

GEOGRAPHY: PAPER I

Time: 3 hours

300 marks

PLEASE READ THE FOLLOWING INSTRUCTIONS CAREFULLY

1. This question paper consists of 30 pages and a colour photograph Insert of 4 (i – iv) pages. Detach the Insert from the middle of the question paper. Please check that your question paper is complete.
 2. Read the questions carefully.
 3. **ANSWER THREE QUESTIONS AS FOLLOWS:**
 - Section A – Compulsory question
 - **One** from Section B
 - **One** from Section C
 4. Credit will be given for the following:
 - interpretation and explanation; and
 - evidence of personal observations where this is appropriate to the question.
 5. You are encouraged to use sketch maps, diagrams and other explanatory drawings to support your answers wherever relevant.
 6. Number your answers exactly as the questions are numbered.
 7. Please circle the number of each question answered on the back inside flap of your Answer Book.
 8. It is in your own interest to write legibly and present your work neatly.
 9. There is a GLOSSARY of words on page 2 explaining what the words in **bold** used in the questions mean.
 10. Candidates must pay attention to the mark allocation. Unless otherwise indicated, two marks are awarded for a valid response. This means that a question carrying four marks requires two responses.
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GLOSSARY

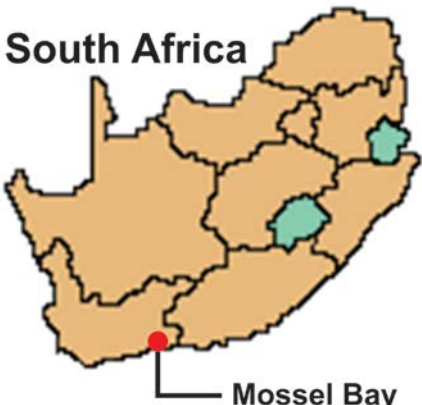
Account for	To explain why, by giving reasons.
Calculate	To work out the value of something using a mathematical method.
Classify	To divide into groups or types.
Compile	To draw up or put a list together.
Copy	To make an exact replica or copy of something.
Define	To give the precise meaning of ...
Demonstrate	To show that you understand something.
Describe	To give an account of something in words.
Determine	To work out by investigation.
Discuss	To explain by argument the various aspects of a statement.
Draw	To show by means of a sketch.
Evaluate	To provide an opinion or judgement with supporting evidence.
Examine	To look at something carefully. To analyse and to discuss.
Explain	To describe something so that it can be understood.
Flow diagram	A series of ideas/concepts linked together to show a process.
Identify	To give the details or characteristics of something/to name or point out.
Justify	To prove something to be valid. To give reasons for your response.
List	To write down, to provide a list of facts or reasons.
Match	To connect similar things or things that belong together.
Mind map	Thoughts and ideas brainstormed and linked together.
Name	To state something, to give; to mention.
Outline	A general explanation or description of something.
Predict	To tell something in advance; to foretell a future event.
Provide	To put forward or give.
Review	To highlight the important parts of an issue.
Select	To choose.
State	To say something, to write something down.
Suggest	To propose an idea, explanation or solution by way of a plan.
Tabulate	To draw up a table.
Trace	To copy an outline by placing a sheet of paper over the figure to be traced.

SECTION A GEOGRAPHICAL ISSUES**COMPULSORY QUESTION FOR ALL CANDIDATES****QUESTION 1 GEOGRAPHICAL CASE STUDY: MOSSEL BAY, WESTERN CAPE**

Study the source material below carefully.

FACT FILE: MOSSEL BAY

- **Population:** 130 000.
- **Climate:** Mossel Bay has the reputation for having the finest weather in South Africa. The warm Agulhas current and the protective Outeniqua Mountains contribute to the temperate climate.
- **Key Economic Sectors:** Farming, fishing and its commercial harbour until the 1969 discovery of natural offshore gas fields led to the development of the gas to liquid refinery called Mossgas. Tourism also plays a significant role.

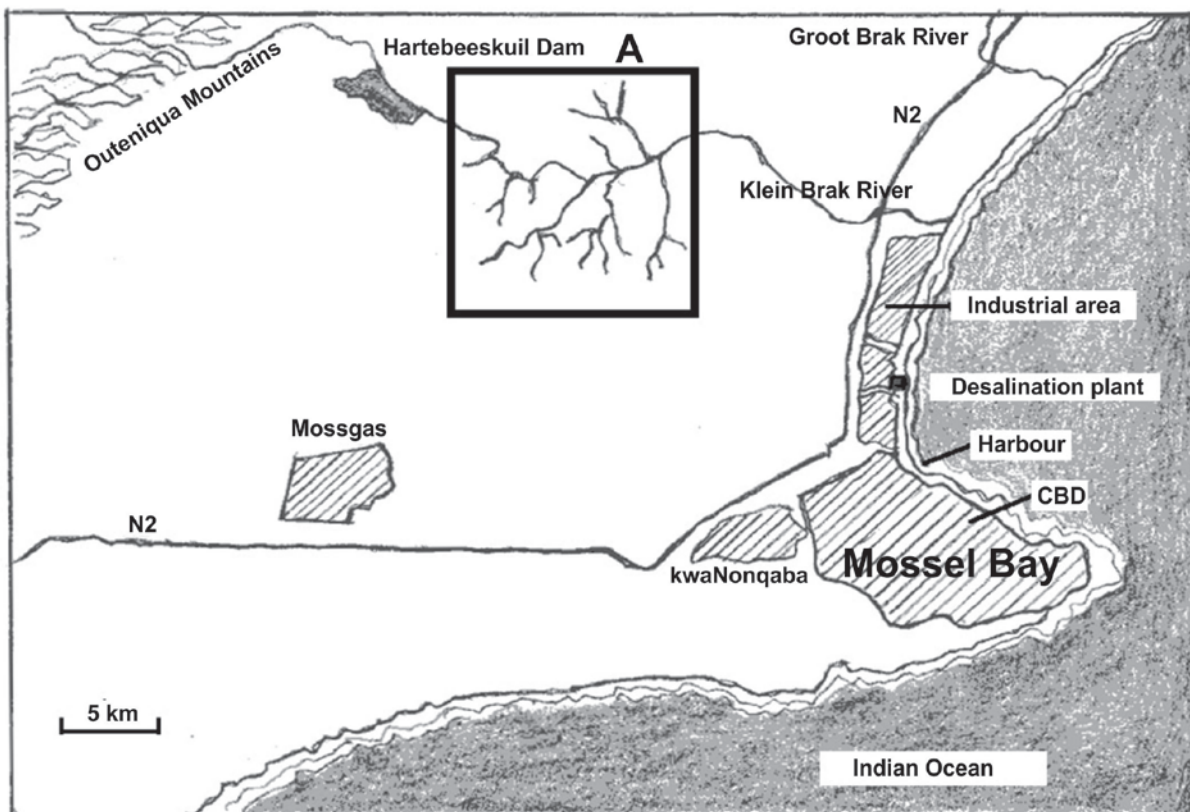


South Africa

Mossel Bay

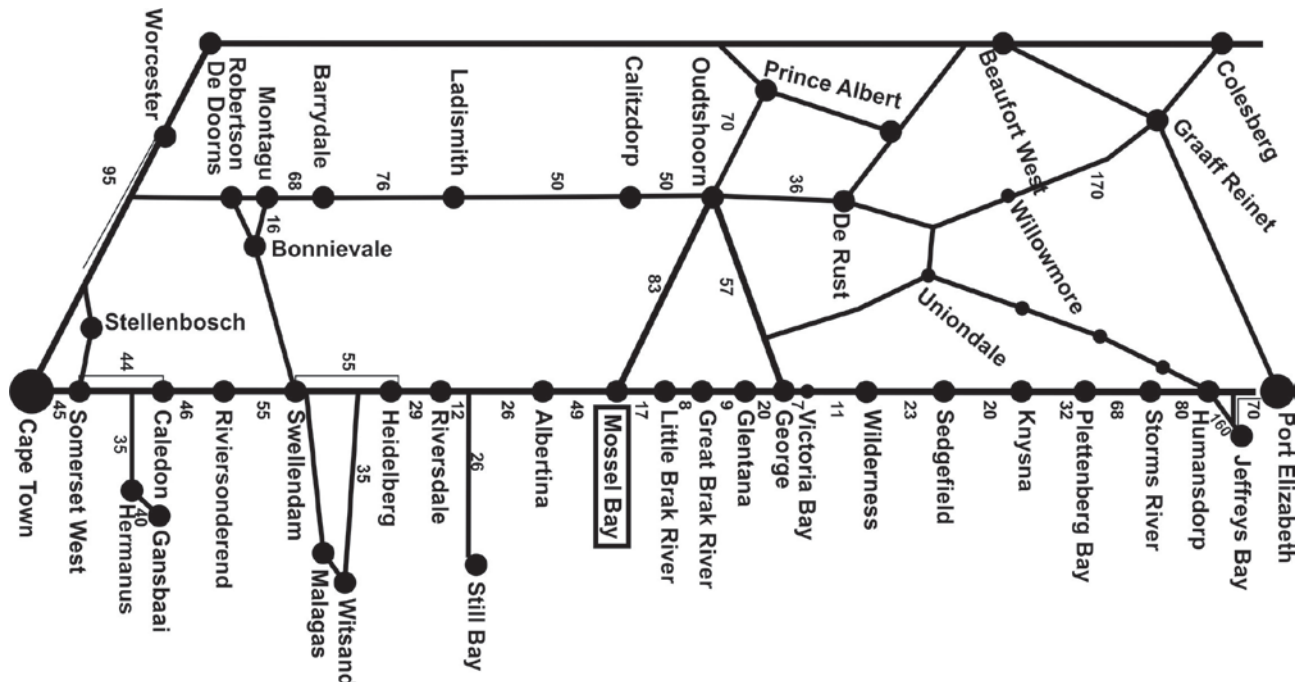
[Source: <www.afrilux.co.za>]

Figure 1: Sketch Map of Mossel Bay and the surrounding areas



1.1 Geographical skills and techniques

Figure 2: A schematic map* from Cape Town to Port Elizabeth



[Source: Lalakoi Publishing]

(*Schematic map – a simplified route map showing the distances between places where scale and direction are not accurate. Other examples include underground train and bus route schematic maps.)

Refer to Figure 2 above.

1.1.1 **Calculate** the shortest distance (km) from Mossel Bay to:

- (a) Oudtshoorn (2)
- (b) Cape Town (2)

1.1.2 **State** if the following are TRUE or FALSE.

- (a) Bearing can be accurately determined using Figure 2. (2)
- (b) Figure 2 attempts to illustrate a hierarchy of urban settlements. (2)
- (c) Figure 2 is drawn using the Universal Transverse Mercator projection. (2)
- (d) The straight line from Cape Town to Port Elizabeth on Figure 2 indicates that this route (N2) follows directly along the coastline. (2)

1.2 Climate and weather, climate hazards: flooding

Text Box: News report of floods in Mossel Bay

FLOODS CAUSED DAMAGE OF R32 MILLION 23 August 2011

The severe weather over most of the African subcontinent yesterday, caused by a massive **cut-off low**, had Sea Rescue stations on high alert to help evacuate people who were in danger. Flooding was reported from the Southern Cape and snowfalls in the Eastern Cape, KZN and even Namibia. The arrival of a **travelling disturbance** two days later resulted in more severe rain.

The Station Commander at Mossel Bay Sea Rescue had his crew down at the Klein Brak River mouth with their rescue boat, and helped to evacuate residents and their animals.

Rainfall Mossel Bay: 23 August 2011 – 105 mm in less than 9 hours. Second highest rainfall in August since 2006.

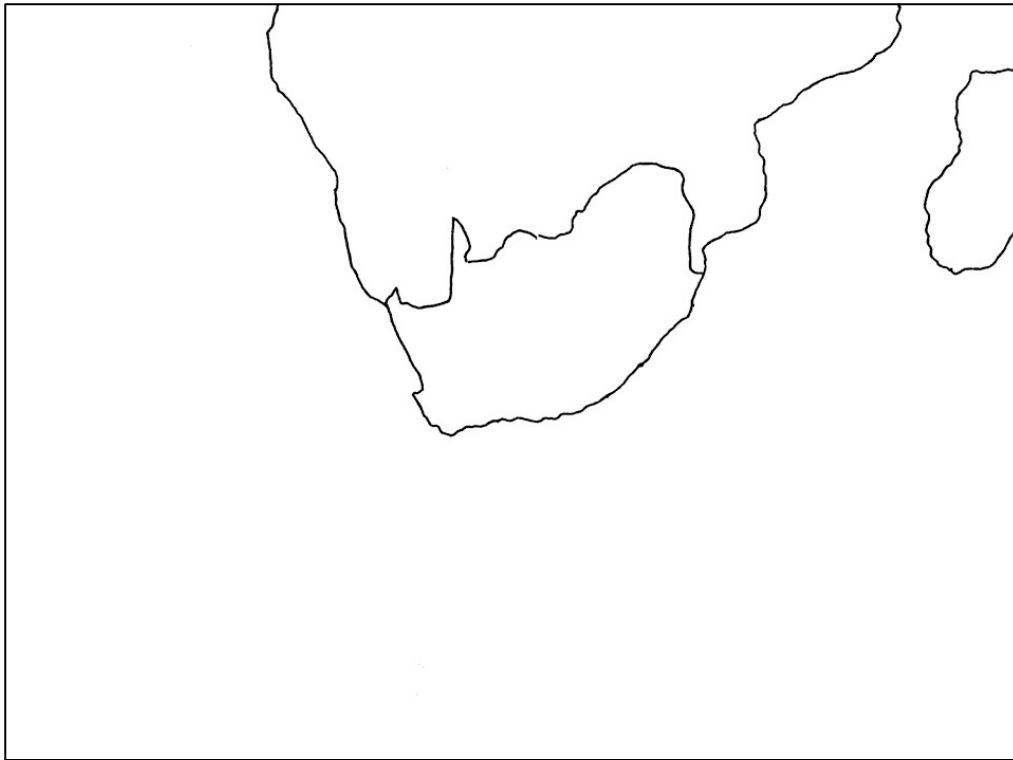
[Source: SA Weather and Disaster Information Service. (SAWDIS)]

Refer to the text box above.

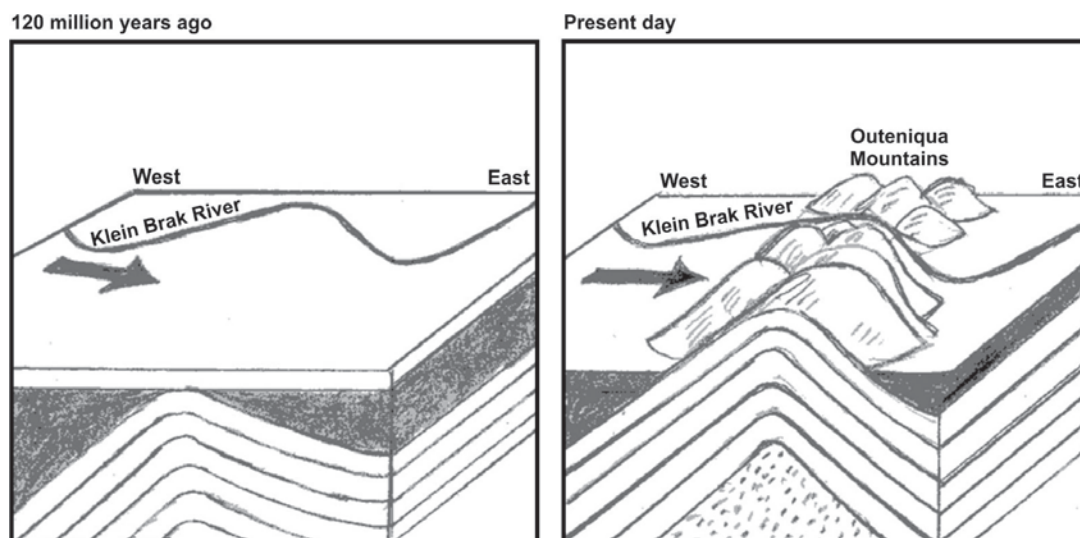
- 1.2.1 Give another climatic name for a *travelling disturbance*. (2)
- 1.2.2 **Copy/trace** the outline map of Southern Africa (Figure 3) on page 6 into your Answer Book. **Draw** a well-labelled synoptic weather map for 23 August 2011 by clearly labelling the following synoptic features:
- (a) South Indian Anticyclone (2)
 - (b) South Atlantic Anticyclone (2)
 - (c) Travelling disturbance (all components) (4)
 - (d) Cut-off low (2)
- 1.2.3 **Describe** how a cut-off low also resulted in snowfalls in other parts of the country, e.g. Eastern Cape and KZN. (4)
- 1.2.4 SA Weather and Disaster Information Service (SAWDIS) is South Africa's early warning service for flood and other disasters. **List TWO** other weather conditions that SAWDIS is likely to monitor in order to save lives and/or money. (4)
- 1.2.5 **Demonstrate** how a GIS system could be used extensively by SAWDIS in preparing warnings. (4)

Figure 3: An outline map of Southern Africa

Copy/trace this outline map into your Answer Book for Question 1.2.2.



1.3 Fluvial processes and landforms

Figure 4: A geological history of the Klein Brak River (North of Mossel Bay)

Refer to Figures 1 (page 3) and 4 (above).

- 1.3.1 **Name** the drainage pattern of the Klein Brak River as shown in block A in Figure 1 (page 3). (2)
- 1.3.2 **List TWO** geomorphological characteristics that determine this particular drainage pattern. (4)

- 1.3.3 **Predict** how the drainage pattern of the Klein Brak River can lead to increased chances of flooding. (4)
- 1.3.4 (a) **Define** *drainage density*. (2)
- (b) **Classify** the drainage density of the Klein Brak River in block A (Figure 1). (2)
- 1.3.5 (a) Study Figure 4 and **state** if the Klein Brak River is superimposed or antecedent. (2)
- (b) **Justify** your answer to Question 1.3.5 (a). (4)

1.4 Water as a critical resource

Refer to Figure 1 (page 3) and the Fact File below.

Fact File: MOSSEL BAY'S DESALINATION PLANT

- The seawater desalination plant of the Mossel Bay Municipality won the top award of Consulting Engineers South Africa for 2011.
- The plant cost R210 million to build as an emergency project when the Southern Cape experienced its worst drought in 132 years in 2010.
- It can produce 15 million litres of fresh water a day.
- It is the biggest seawater desalination plant to have been built in South Africa to date.
- 'Although Mossel Bay's water situation has improved to such an extent that the project will be mothballed almost immediately after the commissioning of the plant in September 2011, it is invaluable from the point of view of Mossel Bay's **water security** in the longer term.'
- The Municipality embarked on the project at a stage when the Hartebeeskuil Dam (see Figure 1), was expected to run dry by the end of 2010.

[Adapted from: < www.mosselbay.gov.za/news>]

- 1.4.1 **Define** *water security*. (2)
- 1.4.2 **Explain** what purpose a desalination plant serves. (2)
- 1.4.3 **Explain** why it was necessary to build a desalination plant in Mossel Bay. (4)
- 1.4.4 **Name** and **evaluate** one other method (other than building a desalination plant) that could be put into place to safeguard water security issues in South Africa. (4)

1.5 People and Places: settlement and economy

Refer to Figure 1 (page 3) and Photographs 1 and 2 (page i in the Insert).

- 1.5.1 **Identify** the main street pattern of kwaNonqaba in Photograph 1. (2)
- 1.5.2 **Name** TWO advantages of this street pattern. (4)
- 1.5.3 **Explain** why kwaNonqaba is located where it is. Refer to Figure 1, page 3. (4)
- 1.5.4 Refer to the Fact File and Figure 1 (both on page 3) and **suggest** an example of employment for the residents of kwaNonqaba in each of these economic sectors:
- (a) Primary (1)
 - (b) Secondary (1)
 - (c) Tertiary (1)
- 1.5.5 **List** THREE municipal services that are evident in Photograph 1 and Photograph 2 (Insert). (3)
- 1.5.6 The settlement of kwaNonqaba was part of the RDP scheme to provide housing and services in the area. Write an essay of approximately 1 – 1½ pages in which you ...
- **Explain** and **review** the purpose of the RDP.
 - Refer to other strategies aimed at improving urban settlements and **evaluate** their impact. (16)

Marks will be awarded for adherence to the suggested sub-sections.

100 marks

SECTION B NATURAL ENVIRONMENTS

Answer **EITHER** Question 2 **OR** Question 3.

QUESTION 2 TROPICAL CYCLONES, MASS MOVEMENTS, FLUVIAL GEOMORPHOLOGY AND URBAN CLIMATE

- 2.1 Study Figure 5, a simplified synoptic weather map for 2012-01-26 and Photograph 3 (page ii of the Insert), a MODIS satellite image of Tropical cyclone Funso.

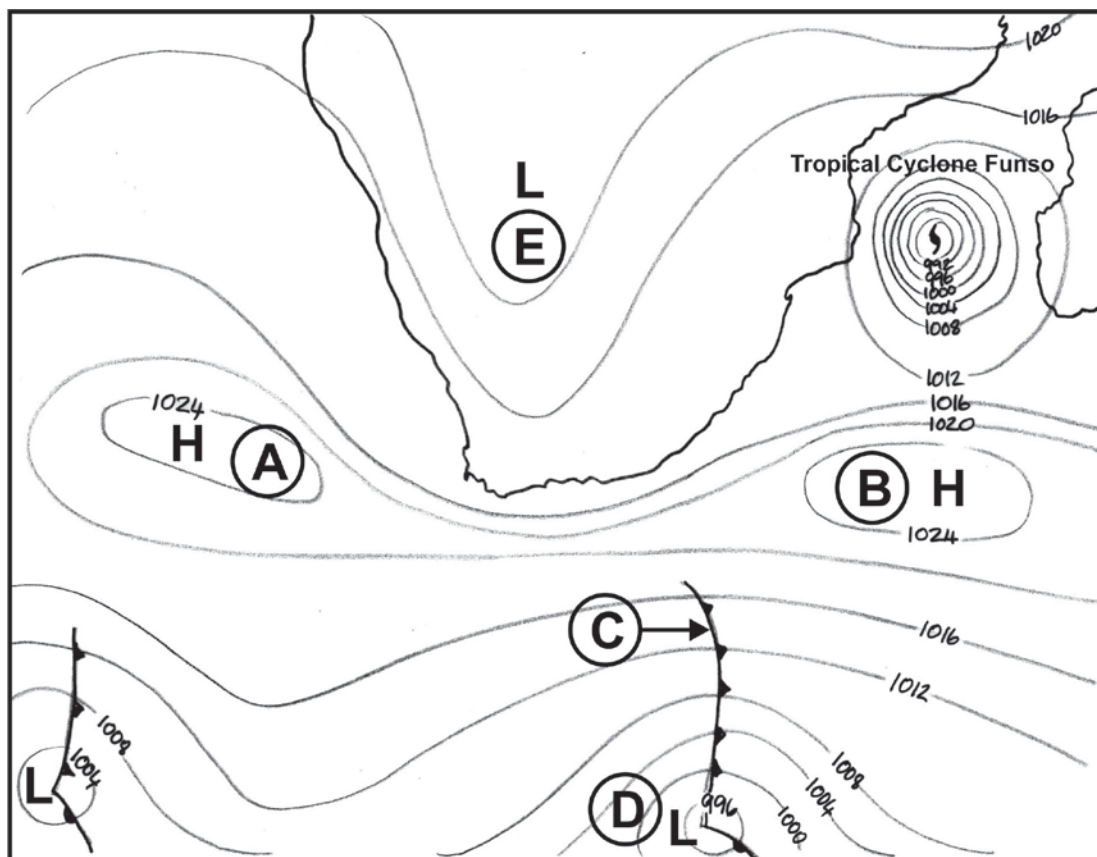
Read the extract below.

NASA's Aqua satellite passed over Tropical Cyclone Funso on 2012-01-26. The MODIS instrument (Moderate Resolution Imaging Spectroradiometer) captured a true colour image of the storm that showed a 46 km eye and clouds swirling into it. The outer extent of Funso's clouds skirted to the west of Madagascar and to the east of Mozambique.

Funso is expected to maintain tropical cyclone strength over the next couple of days as it moves out of the Mozambique Channel and into the open waters of the southern Indian Ocean, where it will begin to weaken.

[Source: <www.sciencedaily.com>]

Figure 5: Simplified synoptic weather map 2012-01-26



Refer to Figure 5 on page 9.

2.1.1 **Name** the ...

- (a) pressure cells A and B.
- (b) weather feature C.
- (c) weather system D.
- (d) weather feature E. (10)

2.1.2 Referring to the season, **explain** the impact pressure cells A and B (Question 2.1.1 a) have on the weather system D (Question 2.1.1 c). (4)

Refer to Figure 5 and Photograph 3.

2.1.3 Locate Tropical Cyclone Funso in the Mozambique Channel. Apart from the name, **provide** THREE pieces of evidence that prove this is a tropical cyclone. (6)

- 2.1.4 (a) In which direction is the air circulating in the tropical cyclone? (2)
- (b) **Name** the force that is associated with this movement of air circulation. (2)

2.1.5 Tropical Cyclone Funso moved into the Mozambique Channel only days after Tropical Cyclone Dando brought severe flooding to Mozambique, Limpopo Province and Mpumalanga. Study the headlines from various news sites below:

TROPICAL CYCLONE DANDO HITS MOZAMBIQUE

'You can let go now' - Man clings to tree for 5 hours in raging flood

Bridges closed as storm limits access to Kruger	Floods force nearly 500 people from their homes in Maputo
--	--

- (a) **Predict** the path that Tropical Cyclone Funso will take over the next few days (refer to Figure 5). (2)
- (b) **Compile** a mind map to **examine** the impacts of tropical cyclones on developing countries such as Mozambique.

Use the following subheadings to **compile** your mind map:

- Weather experienced
- Impacts of severe weather on the people and the environment
- Precautions that could be taken to reduce the risks associated with tropical cyclones (12)

2.2 Mass movements

Study Photographs 4 and 5 in the Insert (page ii).

2.2.1 **Define** *mass movement*. (2)

2.2.2 **Identify** the types of mass movement visible in Photograph 4 and Photograph 5. (4)

2.2.3 **Copy** the table below into your Answer Book and complete the table by filling in the missing information about the mass movements.

	Photograph 4	Photograph 5
Rate of movement		
Explanation of the type of movement		
ONE cause of this type of movement		

(12)

2.2.4 **Suggest** how the mass movement in Photograph 5 can be prevented. (4)

2.3 Fluvial geomorphology

2.3.1 Column A lists various concepts of drainage. Explanations of these concepts are listed in column B. **Match** the correct explanation to each concept. Write only the letter and the corresponding number on your Answer Book. For example: A – 1.

Column A		Column B	
A	Discharge	1	Water which percolates the soil and contributes to the flow of rivers.
B	Flash flood	2	Water that flows over the surface of the ground.
C	Flood peak	3	Amount of water passing a given point in a given period of time.
D	Drainage basin	4	When water flows as a thin sheet across the surface.
E	Base flow	5	The greatest volume of a river after a storm.
		6	The area drained by a river system.
		7	Flooding caused by intense rainfall over a short period of time.

(10)

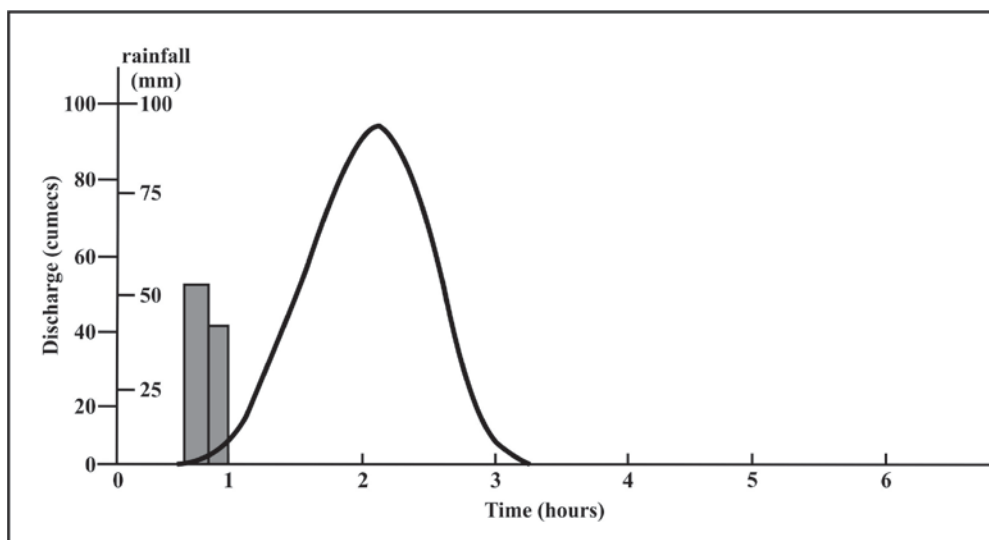
2.3.2 Refer to Photograph 6 and Figure 6 below.

Photograph 6: A wadi* in the Namib desert



[Examiner's photograph]

Figure 6: A hydrograph for a flash flood in a wadi*



(*wadi – a steep-sided, dry ravine in a desert or semi-arid area, usually streamless, but sometimes containing a torrent of water)

- (a) What type of river flow is experienced by rivers in arid regions (e.g. Namib Desert)? (2)
- (b) **Calculate** the lag time (hours) for the hydrograph (Figure 6). (2)
- (c) What is the human significance of the lag time in a flash flood? (2)
- (d) **Explain** why rivers in arid areas stop flowing soon after a rainstorm has ended. (4)
- (e) **Suggest** why experienced tourists and campers should avoid camping in a wadi. (4)

2.4 Urban climate

Refer to Photographs 7 and 8 in the Insert (page iii).

'Cities generate enormous amounts of artificial heat.'

Write an essay of 1 – 1½ pages to **discuss** this statement, using the following sub-headings:

- the sources of heat in an urban environment
 - the impact of increased city temperatures on the urban microclimate
 - sustainable strategies to reduce increasing city temperatures
- (16)

Marks will be awarded for adherence to the suggested sub-sections.

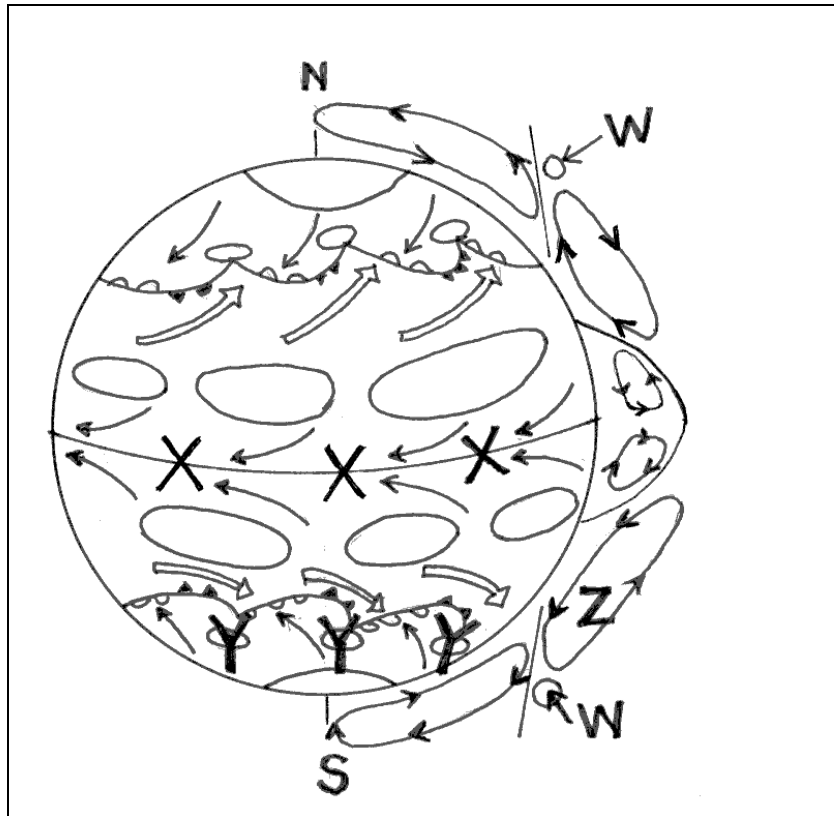
100 marks

OR QUESTION 3

SECTION B NATURAL ENVIRONMENTS**QUESTION 3 CLIMATE AND WEATHER, FLUVIAL PROCESSES AND LANDFORMS****3.1 Global air circulation**

Study Figure 7, a diagram showing the general circulation of the atmosphere.

Figure 7: The general circulation of the atmosphere

**Multiple choice**

Various options are given as possible answers to the following questions. **Select** the most appropriate answer from the list. Write down only the question number and the correct answer. For example: 3.1.1 – D.

3.1.1 The pressure belt at X is ...

- A the equatorial low
- B the cool temperate high
- C the warm temperate low
- D the equatorial high

(2)

3.1.2 The winds at Y are known as ...

- A sub-polar south westerlies
- B polar westerlies
- C polar easterlies
- D polar trade winds

(2)

3.1.3 The air circulation cell at Z is the ...

- A Equatorial cell
 - B Ferrel cell
 - C Hadley cell
 - D Polar cell
- (2)

3.1.4 There is a permanent ... centred over the South Pole.

- A cyclone
 - B low pressure trough
 - C polar front
 - D high pressure
- (2)

3.1.5 The name of the fast flowing air above the polar front at W is called ...

- A a polar easterly
 - B a pressure gradient
 - C the jet stream
 - D the trade wind
- (2)

3.2 Climates at regional and local scale

Read the extract below and study Figure 8 (page iii in the Insert), a meteorological satellite image and synoptic weather map dated 11 February 2011.

Heat Wave Kills 250 Ostriches in South Africa

February 11, 2011

- At least 250 ostriches died from excessively hot temperatures in Oudtshoorn in South Africa's Western Cape Province.
- Ostriches between the ages of four and five months, which cost about R2 300 each, are most vulnerable.
- Ostriches struggle to gasp as a means of cooling down when there is extreme heat, resulting in organ failure.

[Adapted from: Report by Mkhululi Mancotywa, *Beeld*]

3.2.1 A heat wave is an example of a climate hazard. **Define** a *Heat Wave*. (2)

3.2.2 Refer to the automatic weather station at Oudtshoorn in Figure 8 (Insert), and **list** the weather conditions experienced on 11 February 2011. (4)

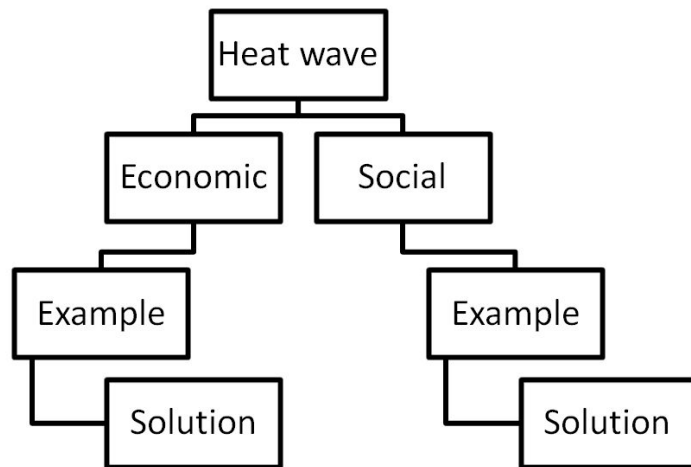
3.2.3 **Name** the hot, dry wind that contributed to the heat wave conditions for Oudtshoorn. (2)

3.2.4 **Describe** THREE climatic conditions necessary for these winds (Question 3.2.3) to form. (6)

3.2.5 **Predict** the weather conditions in Oudtshoorn three days after the weather report, i.e. for the 14 February 2011. (4)

3.2.6 **Draw** a well-labelled diagram (section) from A to B in Figure 8 (Insert) indicating all the climatic features and associated weather. (6)

- 3.2.7 **Copy** and complete the **flow diagram** to **discuss** *examples* and *solutions* of economic and social consequences (other than ostrich losses) to the people residing in Oudtshoorn as a result of the heat wave.



(8)

3.3 Topography associated with horizontal layers: Karoo landscape

Study Photograph 9 (page iv in the Insert).

- 3.3.1 Refer to Photograph 9. Read the following statements. In your Answer Book write down the correct answer selected from the underlined words next to each question letter.

- (a) The landform in Photograph 9 is a butte/mesa.
- (b) Over time the feature will become a plateau/conical hill.
- (c) The resistant rock at A is likely to be dolerite/granite.
- (d) Rockfalls/sheetwash are/is likely to occur at place A.
- (e) The feature labelled D is a pediment/cuesta basin. (10)

- 3.3.2 **Name** the slope elements at B and C. (4)

- 3.3.3 **Draw** the landform shown in Photograph 9 as seen from above using contours, i.e. how it would appear on a 1 : 50 000 topographical map. (4)

- 3.3.4 (a) **Define** *gully erosion*. (2)

- (b) **Suggest** THREE factors that would cause gully erosion to increase in the area in Photograph 9. (6)

3.4 Fluvial processes

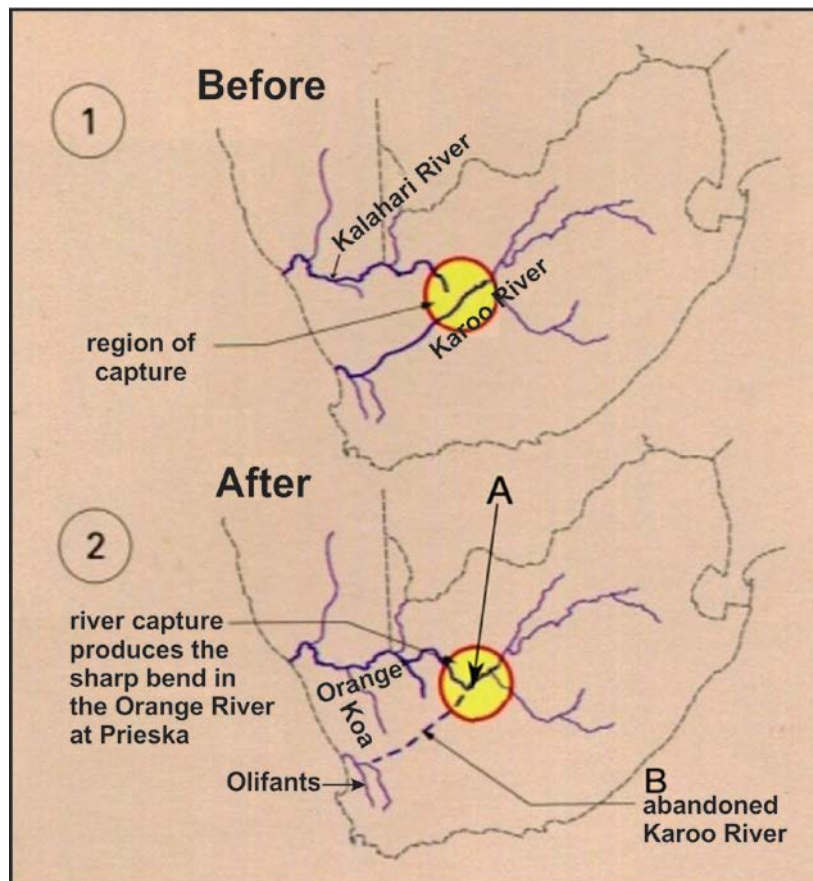
Refer to Figure 9 and the extract below:

What is the origin of west coast diamonds?

- Diamonds are found along the South African and Namibian west coasts.
- Only the Orange-Vaal River system could have carried diamonds to the coast.
- The Benguela Current flows along the coast from south to north. However, diamonds are found all along the west coast as far south as the Olifants River.
- Another river in the geological past must have drained into the Olifants River.

[Adapted from McCarthy, T. *How on Earth?* Struik Nature]

Figure 9: The possible evolution of the Orange River



[Source: McCarthy, T. *How on Earth?* Struik Nature]

3.4.1 Refer to Figure 9. Give another name for the ...

(a) sharp bend in the river (labelled A) (2)

(b) abandoned Karoo River (labelled B) (2)

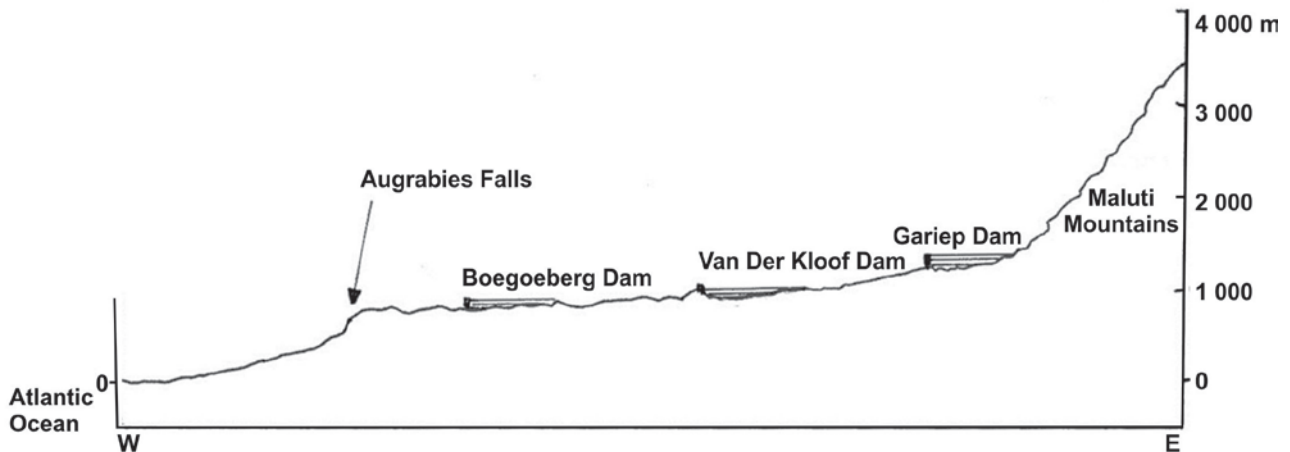
3.4.2 **Identify** TWO possible reasons why the Orange River captured the waters of the Karoo River. (4)

3.4.3 Looking at the 'after' map 2 (Figure 9), one notices that the area of the Orange River drainage basin has increased. **Suggest TWO** reasons for this. (4)

3.4.4 **Discuss** how this theory of the possible river capture of the Orange River could explain why diamonds are found along the coast as far south as the Olifants River. (4)

3.4.5 Refer to Figure 10, a longitudinal profile of the Orange River as it is today.

Figure 10: A longitudinal profile of the Orange River from the Maluti Mountains to the Atlantic Ocean



You have been asked to write 1 – 1½ pages for an adventure tourism company's website to advise river rafters who plan to navigate the Orange River from the source to the mouth. Refer to Figure 10 above.

Use these points to structure your website report:

- **Describe** examples of natural and constructed *knick points* to be encountered on route.
- **Explain** the changes in the *longitudinal profile* and *channel characteristics* of the Orange River from source to mouth.
- **Discuss** why knowledge of a longitudinal river profile is important for river rafters. (16)

Marks will be awarded for adherence to the suggested sub-sections.

100 marks

SECTION C HUMAN ENVIRONMENTS

Answer ONE question from this section, **EITHER** Question 4 **OR** Question 5.

QUESTION 4 PEOPLE AND PLACES; PEOPLE AND THEIR NEEDS**4.1 Karoo settlement**

Study Photographs 10A and 10B below, and Photograph 11, a Google image (page iv of the Insert). These photographs show the small settlement of Prince Albert, Western Cape.

Photograph 10A
Typical Karoo architecture



[Examiner's photograph]

Photograph 10B
Water furrows (leiwater) used by the residents of Prince Albert (Question 4.1)



[Examiner's photograph]

FACT FILE:

- Prince Albert was established in 1762 and served a thriving farming community around it.
- The town is at the foot of the Swartberg Mountains, 70 km from Oudtshoorn and 153 km from Mossel Bay.
- Roads are lined with 200 year old trees and narrow water furrows are used to flood irrigate residents' gardens. Water is obtained from the Swartberg Mountains.
- Many of the original 200 year old houses remain and are good examples of typical Karoo architecture.
- Prince Albert is known for both its fresh and sun-dried fruit and vineyards.
- This is one of the largest olive-producing areas in the country.

[Source: <www.patourism.co.za>]

4.1.1 **Select** the correct underlined word(s) to complete the sentences below. Write down only the letters (a – e) and the correct word(s) next to them.

- (a) Prince Albert is a town/city.
- (b) Prince Albert's sphere of influence is large/small.
- (c) Prince Albert's threshold population is large/small.
- (d) The main function of Prince Albert is a service centre/break-of-bulk point.
- (e) The many Bed-and-Breakfast establishments in Prince Albert are part of the secondary/tertiary sector. (10)

4.1.2 Using evidence from Photograph 10B and Photograph 11 and the Fact File, **describe** the:

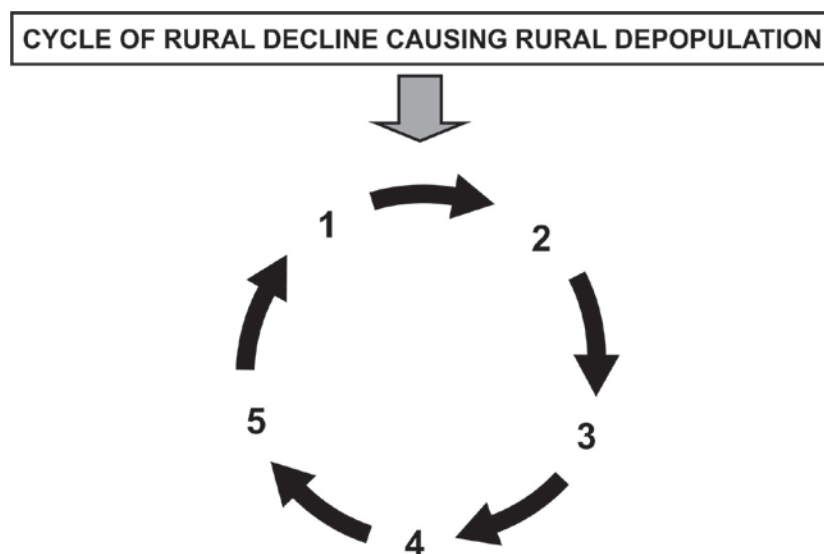
- (a) site, and (4)
- (b) situation of Prince Albert. (4)

4.1.3 Refer to Photograph 11 (Insert).

- (a) **Classify** the settlement of Prince Albert according to its shape. (2)
- (b) **Account for** this pattern. (4)

4.1.4 Settlements such as Prince Albert face the problem of rural depopulation.

Copy the diagram below and fill in the reasons for the cycle of rural decline, which contribute to rural depopulation.



(10)

4.1.5 The authorities in settlements like Prince Albert have had to implement strategies to 'reinvent' such towns to stop rural depopulation.

List FOUR ways in which this settlement could become more attractive and sustainable. Use information that is specific to this area. (8)

4.2 Industrial location

Read the Fact File on the Coega Industrial Development Zone (IDZ), Eastern Cape.

<p>Fact File</p>	<p>The Coega IDZ is expected to flourish in 2012</p> <ul style="list-style-type: none"> • R140 billion potential investments in the pipeline. • This IDZ is one of five established 11 years ago as part of the government's economic development strategy to attract direct foreign investment, technology and production methods. • To date 3 276 jobs have been created. <p>The following projects are expected:</p> <ul style="list-style-type: none"> • Coega dairy – agro-processing • Cerebos (SA) – chemicals • Astrum Energy (Germany) – development of a 13 megawatt solar photovoltaic cell farm • Kalagadi – manganese smelter • Investment from Spain, Germany and China in the automotive industry. <p>Coega is close to the Nelson Mandela Bay Metropole (Port Elizabeth).</p>
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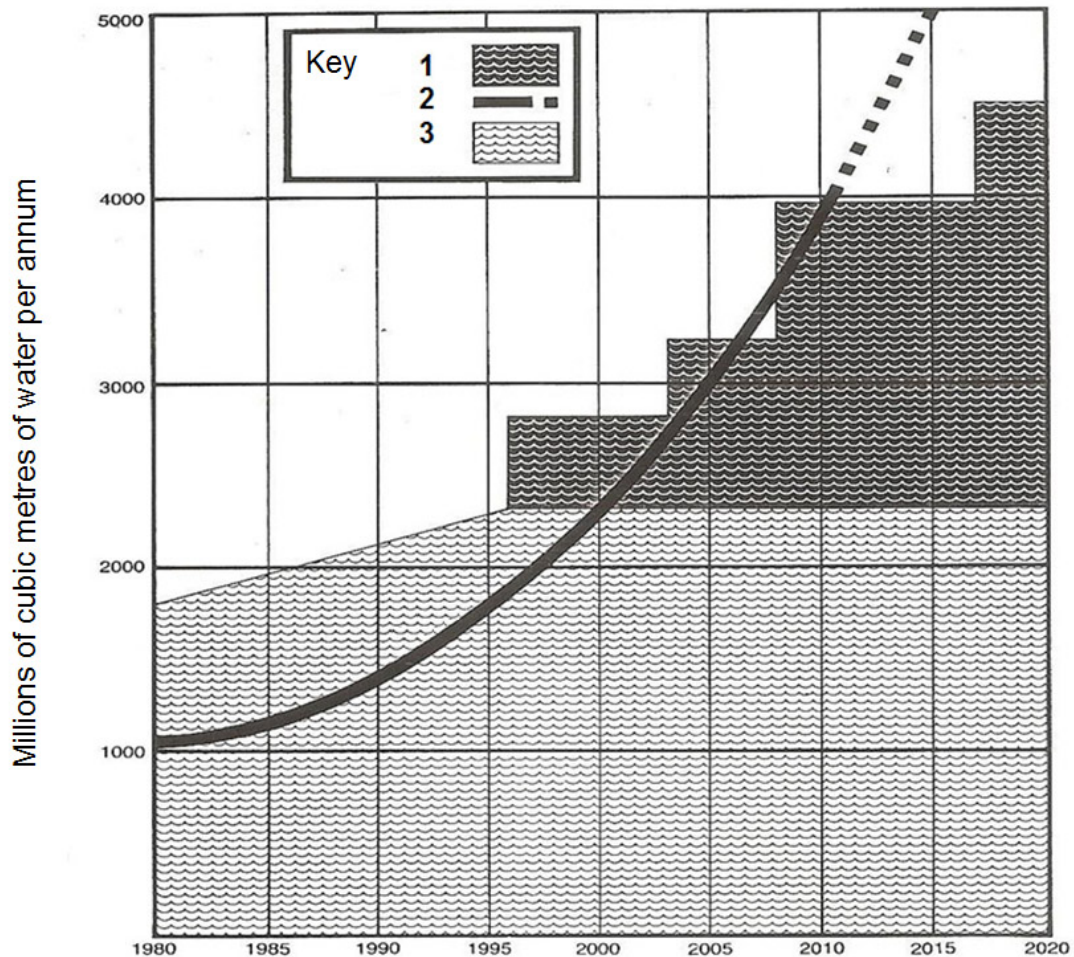
[Source: *Business Times* 2 February 2012]

- 4.2.1 What is an IDZ? (2)
- 4.2.2 **Outline** FIVE industrial location factors that favour the development of an IDZ, such as Coega. (10)
- 4.2.3 Why is the agro-processing industry important to the economy and people of Eastern Cape? (4)
- 4.2.4 **Discuss** the importance of providing more employment opportunities in Eastern Cape. (4)

4.3 Water management

Study Figure 11, a graph showing water supply and demand for Gauteng.

Figure 11: Water supply and demand for Gauteng



Explanation of key in Figure 11:

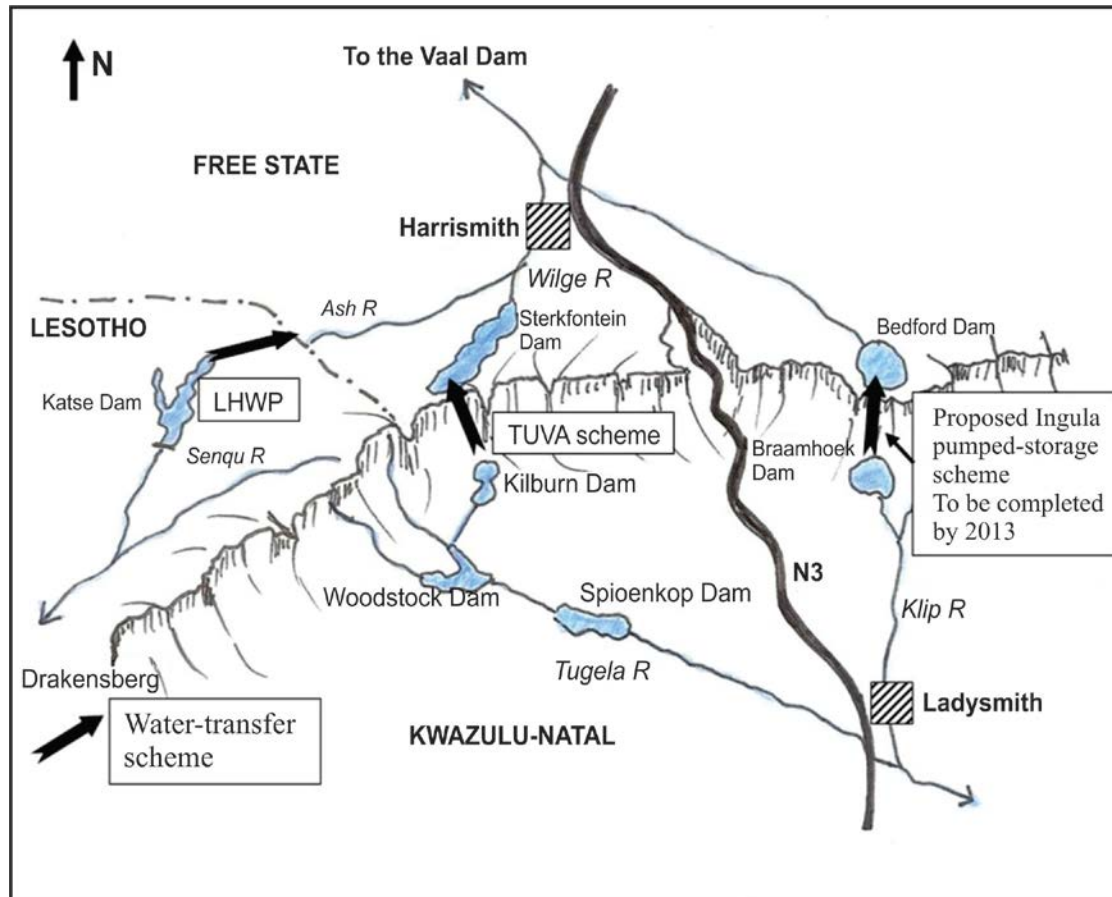
- 1** Lesotho water
- 2** Water demand – Gauteng
- 3** Firm yield of Vaal River and KZN water

- 4.3.1 (a) **Determine** the expected water demand for Gauteng for 2012. (2)
- (b) What is the predicted water demand for 2015 for Gauteng? (2)
- 4.3.2 **Describe** the trend in water demand of Gauteng from 1980 to 2012. (2)
- 4.3.3 **List** FOUR consumers of water in a province such as Gauteng. (4)
- 4.3.4 **Describe** the importance of water from Lesotho with reference to Figure 11. (2)
- 4.3.5 **Explain** what is meant by the *firm yield* of the Vaal River and KZN water. (4)

4.4 Inter-basin transfer schemes

Refer to Figure 12, which shows the location of inter-basin water transfer schemes.

Figure 12: Location of inter-basin water transfer schemes



- 4.4.1 What is an inter-basin transfer scheme? (2)
- 4.4.2 Which TWO schemes currently supplement the Vaal Dam's water reserves? (4)
- 4.4.3 Refer to Figures 11 and 12. Write a report (1 to 1½ pages) in which you **evaluate** the importance of water-transfer schemes and long-term water management to the South African economy. You may refer to any examples that you have studied or are familiar with. (16)

100 marks

OR QUESTION 5

SECTION C HUMAN ENVIRONMENTS**QUESTION 5 PEOPLE AND PLACES, PEOPLE AND THEIR NEEDS****5.1 Terminology: Rural Settlement**

Match the word(s) in column A with the correct statement in column B. Write ONLY the number and correct letter, e.g. 1 – A.

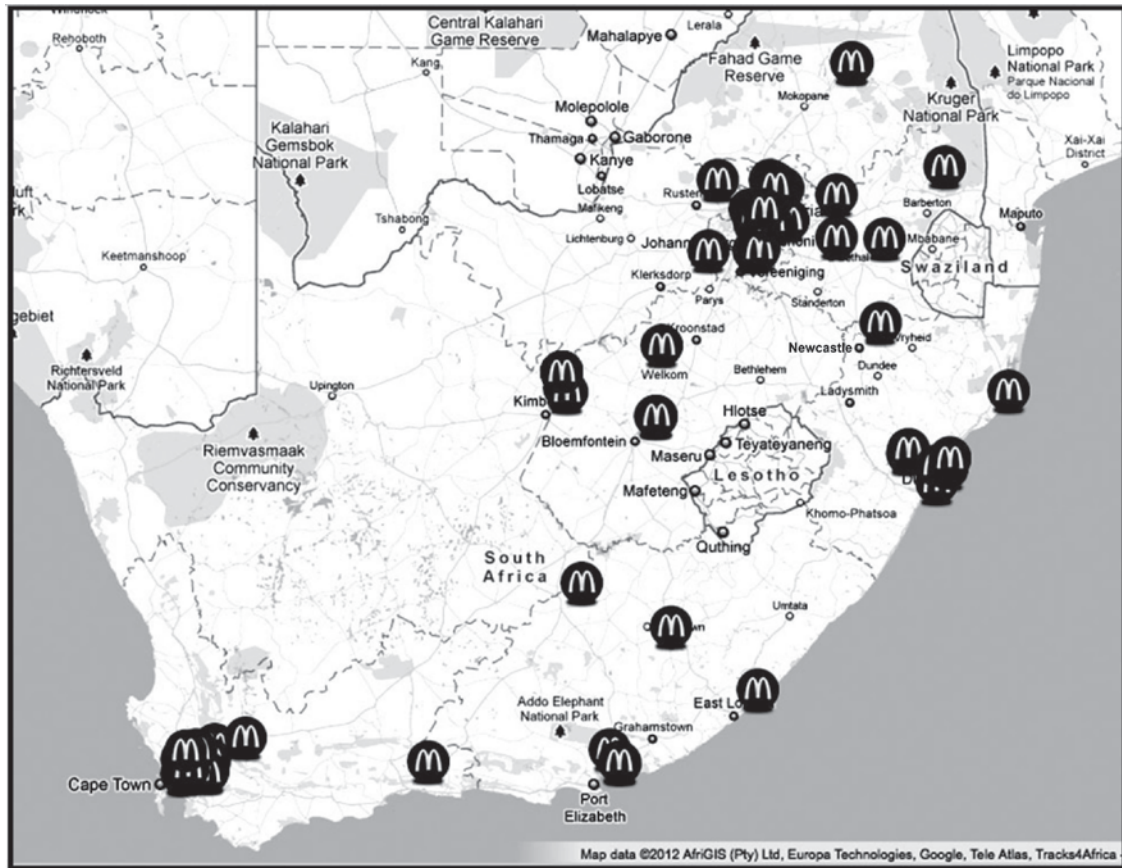
Column A		Column B	
1	Site	A	This is found in an area of abundant water supply.
2	Land reform	B	The actual land on which a settlement is built.
3	Wet point settlement	C	Will reduce the trend of rural depopulation.
4	Communal land tenure	D	To bring about a more fair and equal distribution in land ownership.
5	Counter-urbanism	E	This refers to shared and joint land ownership.
		F	This is found in an area where water is scarce.
		G	This refers to land occupancy – the right to live on the land.
		H	The location of a settlement relative to its surroundings.

(10)

5.2 Urban hierarchy

Refer to Figure 13 illustrating the location of McDonald's fast-food outlets and Table 1 showing the number of McDonald's fast-food outlets in each urban settlement area.

Figure 13: Map indicating the location of McDonald's fast food outlets



[Source: <<http://www.McDonald's.co.za/locator>>]

Table 1: The number of McDonald's fast food outlets in each urban settlement

	Urban settlement name	Number of McDonald's outlets
A	Greater Johannesburg Metropolis	43
B	Cape Town Metropolis	23
C	Bloemfontein	2
D	Newcastle	1
E	Mokopane	0

5.2.1 **Explain** the following settlement terms ...

- (a) Sphere of influence (2)
- (b) Hierarchy or ranking of urban places (2)

5.2.2 **Discuss** THREE locational factors McDonald's fast food would consider when opening a new outlet. (6)

5.2.3 Give your opinion as to whether there is a relationship between the distribution of McDonald's fast-food outlets and Central Place Theory. **Justify** your answer. (8)

5.3 Sustainable, 'Smart'/efficient cities

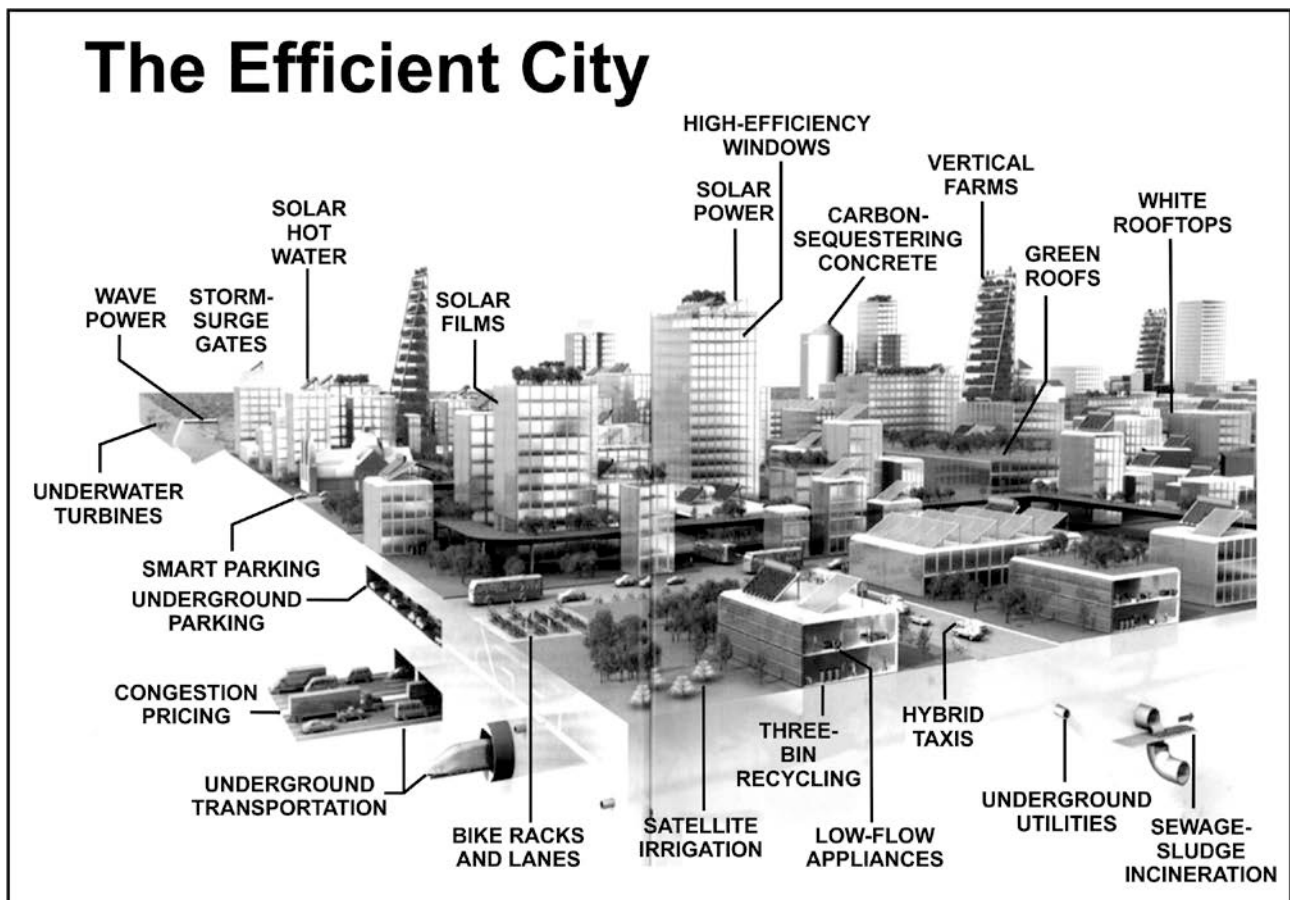
Study Figure 14 on page 27, an artist's impression of a 'Smart'/Efficient City and read the extract below.

The Efficient City

- In order to cope with the rapid tide of urbanisation, cities have to be greener, better and smarter.
- Municipalities worldwide are exploring a host of creative solutions **to reduce energy consumption, water use, waste and emissions, while also making it easier to get around.**
- Retrofitting* is the best way to clean up urban living.
- Readyng today's cities for the future will require both high-tech and low-tech changes.

*Retrofitting – changing something which already exists

[Adapted from: Scientific American, *Greener Cities*, September 2011]

Figure 14: An artist impression of a 'Smart'/Efficient City – Question 5.3

[Source: Scientific American, *Greener Cities*, September 2011]

5.3.1 **Define** an *efficient – sustainable – smart city*. (2)

5.3.2 **Outline** FIVE urban issues that are faced by South African urban settlements in 2012. (10)

5.3.3 Write an essay of 1 – 1½ pages to **examine** how urban designers have to be creative to solve pressing urban issues. Refer to Figure 14 above and use examples from areas you have studied.

Use these sub-headings:

- Ways to reduce urban energy and water consumption
 - Ways to reduce urban waste and emissions
 - Ways to make it easier to get around urban settlements
- (16)

Marks will be awarded for the structure of the essay and adherence to the suggested sub-sections.

5.4 Globalisation

Refer to the extract below:

Walmart, the world's biggest retailer, has gained its first foothold in Africa despite fierce opposition from trade unions

- South Africa's competition tribunal approved the multinational corporation's \$2.4bn bid for Massmart, which has 288 stores in South Africa and a dozen other African countries.
- The move clears the way for Walmart in a fourth continent, having already aggressively swept through America, Asia and Europe.



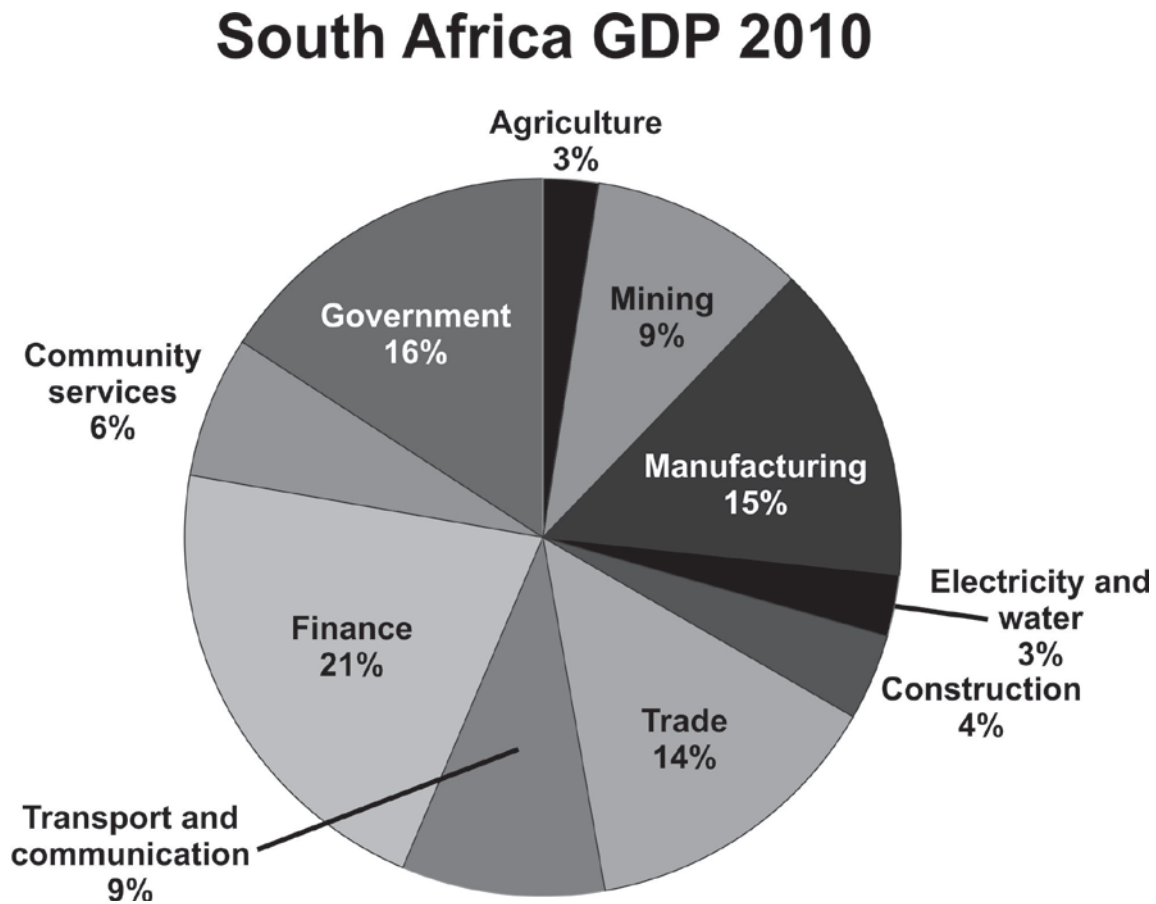
[Source: <www.guardian.co.uk/business/2011/may/31>]

- 5.4.1 **Define** *globalisation*. (2)
- 5.4.2 **Predict** the impact that *Walmart*, a global organisation, could have on South Africa's: (4)
- (a) Employment (4)
- (b) Informal sector (4)
- 5.4.3 **Tabulate** TWO advantages and disadvantages *Walmart* will have on South Africa's trade. (8)
- 5.4.4 **Discuss** TWO factors that influence local business in a global market. (4)

5.5 Economic Activities

Refer to Figure 15 illustrating the GDP per sector for South Africa's economy for 2010.

Figure 15: GDP per sector for South Africa's economy



[Source: SA Institute of Race Relations]

5.5.1 **Define** the following:

- (a) GDP (2)
- (b) Manufacturing (2)

5.5.2 **Name** the TWO economic sectors that contributed the most to South Africa's GDP in 2010. (4)

5.5.3 **Classify** the following components in Figure 15 into primary, secondary or tertiary activities:

- (a) Construction
- (b) Transport
- (c) Agriculture
- (d) Finance (4)

- 5.5.4 In 2011, South Africa had a *trade deficit* of R4 billion. **Explain** what this means. (2)
- 5.5.5 **Suggest** FOUR strategies that could be put into place to help reduce this *trade deficit* (Question 5.5.4). (8)

100 marks

Total: 300 marks