Province of the
EASTERN CAPE
EDUCATION

GRADE 10

JOE GQABI DISTRICT

NOVEMBER 2024

GEOGRAPHY P2

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MARKS: **150**

TIME: **3 hours**

This question paper consists of 18 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 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 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. 1 010 hpa, 9 °C and 25 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 topographical map (3419 AB CALEDON) and a 1:10 000 orthophoto map (3419 AB 24 CALEDON) of a part of the mapped area 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 this.

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

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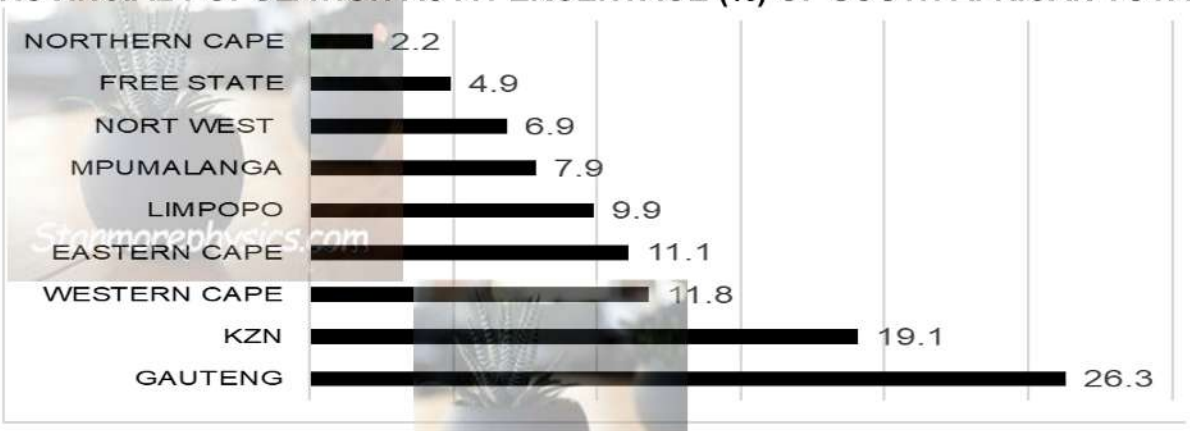
SECTION A

QUESTION 1: POPULATION

1.1 Refer to the graph and table in Fig 1.1 below, which shows population statistics in the provinces of South Africa. Match the statements in COLUMN A with the options in COLUMN B. Choose only Y or Z and the correct choice next to the question numbers (1.1.1 to 1.1.7) in the ANSWER BOOK, e.g. 1.1.8 Y

Fig 1.1

PROVINCIAL POPULATION AS A PERCENTAGE (%) OF SOUTH AFRICAN TOTAL



PROVINCE	POPULATION	LAND AREA (km²)	DENSITY (p/km²)
WESTERN CAPE	7 113 776	129 462	54.9
GAUTENG	15 099 422	18 178	831
KWA-ZULU NATAL	12 423 907	94 361	132
NORTHERN CAPE	1 355 946	372 889	3.64

[Adapted from https://southafrica-info.com/land/nine-provinces-south-africa]

	COLUMN A	COLUMN B
1.1.1	Over a quarter of South Africa's population lives in…	**Y** Gauteng **Z** KwaZulu-Natal
1.1.2	South Africa's population is…distributed among provinces.	**Y** evenly **Z** unevenly
1.1.3	…. is number of people that occupy a km² of land in the Western Cape.	**Y** population density **Z** population distribution
1.1.4	The province with the second lowest population in the country is…	**Y** Western Cape **Z** Free State
1.1.5	Population size in KwaZulu Natal is…than the population of the Western Cape.	**Y** larger **Z** smaller
1.1.6	An economic factor that attracts people to Gauteng is…	**Y** Reliable water **Z** Developed economy
1.1.7	Northern Cape province has a … population density because of the vast land size and arid climate.	**Y** low **Z** high

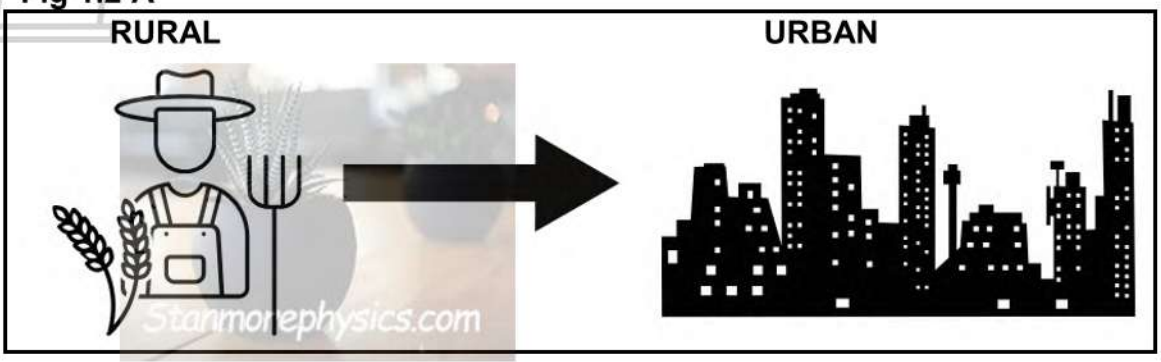
(7 x 1) (7)

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1.2 Various options are provided as possible answers in the following questions. Choose the CORRECT answer and write only the letter (A–D) next to the question numbers (1.1.1 to 1.1.8) in the ANSWER BOOK, e.g. 1.1.9 D.

Refer to the sketch, Fig 1.2 A below showing a type of population movement and answer QUESTIONS 1.2.1 to 1.2.3.

Fig 1.2 A



1.2.1 The type of migration shown in the diagram is…

A Urbanisation
B Urban-rural migration
C Urban growth
D Rural-urban migration

1.2.2 A physical push factor contributing to the migration of people is …

A Famine
B Unemployment
C Drought
D Poverty

1.2.3 Consequences of this type of migration is…

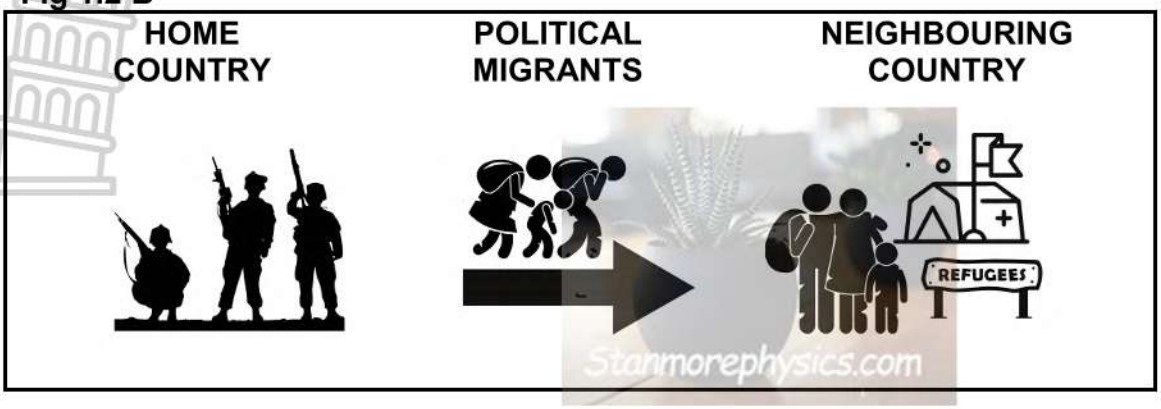
(i) Rural depopulation
(ii) Urban depopulation
(iii) Increased urbanisation
(iv) Decreased urbanisation

A (i) and (iii)
B (i) and (iv)
C (ii) and (iii)
D (ii) and (iv)

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Refer to the sketch, **Fig 1.2 B** showing migration and answer QUESTIONS 1.2.4 to 1.2.6

Fig 1.2 B



1.2.4 Political migration occurs because of …

A famine.
B soil erosion.
C war or conflict.
D desertification.

1.2.5 The sketch shows … migration which is …

(i) seasonal
(ii) international
(iii) forced.
(iv) voluntary.

A (i) and (iii)
B (ii) and (iii)
C (ii) and (iv)
D (i) and (iv)

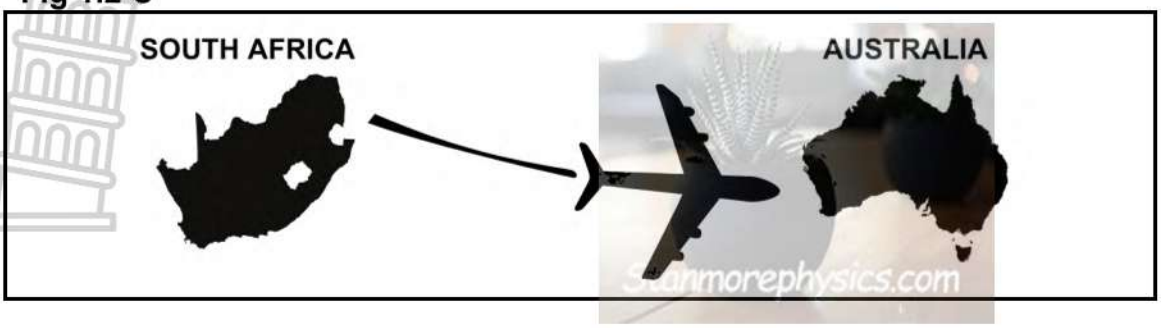
1.2.6 The primary purpose of a refugee camp is to provide … for refugees.

A permanent housing
B temporary shelter and basic services
C job training and educational programmes
D legal citizenship

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Refer to the sketch, Fig 1.2 C below showing migration and answer QUESTIONS 1.2.7 and 1.2.8.

Fig 1.2 C



1.2.7 When a South African legally emigrates to Australia, it is usually … and results in the loss of … in South Africa.

(i) temporary
(ii) permanent
(iii) skilled professionals
(iv) unskilled labourers

A (ii) and (iv)
B (i) and (iii)
C (ii) and (iii)
D (i) and (iv)

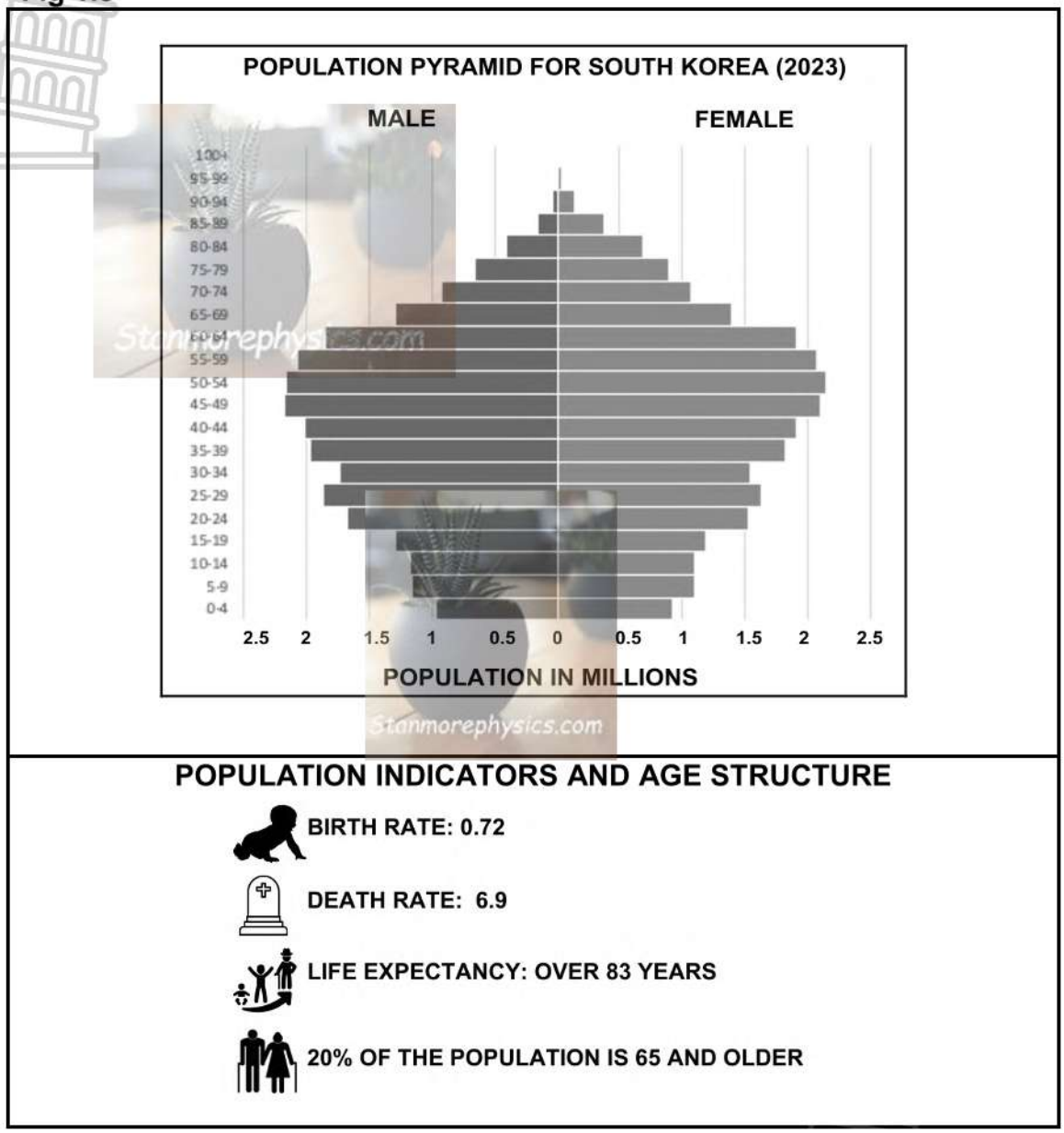
1.2.8 A significant push factor for South Africans emigrating to Australia is…

A A high quality of life in Australia
B Crime rates and safety concerns
C A high quality of life in South Africa
D The favourable exchange rate with the Australian dollar

(8 x 1) (8)

1.3 Refer to the source below, Fig 1.3 based on South Korea's demographics and answer the following questions.

Fig 1.3



1.3.1 According to the population pyramid, which age group makes up the largest proportion of the total population? (1 x 1) (1)

1.3.2 Provide TWO pieces of evidence from the population pyramid that show a declining population. (2 x 1) (2)

1.3.3 Calculate the natural increase of the country's population. (2 x 1) (2)

1.3.4 Why is South Korea's life expectancy considered typical for an economically well-developed country? (2 x 1) (2)

1.3.5 In a paragraph of approximately EIGHT lines, explain how South Korea's aging population will affect its future economy. (4 x 2) (8)

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1.4 Refer to the infographic below, Fig 1.4 on population growth and answer the following questions.

Fig 1.4



The global population reached 8 billion people in 2022. This growing number is putting pressure on global resources and negatively impacting the environment.

It's projected that by 2050, the global population will be 9,7 billion. At this time, Africa's population will reach close to 2.5 billion. This will mean that more than 25 percent of the world's population will be African.

THE EIGHT COUNTRIES EXPECTED TO ACCOUNT FOR OVER HALF OF THE GLOBAL POPULATION GROWTH TO 2050



1.4.1 Define the term population growth. (1 x 2) (2)

1.4.2 According to the cartoon:

(a) What global population number does the baby represent? (1 x 1) (1)

(b) Quote from the extract to prove that population has negative impacts on the environment? (1 x 1) (1)

1.4.3 Identify the projected (expected) global population for 2050 from the extract. (1 x 1) (1)

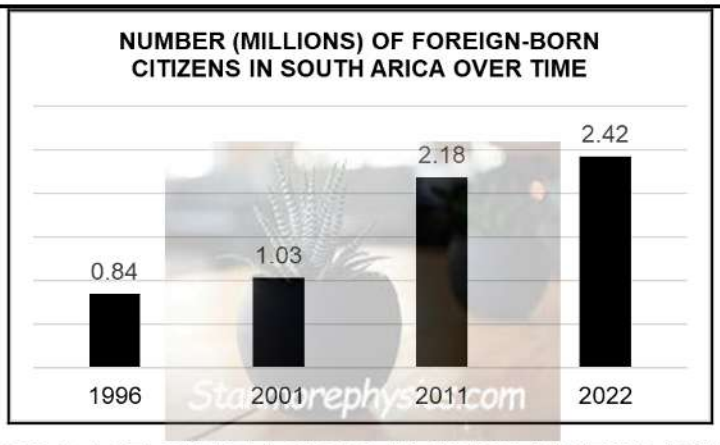
1.4.4 Describe other negative environmental impacts associated with population increase in Africa, beside those mentioned in question 1.4.2(b) above. (2 x 2) (4)

1.4.5 Suggest THREE strategies to manage population growth in Africa. (3 x 2) (6)

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1.5 Refer to the graph and extract, Fig 1.5 below on migration and xenophobia and then answer the following questions.

Fig 1.5



FOREIGNERS FACE CHALLENGES IN AFRICA'S TOP IMMIGRATION DESTINATION

Due to its middle-income status, stable democratic institutions and comparatively industrialised economy, South Africa hosts the largest number of immigrants on the African continent. According to official estimates, the country is home to about 2.9 million immigrants. However, this number is thought to be an underestimate because of the presence of large numbers of unauthorised migrants, particularly from neighboring countries.

But across South Africa, low-income foreign nationals encounter xenophobia which leaves them in a state of constant fear and uncertainty. People migrate to South Africa for a variety of reasons but are primarily driven by the perceived (apparent) opportunities the country offers compared to the rest of the continent. Political disorder, economic instability and a history of human rights abuses and armed conflict are cited as reasons foreigners leave their home country. This helps explain why they endure (tolerate) the mistreatment and victimization once they arrive in South Africa.

[Adapted from https://blogs.lse.ac.uk/]

1.5.1 According to the graph, how many foreign-born citizens were living in South Africa in 2022? (1 x 1) (1)

1.5.2 Refer to the extract and identify TWO pull factors that attract migrants to South Africa. (2 x 1) (2)

1.5.3 Why do official estimates and the actual number of migrants living in South Africa show a difference? (1 x 2) (2)

1.5.4 Explain why many low-income foreign nationals that live in a constant state of fear and uncertainty in South Africa do not return to their home countries. (2 x 2) (4)

1.5.5 State reasons why some South Africans 'mistreat and victimise' foreign nationals. (3 x 2) (6)

[60]

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QUESTION 2: WATER RESOUCES

2.1 Classify the factors influencing water availability in South Africa as physical or social or economic. Write only physical or social or economic next to the question numbers (2.1.1 to 2.1.8) in your ANSWER BOOK, e.g. 2.1.9 physical.

2.1.1 South Africa's low average annual rainfall.

2.1.2 Increased demand for water because more people are living in urban areas.

2.1.3 Alien vegetation that reduces stream flow.

2.1.4 Low household income leading to the inability for many South Africans to pay for water.

2.1.5 Climate change causing rising temperatures and more droughts.

2.1.6 Corruption and theft of money destined for water purification plants.

2.1.7 Increased number of people using groundwater causing the water table to drop.

2.1.8 Uneven distribution of rainfall in South Africa. (8 x 1) (8)

2.2 Various options are provided as possible answers in the following questions. Choose the CORRECT answer and write only the letters (A–D) next to the question numbers (2.2.1 to 2.2.7) in the ANSWER BOOK, e.g. 1.1.9 D.

2.2.1 …is the removal of salt from sea water to make it safe and usable for human consumption
A purification
B desalination
C distillation
D deionization

2.2.2 The process whereby water in dams/lakes/rivers /sea changes into gas is …
A condensation
B precipitation
C evaporation
D transpiration

2.2.3 Clearing or removal of trees from the surface is causes…
A more infiltration
B less floods
C more run-off
D less erosion

2.2.4 The process of transferring water from on river basin to another through tunnel and canals is…

A spot mart transfer
B piping
C inter-basin transfer
D water exchange

2.2.5 The scarcity and poor quality of water in South Africa is affected by …and…

(i) Silted dams due to soil erosion which redes dam capacity
(ii) Enough rainfall that fill up rivers and dams
(iii) Industry and mining activities which pollute water resulting in poor quality
(iv) Vendors selling contaminated water and increasing the cost of water

A (ii) and (iv)
B (i) and (iii)
C (iv) and (iii)
D (i) and (ii)

2.2.6 Floods occur because of …

A more infiltration during rainy days
B deforestation that increases soil erosion, reducing infiltration and increasing runoffs that overfills the rivers.
C well managed solid waste in informal settlements.
D proper management of drains by municipalities to make sure that there are no blockages

2.2.7 People in areas without clean and safe water are likely to…

A suffer illnesses and diseases
B ignore water crisis
C use grey water over and over again
D regard this poor access as just part of their lives

(7 x 1) (7)

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2.3 Read the case study, Fig 2.3 below on the role of municipalities in water provision in South Africa.

Fig 2.3

WATERSHEDDING IN THE CITY OF JOHANNESBURG

Through the process of decentralising the water supply, the South African government has made it is the responsibility of local authorities (municipalities) to get water to the consumer.

The City of Johannesburg is currently facing a water crisis. As a result there is 'watershedding'. This is a planned process of reducing water supply to different areas of the city in order to manage demand and prevent the complete depletion of water resources.

The inability of the municipality to supply sufficient water to the residents of Johannesburg has resulted from decades of neglecting water infrastructure. In 2023, the city was loosing 48,2% of its water to leakage and theft. In addition, mismanagement of municipal funds has played a significant role in the current water crisis that the city faces.

Millions of people have been affected by the collapse of the Johannesburg water system. The crisis is also impacting industry, as many of the region's mines and factories cannot operate without water.

[Adapted from https://thinklandscape.globallandscapesforum.org]

2.3.1 Who is responsible for providing water to the consumers in Johannesburg? (1 x 1) (1)

2.3.2 What are the TWO aims of 'watershedding'? (2 x 1) (2)

2.3.3 According to the extract, in what ways has the municipality contributed to the water crisis that Johannesburg faces? (2 x 1) (2)

2.3.4 How can water conservation campaigns be used to address the water crisis in Johannesburg? (2 x 2) (4)

2.3.5 Explain how the water crisis ('watershedding') is negatively impacting the economy of Johannesburg. (3 x 2) (6)

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2.4 Refer to the extract and sketch, Fig 2.4 below on South Africa's ability to provide free basic water and non-traditional water sources.

Fig 2.4

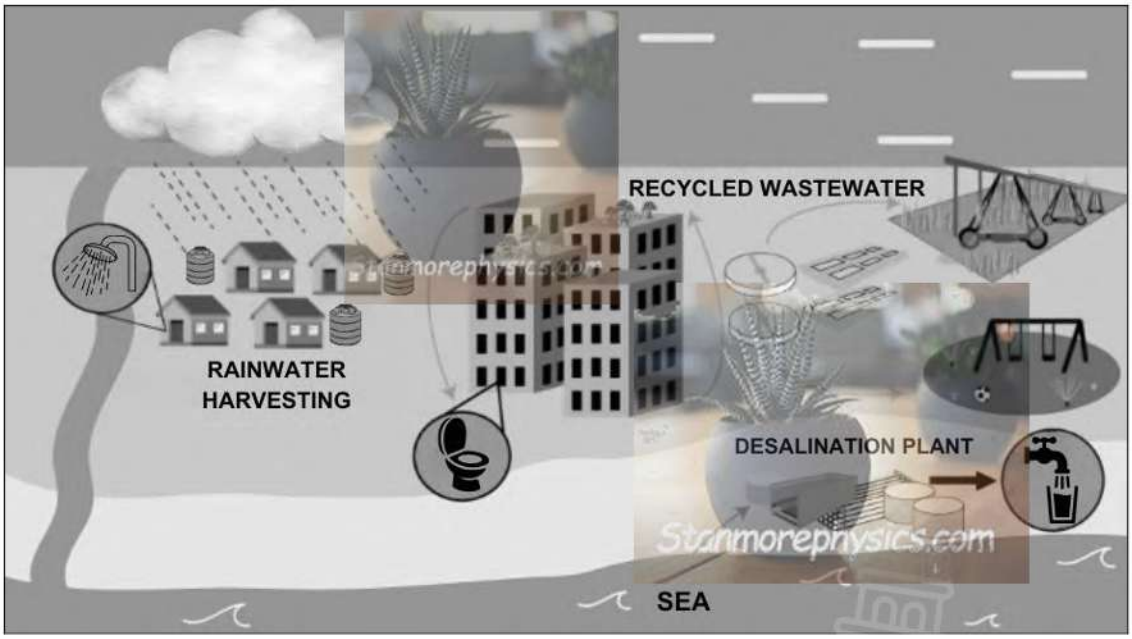
SOUTH AFRICA'S FREE BASIC WATER POLICY

The Free Basic Water (FBW) project in South Africa is a government policy that provides a minimum amount of safe drinking water (6000 liters per month per household) to poor households at no cost.

The FBW policy has improved water service delivery, with 86% of households in South Africa receiving safe water. This is a significant improvement from the apartheid era, when only 66% of urban households and 39% of rural households received safe water.

The FBW policy has been difficult to implement in rural areas, and some municipalities have struggled with implementation.

NON-TRADITIONAL WATER SOURCES



2.4.1 How much free water is allocated per month to qualifying households? (1 x 1) (1)

2.4.2 Who is the key target group of the project? (1 x 2) (2)

2.4.3 From the extract, identify TWO successes that the project has achieved. (2 x 1) (2)

2.4.4 Why has the policy been difficult to implement in rural areas? (2 x 2) (4)

2.4.5 Explain the role the THREE non-traditional water sources (illustrated in the sketch) can play in increasing the supply of water. (3 x 2) (6)

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2.5 Refer to the extract and photograph, Fig 2.5 below on floods in the Western Cape and answer the following questions.

Fig 2.5

FLOODS AFFECT THE WESTERN CAPE

The multiple cold fronts that affected the region on the southwest tip of Africa (July 2024) brought record high rainfall in some parts of the province.

The series of cold fronts led to extremely cold conditions, gusty winds, heavy snowfall and torrential rain. At least 4,500 people were forced out of their homes and approximately 15,000 structures were damaged.

Although many people were affected, the majority of the people left homeless were from the impoverished (poor) informal settlements where metal and wooden shacks are especially vulnerable to strong wind and flooding.

FLOODING IN AN INFORMAL SETTLEMENT



[Adapted from https://apnews.com/article/south-africa-storms-floods-cape-town]

2.5.1 What is a *flood?* (1 x 2) (2)

2.5.2 From the extract, identify ONE negative impact of the floods. (1 x 1) (1)

2.5.3 Why are informal settlements more at risk to adverse (bad) weather conditions? (2 x 2) (4)

2.5.4 In a paragraph of approximately EIGHT lines, suggest strategies to minimise (reduce) the impacts of floods in informal settlements. (4 x 2) (8)

[60]

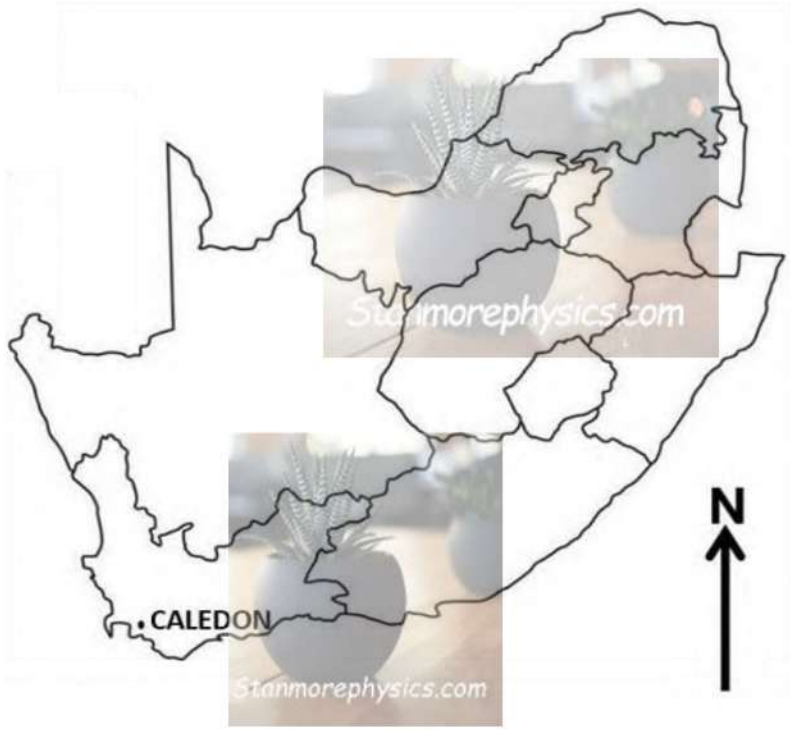
TOTAL SECTION B: 120

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SECTION B

QUESTION 3: GEOGRAPHICAL SKILLS AND TECHNIQUES

GENERAL INFORMATION ON CALEDON



Coordinates: 34° 13' S; 19° 25' E

The following English terms and their Afrikaans translations are shown on the topographic and orthophoto maps:

ENGLISH	AFRIKAANS
Caledon Casino and Spa Resort	Caledon Casino en Spa-oord
Nature Reserve	Natuurreservaat
Show Grounds	Skougronde
Hot Spring	Warmwaterbronne
Sewage Disposal Works	Rioolverwerkingsaanleg
Silo	Graansuier
Marshes and vlei	Moeras en vlei
Diggings	Uitgrawings

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3.1 MAPWORK SKILLS AND CALCULATIONS

3.1.1 Caledon is situated in…province

A Kwa Zulu Natal.
B Eastern Cape
C Northern Cape
D Western Cape (1 x 1) (1)

3.1.2 The number 19 on the map's reference / map index represents…

A Seconds
B Minutes
C Degrees East of the prime meridian
D Degrees South of the equator (1 x 1) (1)

3.1.3 The mean magnetic declination for 2024 is…

A 23° 46' west of true north
B 25° 18' west of true north
C 23 years
D 4' west of true north (1 x 1) (1)

3.1.4 Calculate the difference in height between the spot height in **B6** and the trigonometrical beacon in **A4.** (2 x 1) (2)

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3.1.5 On the orthophoto map, the breadth (b) of the hospital is 1.3 cm. The length is 3 cm.

Calculate the area of the hospital in (m²) (area **2**) on the orthophoto map. (3 x 1) (3)

3.1.6 Why does the hospital (area **2**) on the orthophoto map appear bigger than the hospital in block **E3** on the topographical map? (1 x 2) (2)

3.2 MAP INTERPRETATION

3.2.1 Refer to feature numbered **3** on the orthophoto map.
(a) At what time of the day (early morning, midday, late afternoon) was the photograph taken? (1 x 1) (1)

(b) Give a reason for your answer to QUESTION 3.2.1 (a) (1 x 2) (2)

Refer to the section of the Badsrivier **(G)** on the topographical map to answer QUESTIONS 3.2.2

3.2.2 Badsrivier is flowing in an (south-easterly / north-westerly) direction. (1 x 1) (1)

3.2.3 Give evidence from the map showing that in block **C5** topography is a steep slope. (1 x 2) (2)

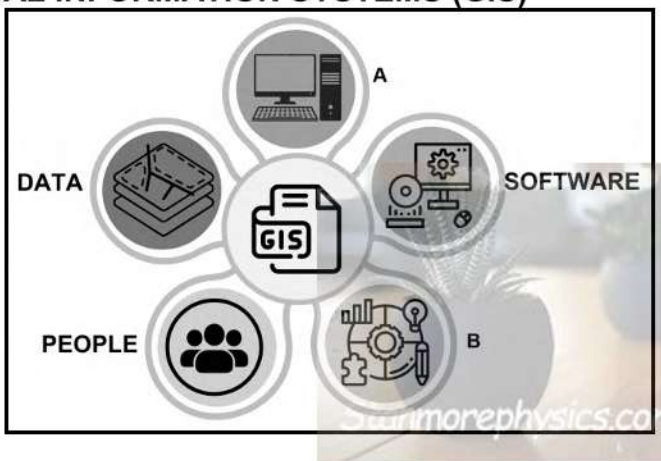
Refer to block **A3** on the topographical map to answer QUESTIONS 3.2.4 and 3.2.5.

3.2.4 Identify TWO types of agricultural activities that take place in block **A3.** (2 x 1) (2)

3.2.5 Explain how the dams in block **(A3)** have positive economic impacts to the farmers. (2 x 2) (4)

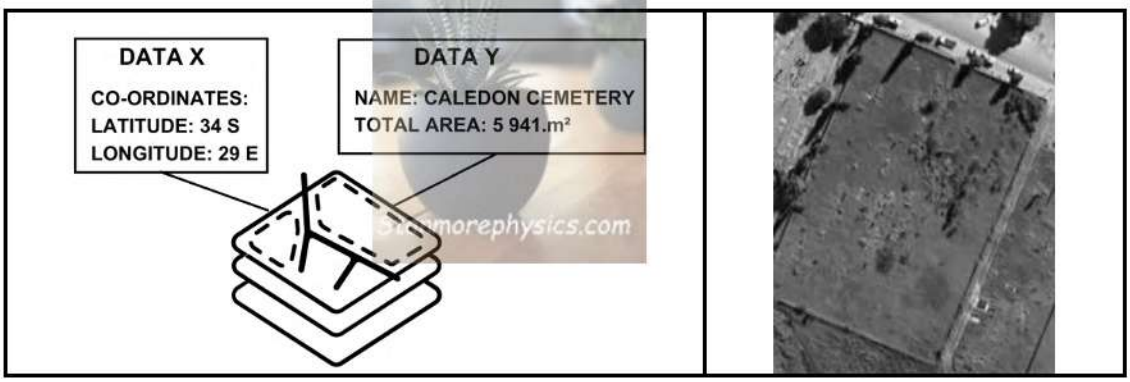
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3.3 GEOGRAPHICAL INFORMATION SYSTEMS (GIS)



3.3.1 State the GIS components labelled **A** and **B.** (2 x 1) (2)

Refer to the sketch and the photograph below that represents the cemetery located in block **E3** on the topographical map. Use this information to answer QUESTIONS 3.3.2 to 3.3.5.



3.3.2 Which data **(X** or **Y)** is attribute data? (1 x 1) (1)

3.3.3 Give a reason for your answer in QUESTION 3.3.2 above. (1 x 2) (2)

3.3.4 Why is the photograph an example of raster data? (1 x 2) (2)

3.3.5 Draw the symbol for a grave as it would be shown on a topographical map. (1 x 1) (1)

TOTAL SECTION B: [30]
GRAND TOTAL: 150

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