COLUMN B that matches the statement in COLUMN A. Write ONLY the letter (A–I) next to the corresponding question numbers (1.1.1 to 1.1.8) in your ANSWER BOOK, e.g, 1.1.9 J.

COLUMN A		COLUMN B	
1.1.1	The number of people per square kilometer	**A**	Demographics
1.1.2	Where people live, or how they are spread around the world	**B**	Baby boom
1.1.3	When the country loses professional people due to emigration	**C**	Population distribution
1.1.4	The deliberate killing of people from a certain ethnic group or nation	**D**	Exiles
1.1.5	A political migrant who is forced to migrate to another country	**E**	Refugee
1.1.6	Period during which a large number of babies is born	**F**	"Brain drain"
1.1.7	Political migrants who cannot return home	**G**	Population density
1.1.8	The study of population statistics	**H**	Ecumene
		I	Genocide

(8 x 1) (8)

1.2 Choose the correct word(s) between brackets to make the statements true. Write ONLY the word(s) next to the question number (1.2.1 to 1.2.7) in your ANSWER BOOK, e.g, 1.2.8 K. stigmatization.

1.2.1 (Birth rate/Fertility rate) is the average number of children born to each woman in her child bearing years.

1.2.2 Women who are more educated tend to bear (few/more) children.

1.2.3 (Polygamy/Polyandry) is the practice of having more than one wife at the same time.

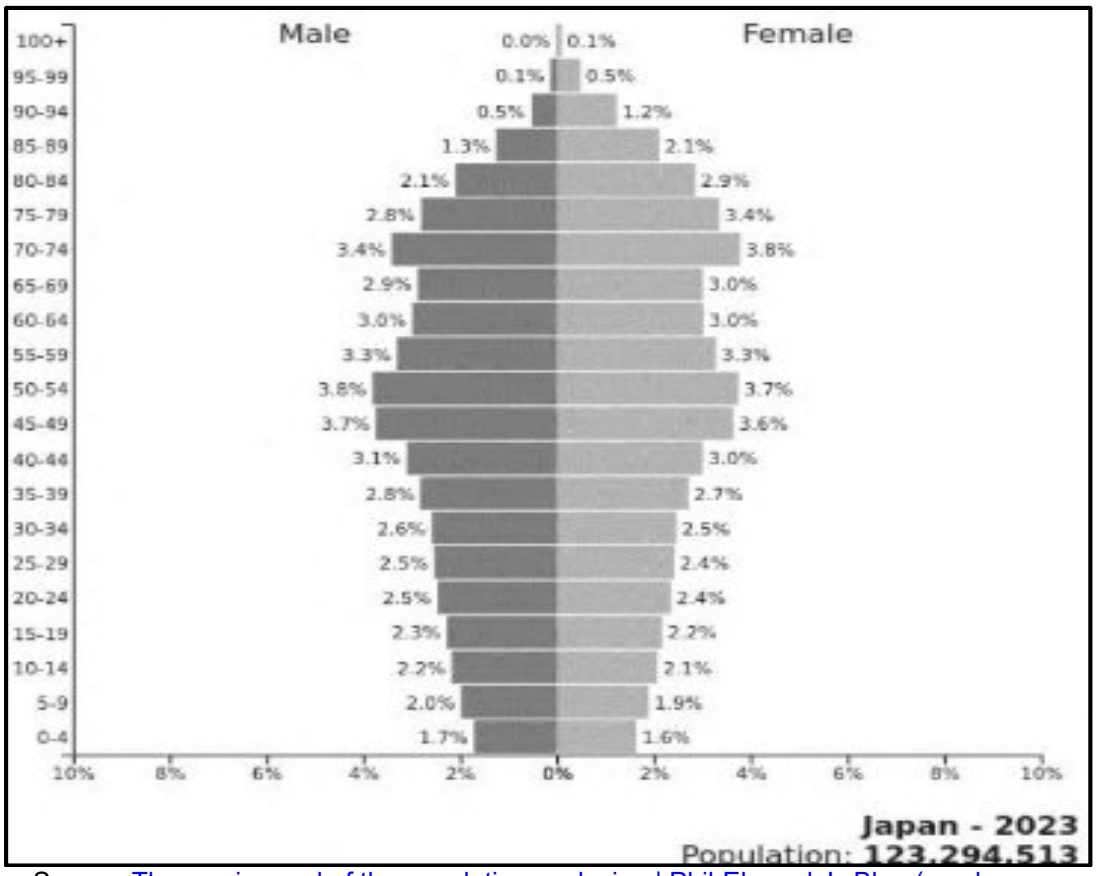
1.2.4 Lack of access to medical care (increases/decreases) death rate.

1.2.5 Literacy rate is (higher/lower) in More Economically Developed Countries as compared to Less Economically Developed Countries.

1.2.6 (Contraception/Vasectomy) is a permanent method of prevention.

1.2.7 (Infant mortality rate/Death rate) refers to the number of children who die before they reach age of five. (7 x 1) (7)

1.3 Refer to the population pyramid of Japan below for the year 2023.



Source: The coming end of the population explosion | Phil Ebersole's Blog (wordpress.com)

1.3.1 What is a *population pyramid?* (1 x 2) (2)

1.3.2 The type of population pyramid shown above is (progressive/ regressive). (1 x 1) (1)

1.3.3 The shape of this population pyramid indicates (low/high) infant mortality rate and death rate. (1 x 1) (1)

1.3.4 Calculate the total percentage of females aged between 0 – 14 years. (1 x 2) (2)

1.3.5 Which age group represent the largest portion of the population in 2023? (1 x 2) (2)

1.3.6 (a) Which gender lives the longest in Japan? (1 x 1) (1)

(b) Explain why this is the case. (1 x 2) (2)

1.3.7 Demographers use population pyramids to calculate their countries' dependency ratio. Why is it important for the country to know its dependency ratio? (2 x 2) (4)

1.4 Refer to the photograph and extract below on overpopulation.

OVERPOPULATION IN INDIA



Source: Meta AI

Whether you are in a metro station, airport, railway station, road, highway, bus stop, hospital, shopping mall, market, temple, or even in a social/religious gathering, we see all these places are overcrowded at any time of the day.

According to the Indian census, carried out in 2011, the population of India was exactly 1 210 193 422, which means India has crossed the 1-billion mark. This is the second most populous country of the world after China and the various studies have projected that India will be world's number-1 populous country, surpassing China, by 2025.

[Source: From: Overpopulation in India - Causes, Effects, Stats and How to control it? - India (mapsofindia.com)]

1.4.1 What evidence in the source indicates that India is overpopulated? (2 x 1) (2)

1.4.2 According to the extract, what was the total population of India in 2011? (1 x 1) (1)

1.4.3 Describe TWO possible social issues that are leading to overpopulation in India. (2 x 2) (4)

1.4.4 In a paragraph of approximately EIGHT lines, explain the negative effects of overpopulation in a country and suggest steps that need to be taken in order to bring population under control. (4 x 2) (8)

1.5 Refer to the extract on Population Movement below.

Dudula: How South African anger has focused on foreigners

13 March 2022 Pumza Fihlani BBC News, Johannesburg

Police in South Africa are on alert in case of renewed clashes between residents of Johannesburg's Alexandra township and foreign street vendors.

Alexandra is one of the poorest areas of the country but from its shacks, residents can easily see the towering skyscrapers of Sandton, one of the richest commercial districts on the whole continent, just a few kilometres away. As a result, people from across South Africa and neighbouring countries flock to the township to use it as a base to earn a living.
Two controversial groups - the Alexandra Dudula Movement and Operation Dudula - which are campaigning against undocumented foreign nationals have emerged recently and support seems to be growing among South African communities. There are concerns that their campaigns could lead to yet another outbreak of xenophobic violence in the country.

Poverty is the main driver of the tension as South African residents believe - whether rightly or wrongly - that foreigners are the cause of many of their difficulties. Dudula is a word in the Zulu language which loosely means to "push back" or "drive back" - this gives a clue about what they want.
Though the two groups are separate, they have been inspired by the same cause - they both hope to drive out undocumented African migrants from their communities. They believe by doing this they can ensure that jobs and business opportunities go to South Africans.

[Source: From: Dudula: How South African anger has focused on foreigners (bbc.com)]

1.5.1 Define the concept *Xenophobia.* (1 x 2) (2)

1.5.2 What is the name of the commercial city that is located closer to Alexander? (1 x 1) (1)

1.5.3 According to the extract, what is the meaning of the word Dudula? (1 x 1) (1)

1.5.4 Give the main aim of the two groups that are mentioned in the extract. (1 x 1) (1)

1.5.5 Why do people choose to move from their place of origin to go and stay in cities? (2 x 2) (4)

1.5.6 Explain THREE reasons for the outbreak of violence against foreign nationals in South Africa. (3 x 2) (6)

[60]

QUESTION 2: WATER AND WATER RESOURCES

2.1 Various options are provided as possible answers to the following questions. Choose the answer and write only the letter (A–D) next to the question numbers (2.1.1 to 2.1.7) in the ANSWER BOOK, e.g. 2.1.8 D.

2.1.1 The primary source of water in South Africa is …

A rainfall.
B groundwater.
C desalination.
D recycling.

2.1.2 A physical factor that affects rainfall patterns in South Africa.

A Topography
B Climate Change
C Soil type
D Vegetation

2.1.3 The … is the largest river in South Africa.

A Orange River
B Vaal River
C Limpopo River
D Tugela River

2.1.4 The sector which uses the most water in South Africa is … sector.

A agriculture
B industrial
C forestry
D mining

2.1.5 A major challenge facing South Africa's water infrastructure.

A Aging infrastructure
B Inadequate funding
C Lack of maintenance
D All of the above

2.1.6 The main purpose of water storage facilities in South Africa is to …

A support irrigation.
B generate hydroelectric power.
C supply water during scarcity.
D provide drinking water.

2.1.7 The province receives the most rainfall in South Africa.

A Western Cape
B Eastern Cape
C KwaZulu-Natal
D Mpumalanga (7 x 1) (7)

2.2 Choose ONE term/concept from the list below that matches the descriptions that follow. Write only the term/concept next to the question numbers (2.2.1 to 2.2.8), e.g. 2.2.9 Reservoir.

Desalination; Water treatment; Water harvesting; Ocean currents; Grey water; Marine pollution; Water transfer; Water scarcity; Water conservation

2.2.1 The practice of using water efficiently and reducing waste to minimize the amount of water used.

2.2.2 Used water which is still clean.

2.2.3 Moving water from one drainage basin to another.

2.2.4 The lack of sufficient water to meet demand.

2.2.5 Removing contaminants and pollutants from water to make it safe for use.

2.2.6 A process of removing salt from seawater.

2.2.7 Collecting and storing rainwater for non-potable uses, such as irrigation or toilet flushing.

2.2.8 Introduction of harmful materials into the water sources. (8 x 1) (8)

2.3 Refer to the article on water pollution below.

SOUTH AFRICAN SCIENTISTS USE BUGS IN WAR AGAINST WATER HYACINTH

By Agency Staff 1 March 2023



View of boats stuck in a sea of invasive green water hyacinth weed at the Hartbeespoort Dam. Shafiek Tassiem/Reuters

The Hartbeespoort Dam north-west of Johannesburg used to be brimming with people enjoying scenic landscapes and recreational watersports. Now the visitors are greeted to the sight of boats stuck in a sea of invasive green water hyacinth weed.
The spike in Harties — as Hartbeespoort is known — can be attributed to pollution, with sewage, industrial chemicals, heavy metals and litter flowing on rivers from Johannesburg and Pretoria.
Nutrients in the pollutants act as perfect fertilisers for the weed, a big concern for nearby communities due to its devastating impact on livelihoods.
Dion Mostert, 53, is on the verge of laying off 25 workers at his recreational boat company after his business came to a standstill because of the carpet of water hyacinths.
"The boats aren't going anywhere. It's affecting tourism in our town… tourist jobs," Mostert said pointing towards his luxury cruise boat "Alba", marooned in the weeds.

**hyancith: a perennial aquatic plant, free floating in shallow water.*

[Adapted from: South African scientists use bugs in war against water hyacinth - TechCentral]

2.3.1 Name the dam that is invaded by hyancith weed. (1 x 1) (1)

2.3.2 Give TWO main causes of pollution in this dam as mentioned in the article. (2 x 1) (2)

2.3.3 How do pollutants promote growth of hyancith weed? (1 x 2) (2)

2.3.4 According to the article, how does the invasion of hyancith weed impact negatively on the nearby communities? (2 x 2) (4)

2.3.5 Suggest ways in which water managers can reduce the negative impact of alien species on water availability in their area. (3 x 2) (6)

2.4 Refer to the cartoon below on water-saving techniques.



[Source: Save Water Animated Images (mavink.com)]

2.4.1 Is water a renewable or non-renewable resource? (1 x 1) (1)

2.4.2 Name TWO ways in which water is used by people at their homes (2 x 1) (2)

2.4.3 Why is it difficult for the government to provide free basic water? (2 x 1) (2)

2.4.4 Describe THREE water-saving techniques that are depicted in the cartoon. (3 x 2) (6)

2.4.5 Suggest TWO government initiatives that can be used to secure South Africa's scarce water supply in the future. (2 x 2) (4)

2.5 Refer to the newspaper article below on floods.

KHAYELITSHA RESIDENTS SHELTER IN CHURCHES AFTER NON-STOP RAIN.

By: SA People Contributor

15-06-22 14:25



Hundreds of people have abandoned their homes after heavy rains in Cape Town. Dozens of residents of RR section of Khayelitsha have taken refuge in local churches. Community leader Sihla Tongo said the shacks of about 400 people are now underwater after two days of incessant rain.

Tongo and about 12 others slept at Khayalabangcwele Apolostic Church in Zion on Tuesday night. He said many people are staying in less affected shacks in nearby Covid Village "cramped in groups of eight and ten, depending on the size of the shacks".

Our shacks have become dams, said Tongo. "We had to huddle together on a mattress in one place to avoid leaks. We covered ourselves with three wet blankets that we took out of flooded shacks … I have been wearing the same clothes since Monday."

[Source: From: WATCH Flooding in Cape Town, Shacks Washed Away, Blocked Canal Blamed for Some Flooding - SA People]

2.5.1 Define the term *flood.* (1 x 2) (2)

2.5.2 What caused flooding in Khayelitsha? (1 x 1) (1)

2.5.3 How did the floods affect residents of Khayelitsha? (1 x 2) (2)

2.5.4 Give ONE reason why informal settlements are more affected by floods as compared to formal settlements. (1 x 2) (2)

2.5.5 In a paragraph of approximately EIGHT lines discuss how the City of Cape Town could have prevented the worst effects of flooding in the urban area. (4 x 2) (8)

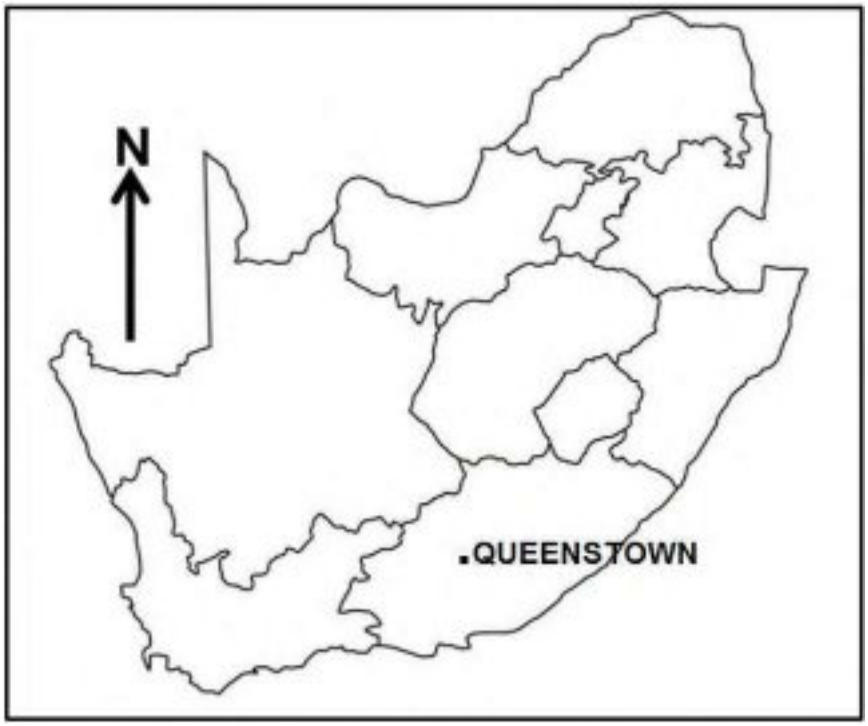
[60]

TOTAL SECTION A: 120

SECTION B

QUESTION 3: GEOGRAPHICAL SKILLS AND TECHNIQUES

GENERAL INFORMATION ON QUEENSTOWN



Coordinates: 31°54'S; 26°53'E

Queenstown (officially known as Komani) is a town in the Eastern Cape in South Africa, roughly halfway between the smaller towns of Cathcart and Sterkstroom on the N6 National Route.

The town was established in 1853 and is currently the commercial, administrative, and educational centre of the surrounding farming district.

The town lies on the banks of the Komani River which forms part of the Great Kei river system and has a refreshing climate and an abundant water supply from the surrounding rugged mountains.

[Adapted from: Queenstown, South Africa - Wikipedia]

The following English terms and their Afrikaans translations are shown on the topographical map:

ENGLISH	AFRIKAANS
Diggings	Uitgrawings
River	Rivier

3.1 MAP SKILLS AND CALCULATIONS

3.1.1 Queenstown is located in the … province

A North West
B Western Cape
C Eastern Cape
D Limpopo (1 x 1) (1)

3.1.2 The contour interval of the orthophoto map is … metres

A 10
B 100
C 20
D 50 000 (1 x 1) (1)

3.1.3 The scale of the topographical map is … times smaller than that of an orthophoto map

A 0,5
B 5
C 10 000
D 50 000 (1 x 1) (1)

Refer to the topographic map.

3.1.4 Calculate the magnetic declination for the year 2024. Use the steps below to answer the question.
Show ALL calculations.
Clearly indicate the direction in relation to true north in your final answer.

- Difference in years:
- Mean annual change:
- Total annual change:
- Magnetic declination 2024: (5 x 1) (5)

Refer to the orthophoto map.

3.1.5 Calculate straight line distance in kilometres between features labelled **6** and **7** on the orthophoto map.

Formula: **Actual distance = Map distance x Map scale**. (2 x 1) (2)

3.2 MAP INTEPRETATION

Refer to the topographic map.

3.2.1 The name of the river flowing in block **D1** is (Lesseyton/ Olifantspoort) (1 x 1) (1)

3.2.2 In which direction is the river flowing mentioned in QUESTION 3.2.1? (1 x 2) (2)

Refer to block **B1** on the topographic map

3.2.3 (a) Would you classify Nooitgedacht as a rural or urban settlement? (1 x 1) (1)

(b) The type of farming practiced in Nooitgedacht is (crop/stock) farming. (1 x 1) (1)

(c) Describe TWO possible factors that could force people to move from Nooitgedacht to Queenstown. (2 x 1) (2)

3.2.4 Identify features labelled **F** and **J** in block **A2/A3** on the topographic map. (2 x 1) (2)

3.2.5 Refer to block **E3** on the topographic map. What evidence indicates that former residents have moved out of that area? (1 x 1) (1)

3.2.6 Queenstown receives seasonal rainfall. Give ONE piece of evidence on the topographic map to support this statement. (1 x 2) (2)

3.3 GEOGRAPHICAL INFORMATION SYSTEM (GIS)

3.3.1 Define the concepts:

(a) *Geographical Information System* (1 x 2) (2)

(b) *Remote Sensing* (1 x 2) (2)

3.3.2 List TWO components of Geographical Information System. (2 x 1) (2)

3.3.3 Give ONE line and ONE polygon feature in block **D3** on the topographic map. (2 x 1) (2)

[30]

TOTAL SECTION B: 30
GRAND TOTAL: 150

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