Downloaded from Stanmorephysics.com

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.

Copyright reserved

Downloaded from Stanmorephysics.com

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.

Downloaded from Stanmorephysics.com

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)

Downloaded from Stanmorephysics.com

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.

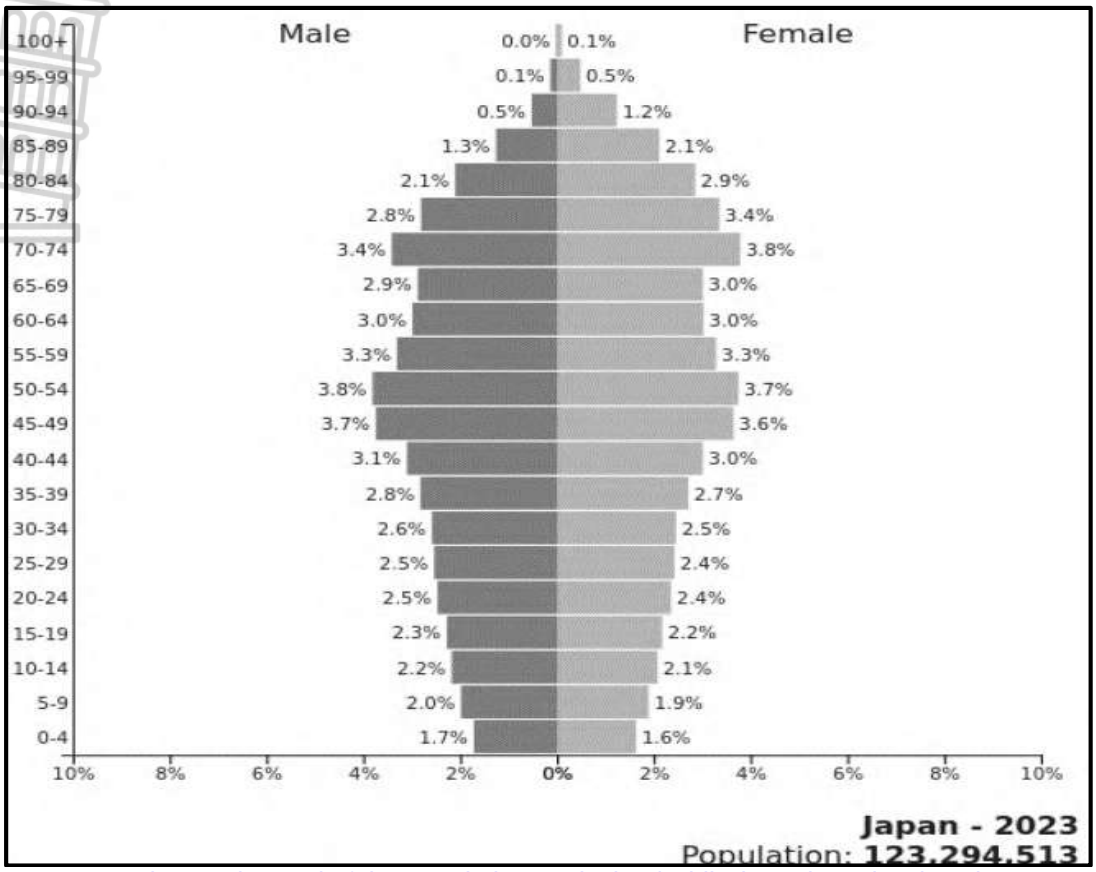
1.2.5 Literacy rate is (higher/lower) in More Economically Developed Countries as compared to Less Economically Developed Countries.

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)

Downloaded from Stanmorephysics.com

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)

Downloaded from Stanmorephysics.com

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)

Downloaded from Stanmorephysics.com

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]

Downloaded from Stanmorephysics.com

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.

Downloaded from Stanmorephysics.com

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)

Downloaded from Stanmorephysics.com

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]

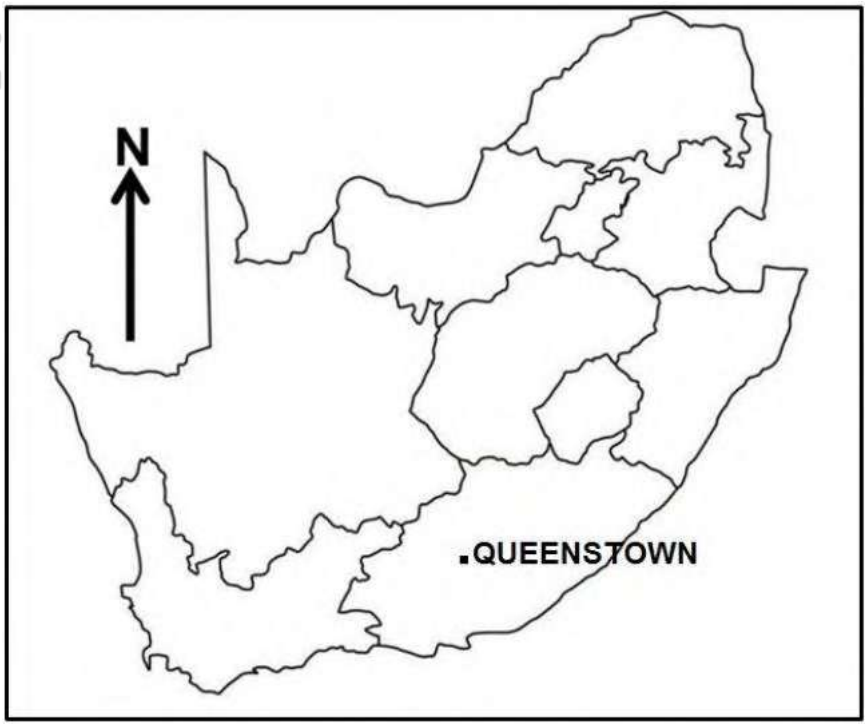
TOTAL SECTION A: 120

Downloaded from Stanmorephysics.com

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)

Downloaded from Stanmorephysics.com

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

Copyright reserved

Downloaded from Stanmorephysics.com

education

Department:
Education
North West Provincial Government
REPUBLIC OF SOUTH AFRICA

PROVINCIAL ASSESSMENT

GRADE 10

GEOGRAPHY P2
NOVEMBER 2024
MARKING GUIDELINES

MARKS: 150

These marking guidelines consist of 11 pages.

Copyright reserved

Downloaded from Stanmorephysics.com

SECTION A: POPULATION AND WATER RESOURCES
QUESTION 1: POPULATION

1.1	1.1.1	G (1)		
	1.1.2	C (1)		
	1.1.3	F (1)		
	1.1.4	I (1)		
	1.1.5	E (1)		
	1.1.6	B (1)		
	1.1.7	D (1)		
	1.1.8	A (1)	(8 x 1)	(8)
1.2	1.2.1	Fertility rate		
	1.2.2	Few		
	1.2.3	Polygamy		
	1.2.4	Increases		
	1.2.5	Higher		
	1.2.6	Vasectomy		
	1.2.7	Infant mortality rate	(7 x 1)	(7)
1.3	1.3.1	It is a visual or graphic way of showing the population structure of a country or continent which focus on age groups and gender groups. (2) **CONCEPT**	(1 x 2)	(2)
	1.3.2	Regressive (1)	(1 x 1)	(1)
	1.3.3	Low (1)	(1 x 1)	(1)
	1.3.4	1.6 +1.9 +2.1 (1) = 5.6%(1)	(2 x 1)	(2)
	1.3.5	50 – 54 (2)	(1 x 2)	(2)
	1.3.6	(a) Females (1)	(1 x 1)	(1)

Downloaded from Stanmorephysics.com

(b) Women generally eat healthier (2)
Women pay more attention to their health (2)
Biological differences (2)
Women tend to choose better lifestyles (2)
Men are more likely to work in hazardous occupations, increasing mortality risks (2)
Women tend to maintain stronger social connections, providing emotional support (2)
[ANY ONE] (1 x 2) (2)

1.3.7 For planning and making decisions. (2)
To provide insights into family formation and housing needs. (2)
To determine needs for related and unrelated households. (2)
To determine relationship between the potential labor force and the remainder of a countries population. (2)
[ANY TWO] (2 x 2) (4)

1.4 1.4.1 Overcrowding (at the train station) (1)
"Second most populous" (1)
1 210193 422 (1)
[ANY TWO] (2 x 1) (2)

1.4.2 1 210 193 422 (1) (1 x 1) (1)

1.4.3 Getting married at a young age (2).
Marriage as a sacred obligation and a universal practice (2)
Poor/ impoverished families (2)
Lagging behind when it comes to the use of contraceptives and birth control methods. (2)
High illiteracy rate (2)
Illegal immigration: (2)
Improved medical care (2)
Improved sanitation and water supply (2)
Improved food supply (2)
Decrease in infant mortality (2)
Decreased death rate (2)
Increased birth rate (2)
[ANY TWO] (2 x 2) (4)

1.4.4 **NEGATIVE EFFECTS**
Resources are overexploited (2)
Congestion in cities (2)
Farmland will shrink as there is a need for more space to build houses (2)
Unemployment rate will increase (2)
Forests are shrinking (2)
Municipality services will break down (2)
Waste disposal becomes a crisis (2)
Unhealthy competition/ conflict/ wars (2)
Climate change and increased greenhouse gas emmissions (2)
Housing shortages and increased costs (2)

Downloaded from Stanmorephysics.com

Food insecurity and malnutrition (2)
Increased crime rates (2)
Increased corruption and inequality (2)

STEPS TO BE TAKEN
Practise birth control (2)
Avail contraceptives (2)
Encourage sterilisation (2)
Encourage family planning (2)
People can be educated about the problems brought by overpopulation (2)
Provide affordable and safe abortion services (2)
Provide incentives for small families (2)
Encourage delayed marriage and child bearing (2)
Provide sex education in schools (2)
Investment in healthcare and education (2)
[ANY FOUR MUST REFER TO EFFECTS AND STEPS TO BE TAKEN] (4 x 2) (8)

1.5 1.5.1 Is the fear, hatred or lack of acceptance of people from a different country, tribe, religion (2)
[CONCEPT] (1 x 2) (2)

1.5.2 Sandton (1 x 1) (1)

1.5.3 Push back/Drive back (1 x 1) (1)

1.5.4 To drive out undocumented African migrants from their communities.(2) (1 x 1) (1)

1.5.5 More job opportunities (2)
For higher wages (2)
For better living conditions (2)
For improved access to basic services (2)
For access to better facilities (2)
There is less chance of natural disasters (2)
For security (2)
[ANY TWO] (2 x 2) (4)

1.5.6 Foreigners get the blame for many illnesses in the country (2)
South Africans blame them for “taking” their jobs as they are willing to work for cheaper rates (2)
South Africans blame them for the high crime rate – if they don’t get jobs they have to steal to get food (2)
South Africans believe they make the competition for housing more difficult (2)
They will put more pressure on resources which makes it difficult for everybody to have access to resources (2)
Sometimes foreigners can involve local residents in illegal activities which can lead to the downgrading of urban areas (2)
Lack of trust of people from outside South Africa (2)

Downloaded from Stanmorephysics.com

South Africans have fear of losing their possessions and goods to foreigners (2)

[ANY THREE] (3 x 2) (6)

[60]

Downloaded from Stanmorephysics.com

QUESTION 2: WATER AND WATER RESOURCES

2.1	2.1.1	A (1)		
	2.1.2	B (1)		
	2.1.3	A (1)		
	2.1.4	A (1)		
	2.1.5	D (1)		
	2.1.6	C (1)		
	2.1.7	C(1)	(7 x 1)	(7)
2.2	2.2.1	Water conservation (1)		
	2.2.2	Grey water (1)		
	2.2.3	Water transfer (1)		
	2.2.4	Water scarcity (1)		
	2.2.5	Water treatment (1)		
	2.2.6	Desalination (1)		
	2.2.7	Water harvesting (1)		
	2.2.8	Water pollution (1)	(8 x 1)	(8)
2.3	2.3.1	Hartbeespoort dam (1)	(1 x 1)	(1)
	2.3.2	Sewage (1) Industrial chemicals (1) Heavy metals (1) Litter (1) **[ANY TWO]**	(2 x 1)	(2)
	2.3.3	Nutrients in the pollutants act as perfect fertilisers for the weed. (2)	(1 x 2)	(2)
	2.3.4	Their businesses came to a standstill (2) People are about to lose their jobs in the tourism industry (2)	(2 x 2)	(4)

Downloaded from Stanmorephysics.com

2.3.5 Decrease the use of pesticides/herbicides (2)
Buffering of the catchment areas (2)
Practice green agriculture (accept examples) (2)
Close the mines along the river banks (2)
Manage dumping of industrial waste (accept examples) (2)
Reduce deforestation (2)
Reduce dumping of waste into the rivers (2)
Create awareness campaigns (accept examples) (2)
Implement wastewater treatment (2)
Ensure storm water management (2)
Proper land use planning (accept examples) (2)
Regular testing of water (accept examples) (2)
Improve infrastructure in informal settlements (accept examples) (2)
Maintain water purifying plants (2)
Regular environmental impact assessment studies (2)
Afforestation/Recover the flood plain/riparian zone (2)
[ANY THREE] (3 x 2) (6)

2.4 2.4.1 Renewable (1) (1 x 1) (1)

2.4.2 Drinking (1)
Preparing food/ cooking (1)
Bathing (1)
Washing clothes and dishes (1)
Brushing teeth (1)
Watering the garden (1)
[ANY TWO] (2 x 1) (2)

2.4.3 In rural areas communities are small, spread out and far from dams (2)
In urban areas informal settlements grow quicker than the provision of services (2)
Pollution provides a huge challenge as rivers and water sources are polluted (2)
Not economically viable as people are spread out too far across the country (2)
Water provision takes time and costs money (2)
Lack of skilled people to do the work (2)
Apartheid legacy of access to water in rural areas (2)
Lack of funding for improved infrastructure (2)
Lack of planning and development in rural areas (2)
Population increase faster than infrastructure development (2)
Poor maintenance of existing infrastructure network (2)
Mismanagement of funds (corruption) by the government (2)
Boreholes not accessible/privately owned (2)
Theft of water infrastructure (2)
Focus placed on industrial development (2)
Diversion of water resources (2)
Poor/cheap quality materials used to maintain water infrastructure (2)
[ANY ONE] (1 x 2) (2)

Downloaded from Stanmorephysics.com

2.4.4 Close taps when not using the water (2)
Fix dripping taps and leaks (2)
Use water-saving showerheads/Take showers and fewer baths (2)
Use a watering can instead of a hose pipe (2)
Use bath water to water vegetables (2)
Switch the water off while brushing your teeth (2)
[ANY THREE] (3 x 2) (6)

2.4.5 Building of dams to store more water (2)
Desalination, coastal settlements can remove the salt from sea water (2)
Recycling, national and local government can purify and recycle more waste water (2)
Groundwater, boreholes can supplement water supplies (2)
Rainwater harvesting, people can use tanks to collect rainwater (2)
Using of grey water (2)
Increase water charges/tariffs (2)
Increasing tariffs will make residents use less water. (2)
Fix leaking taps (2)
Offer training to consumers on water usage (2)
Hire skilled operators in water plants (2)
Cloud seeding to artificially increase rainfall (2)
Crop rotation to protect soil to store water (2)
Redirecting water to provide for irrigation in areas prone to drought (2)
Harvesting rain water from rooftops (2)
Development of sustainable agricultural practices (2)
Water-restrictions (2)
[ANY TWO] (2 x 2) (4)

2.5 2.5.1 Flood is when a large amount of water covers parts of the land that is not usually under water. (2)
[CONCEPT] (1 x 2) (2)

2.5.2 Heavy rains (1) (1 x 1) (1)

2.5.3 They lost their homes (2)
Their shacks were flooded (2)
[ANY ONE] (1 x 2) (2)

2.5.4 Informal settlements are often poorly located below flood lines (2)
They use poor building material which cannot withstand floods (2)
Very dense housing with unplanned street patterns. (2)
Informal settlements often lack proper drainage systems, storm water management, and flood protection measures. (2)
Limited access to emergency services. (2)
Informal settlements often lack proper waste management systems, leading to clogged drainage systems and increased flood risk. (2)
[ANY ONE] (1 x 2) (2)

Downloaded from Stanmorephysics.com

2.5.5 Urban areas must have a well-designed storm water drains to remove the run-off so that it does not flow into the river. (2)
Preventing construction in areas close to the river. (2)
Retaining vegetation on the floodplains of the rivers. (2)
Educating people about dangers of floods. (2)
Designing disaster plans to handle a flood situation when it happens. (2)
Providing formal houses in other areas. (2)
Removing litter which blocks the sewer system. (2)
Planting more trees and creating roof-top gardens to trap water and reduce flooding. (2)
Introducing better flood warning system. (2)
[ANY FOUR] (4 x 2) (8)
[60]

TOTAL SECTION A: 120

Downloaded from Stanmorephysics.com

SECTION B

QUESTION 3: GEOGRAPHICAL SKILLS AND TECHNIQUES

3.1 MAP SKILLS AND CALCULATIONS

3.1.1 C (1) (1 x 1) (1)

3.1.2 A (1) (1 x 1) (1)

3.1.3 B (1) (1 x 1) (1)

3.1.4 Difference in years: 2024 – 2017 = 7(1) years
Mean annual change: 10' (1) Westwards
Total annual change: 7 x 10' = 70' (1) westwards **OR** 1'10" (1) westwards
MD for 2024 = 26°25' + (1) 1°10'
= 27°35' **West of True North** (1) (5 x 1) (5)

3.1.5 Distance = 9.5 (1) cm x 0,1 km [Range 9.4 cm – 9.6 cm]
= 0.95 km (1) [Range 0.94 km – 0.96 km] (2 x 1) (2)

3.2 3.2.1 Lesseyton (1) (1 x 1) (1)

3.2.2 Southwards (2) (1 x 2) (2)

3.2.3 (a) Rural(1) (1 x 1) (1)

(b) Crop (1) (1 x 1) (1)

(c) Natural disasters (accept examples) (1)
Mechanization (1)
Lack of basic services (1)
Poor infrastructure (1)
Lack of entertainment facilities (1)
Few job opportunities (1)
Lower wages (1)
Crop failure (1)
Poverty (1)
[ANY TWO] (2 x 1) (2)

3.2.4 F: Wall (1)
J: Perennial water (1) (2 x 1) (2)

3.2.5 Presence of ruins (1) (1 x 1) (1)

Downloaded from Stanmorephysics.com

3.2.6 Presence of water storage features (2)
Dams to store water (2)
Reservoirs to store water (2)
Few cultivated areas (2)
Non perennial streams (2)
Dry pans (2)
Furrows to transfer water (2)
[ANY ONE] (1 x 2) (2)

3.3 GEOGRAPHICAL INFORMATION SYSTEM

3.3.1 a Geographic Information System (GIS) is a computer-based tool used for capturing, storing, analyzing, and displaying geographically referenced data. (2)
[CONCEPT] (1 x 2) (2)

b Remote sensing is the acquisition of information about the Earth's surface through the use of sensors that are not in direct physical contact with the object or area being observed. (2)
[CONCEPT] (1 x 2) (2)

3.3.2 Hardware (1)
Software (1)
People (1)
Methods (1)
Data (1)
[ANY TWO] (2 x 1) (2)

3.3.3 **LINE FEATURES**
Fence (1)
Non-perennial river (1)
Other road (1)
Row of trees (1)
Track and hiking trail (1)
[ANY ONE]

POLYGON FEATURES
Cultivated land (1)
Non-perennial water (1)
[ANY ONE] (2 x 1) (2)

[30]
TOTAL SECTION B: 30
GRAND TOTAL: 150

Copyright reserved