



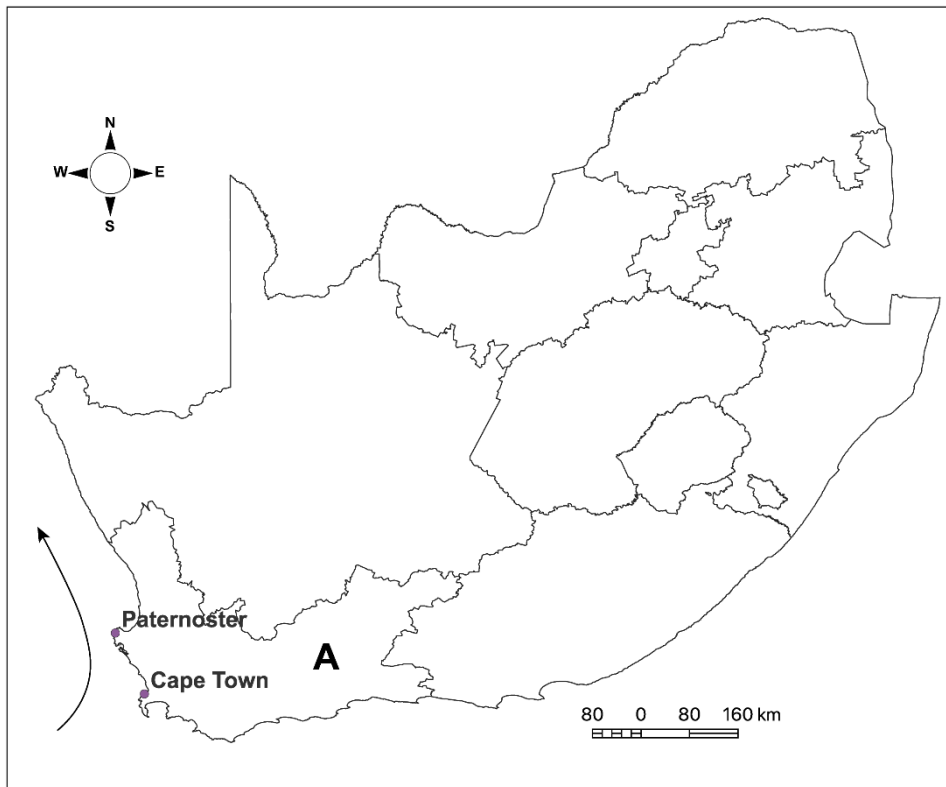
**Topographic map symbols**

**Topografiesekaartsimbole**

**Topographic map symbols**

**Topografiesekaartsimbole**

National Freeway; National Route .....		Nasionale Deurpad; Nasionale Roete .....
Arterial Route .....		Hoofverkeersroete .....
Main Road .....		Hoofpad .....
Secondary Road; Benchmark .....		Sekondêre Pad; Hoogtemerk .....
Other Road; Bridge .....		Ander Pad; Brug .....
Track and Hiking Trail .....		Dowwe Pad en Voetslaanpad .....
Railway; Station or Siding .....		Spoorweg; Stasie of Sylyn .....
Other Railway; Tunnel .....		Ander Spoorweg; Tonnel .....
Embankment; Cutting .....		Opvulling; Deurgrawing .....
Power Line .....		Kraglyn .....
Built-up Area (High, Low Density) .....		Beboude Gebied (Hoë, Lae Digtheid) .....
Buildings; Ruin .....		Geboue; Murasie .....
Post Office; Police Station; Store .....		Poskantoor; Polisiestasie; Winkel .....
Place of Worship; School; Hotel .....		Plek van Aanbidding; Skool; Hotel .....
Fence; Wall .....		Draadheining; Muur .....
Windpump; Monument .....		Windpomp; Monument .....
Communication Tower .....		Kommunikasietoring .....
Wind Turbine; Wind Farm .....		Windturbine; Windplaas .....
Satellite Antenna; Solar Panel Array .....		Satellietantenna; Sonkragplaas .....
Trigonometrical Station; Marine Beacon .....		Peilbaken; Seevaartbaken .....
Lighthouse and Marine Light .....		Vuurtoring en Seevaartlig .....
Cemetery; Grave .....		Begraafplaas; Graf .....
International Boundary and Beacon .....		Internasionale Grens en Baken .....
Provincial Boundary .....		Provinsiale Grens .....
Protected Area .....		Bewaringsgebied .....
Perennial River .....		Standhoudende Rivier .....
Perennial Water .....		Standhoudende Water .....
Non-perennial River .....		Nie-standhoudende Rivier .....
Non-perennial Water .....		Nie-standhoudende Water .....
Dry Watercourse .....		Droë Loop .....
Dry Pan .....		Droë Pan .....
Marsh and Vlei .....		Moeras en Vlei .....
Pipeline (above ground) .....		Pyplyn (bo die grond) .....
Water Tower; Reservoir; Water Point .....		Wattoring; Reservoir; Waterpunt .....
Coastal Rocks .....		Kuslynrotse .....
Prominent Rock Outcrop .....		Prominente Klipbank .....
Erosion; Sand .....		Erosie; Sand .....
Woodland .....		Beboste Gebied .....
Cultivated Land .....		Bewerkte Land .....
Orchard or Vineyard .....		Boord of Wingerd .....
Recreation Ground .....		Ontspanningsterrein .....
Row of Trees .....		Ry Bome .....
Mine Dump; Excavation .....		Mynhoop; Uitgraving .....

**QUESTION 1      MAP SKILLS AND FLUVIAL GEOMORPHOLOGY****Figure 1 – Location map and fact file**

[Source: IEB cartographer]

- Paternoster, founded in 1863, is one of the oldest fishing villages on the West Coast of South Africa.
- Its name means 'Our Father' in Latin, which either refers to the prayers of the Portuguese sailors when they became shipwrecked, or to the name given to the beads that the Khoi (Khoekhoe) tribe wore.
- The remarkable coastline of jagged cliffs and white boulders makes this one of the most beautiful beaches and a sought-after tourist destination.
- The area is a pillar in the South African commercial fishing industry. The town itself has a lobster factory and fish farms, whilst the local people catch and sell herring, and harvest mussels from the rocks.
- Limestone is abundant in the area, and it was often used for building. Whitewashed houses and fisherman's cottages dominate the town's architecture. Nowadays the town is better known as a tourist centre than a fishing hub.

[Source: Adapted from <<https://www.paternoster.co.za/paternoster/history>>]

1.1 Refer to the location map on page 3 and **mark** the correct answer.

1.1.1 The capital of the province is the ... national capital.

judicial	
legislative	
executive	
administrative	

(1)

1.1.2 The ocean current that flows past Paternoster is: (circle 3 correct answers)

warm	north flowing	Agulhas	cold	south flowing	Benguela
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(3)

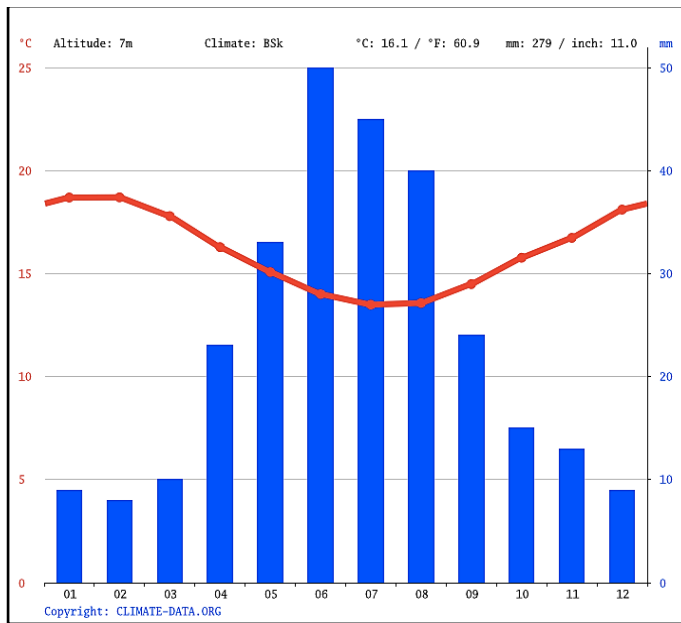
1.1.3 Calculate the straight-line distance from Paternoster to Cape Town.

Distance: \_\_\_\_\_

(1)

1.2 Refer to the graph to answer the questions below.

**Figure 2 – Climate graph for Paternoster**



[Source: <Climate-Data.org>]

1.2.1 The climate experienced at Paternoster is best described as ...

Mediterranean.	<input type="checkbox"/>
desert.	<input type="checkbox"/>
subtropical.	<input type="checkbox"/>

(1)

1.2.2 Circle the correct answers:

Rainfall in Paternoster is <i>high</i> / <i>low</i> and annual temperatures are generally <i>high</i> / <i>low</i> .
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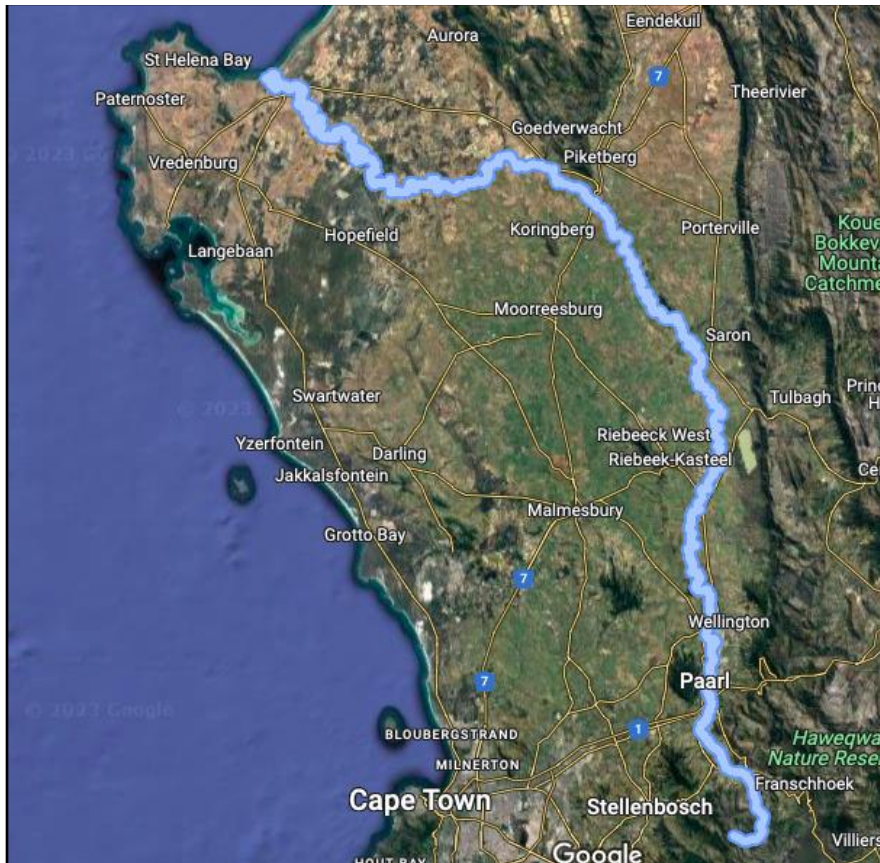
(1)

### 1.3 Berg River and the Canoe Marathon

The Berg River rises in the Franschhoek Mountains at an altitude of 1 500 m. The river is 294 km long.

[Source: <sahistory.org.za>]

**Figure 3 – Berg River**



[Source: Google maps]

1.3.1 The source of the Berg River is (i) or (ii) and the mouth lies to the (iii) or (iv) of Paternoster.

(i) St Helena Bay      (ii) Franschhoek      (iii) SW      (iv) ENE

The correct order is:

(i)	(iii)	
(i)	(iv)	
(ii)	(iii)	
(ii)	(iv)	

(2)

1.3.2 Use the information given to calculate the average gradient of the Berg River. Mark the correct answer.

1:5	
1:0.05	
1:196	

Calculations:

(2)

**Figure 4 – Berg River Canoe Marathon**



[Source: <ShowMe South Africa>]

1.3.3 In the space below, draw a field sketch of the photograph above. On it, label the following:

- Direction of flow
- Undercut and slip-off slopes
- Area of fastest flow
- Area of slowest flow

(5)

1.3.4 Using the photograph on page 7, fill in the table below:

	<b>Answer:</b>	<b>Proof:</b>
<b>Course of the river (upper/ middle/ lower)</b>		
<b>Type of flow (laminar/ turbulent)</b>		

(4)

**[20]**

<b>Q1 subtotal</b>
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**QUESTION 2      MAP SKILLS AND SETTLEMENT**

2.1 A group of tourists meet at the school in Paternoster (E4 on the topographic map). They walk along the hiking trail to Groot Paternoster-punt (point) in A4.

2.1.1 Calculate the distance they will walk in kilometres.

8,4km	
16,8km	
84km	

Calculation:

(2)

2.1.2 Identify THREE natural features they would be able to see on this hike.

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

(3)

2.1.3 From Groot Paternoster-punt, would they be able to see the lighthouse on the western side of Seal Island (A3)?

Answer: \_\_\_\_\_

(1)

Reason: \_\_\_\_\_

\_\_\_\_\_

(1)

2.1.4 What is the bearing of this hike, from the school in E4 to Groot Paternoster-punt in A4?

\_\_\_\_\_

(1)

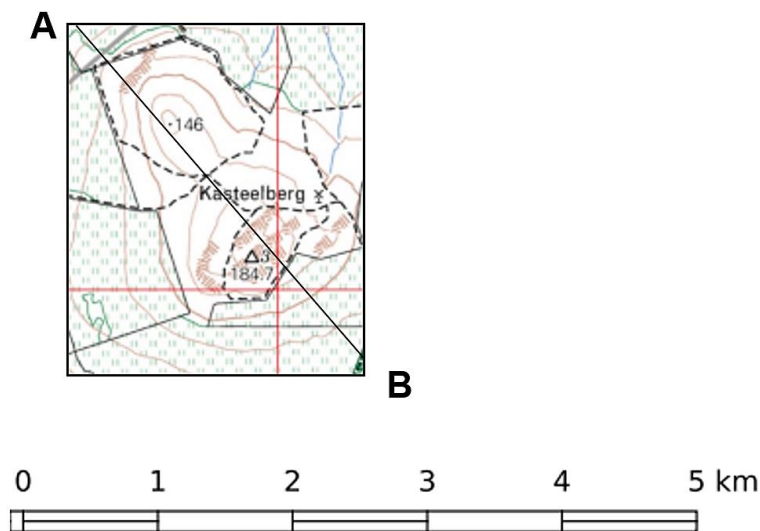
2.2 Read the following extract about Kasteelberg (E7).

**The Place of Kasteelberg in Khoekhoe History**

- Kasteelberg was a convenient camping location for early herders to access the rich marine resources of the West Coast. Young seals and shellfish were a major part of their diet, and seal fat was mixed with red pigment (ochre) and used as a body covering.
- The koppie was occupied by Middle Stone Age hunters some 30 000 years ago, but the main occupation came much later, approximately 1 800 years ago.
- Kasteelberg is by far the richest herding site in the Western Cape. There is a small cave that shows two occupation periods. During the first occupation period, it was used by hunters because the main fauna found here was small buck. During the second occupation period, the cave was used by shepherds.

[Source: <<https://www.theheritageportal.co.za/article/place-kasteelberg-khoekhoe-history>>]

**Figure 5 – Kasteelberg**



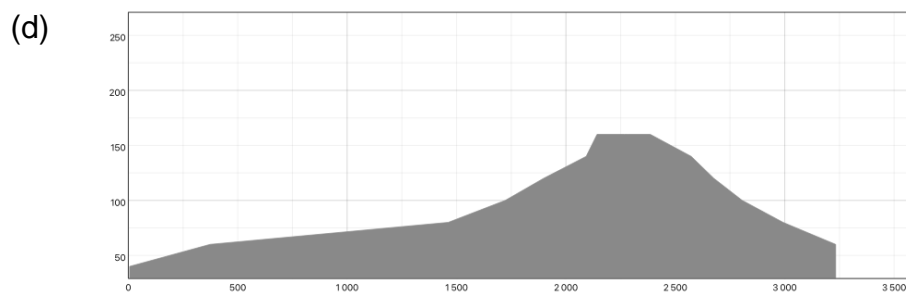
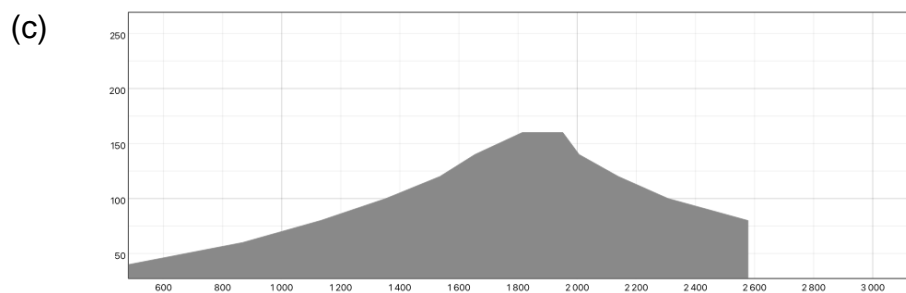
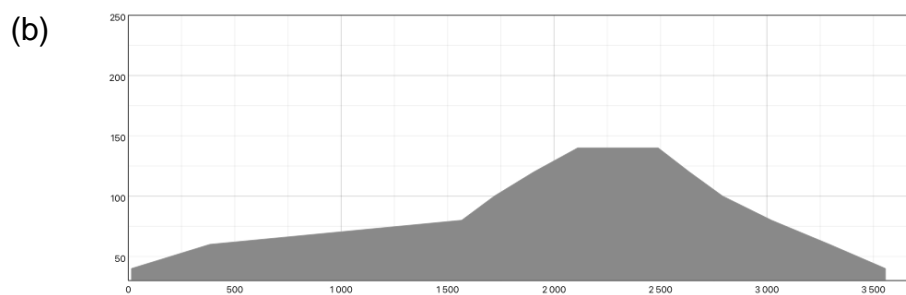
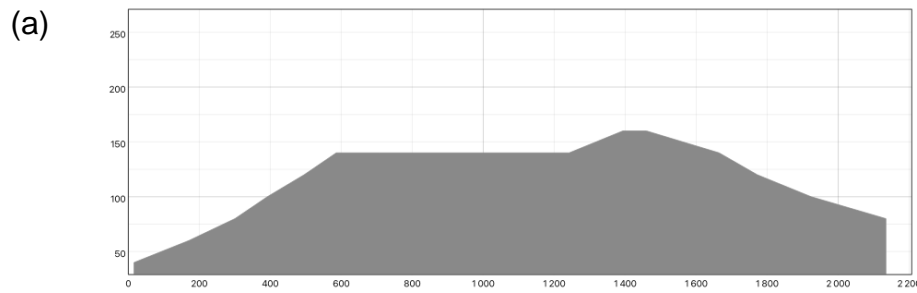
2.2.1 Calculate the area represented in Figure 5 above in hectares.

Area: \_\_\_\_\_ hectares

Calculations:

(3)

2.2.2 Use the topographic map of Kasteelberg (E7). Which of the cross sections below best suits the line A–B in Figure 5 on page 10? Mark the correct answer.



- A
- B
- C
- D

(2)

2.2.3 Calculate the vertical exaggeration of cross section (a) on page 11.

Vertical scale: \_\_\_\_\_

Horizontal scale: \_\_\_\_\_

Vertical exaggeration: \_\_\_\_\_

Calculations:
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(4)

2.2.4 Using evidence from the map and the extract, explain why Kasteelberg was a favoured site for Khoekhoe settlement.

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(4)

2.2.5 Suggest a reason why it is important to preserve and celebrate heritage sites such as this one.

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(2)

2.3 Paternoster Hotel was founded in 1940 when one of the original farmhouses was converted.

**Figure 6 – Paternoster Hotel circa 1940**



[Source: <<https://paternosterhotel.co.za/author/paternosterhotel/>>]

**Figure 7 – Paternoster Hotel today**



[Source: <<https://www.eatout.co.za/venue/paternoster-hotel/>>]

2.3.1 Figures 6 and 7 show temporal resolution, taken 80 years apart. State whether this is high or low temporal resolution, with a reason for your answer.

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(2)

2.3.2 The hotel is one of the many buildings in Paternoster that displays *facadism*. Explain what this means.

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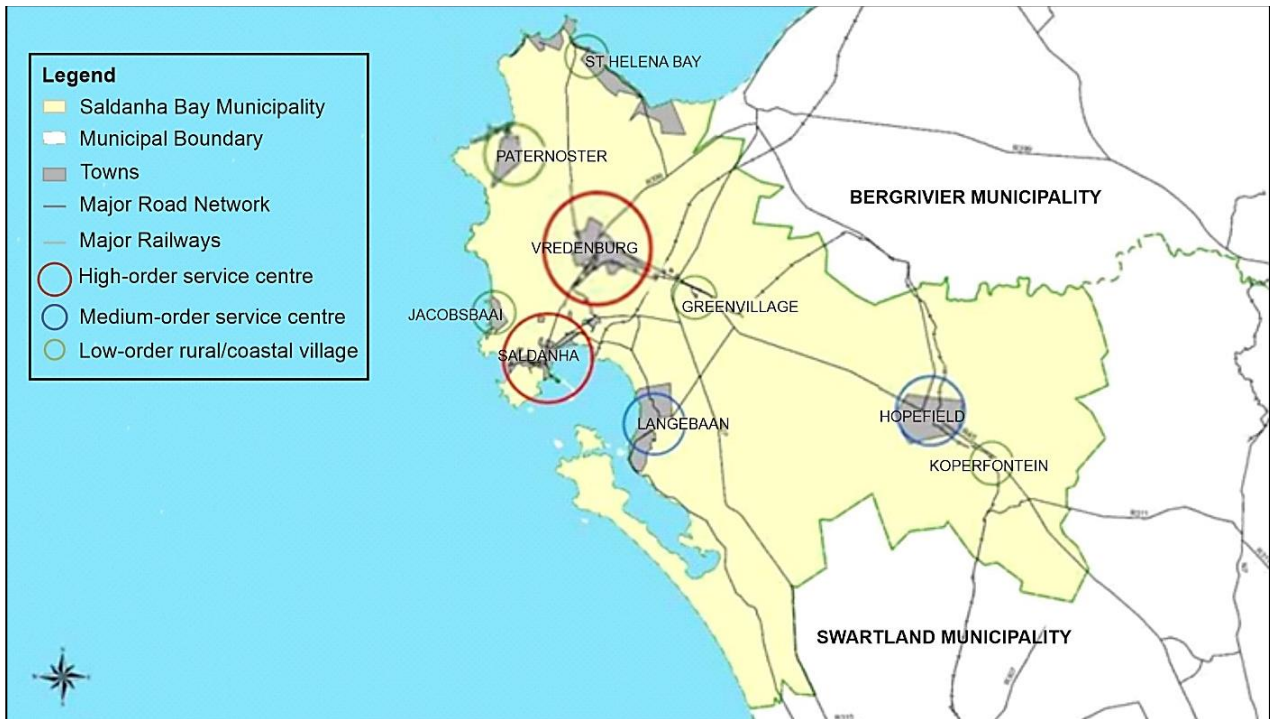
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(2)  
[27]

<b>Q2 subtotal</b>
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**QUESTION 3 ECONOMIC GEOGRAPHY**

**Figure 8 – Saldanha Bay Municipality**



[Source: Human Settlements Plan: Saldanha Bay Municipality]

**Figure 9 – Table of main functions, economic base and locational advantages**

Settlement	Main functions	Economic hierarchy	Economic base: locational advantages
Saldanha	High-order main centre	1	Industrial town
			Deep sea harbour
			Proclaimed IDZ
			Established fishing industry and harbour
			Railway connection
Hopefield	Medium-order agricultural service centre	4	Limited commercial activities
			Railway connection
Paternoster	(a)	4	(b)
			(c)

[Source: Human Settlements Plan: Saldanha Bay Municipality]

3.1 3.1.1 The table states that Saldanha is a 'Proclaimed IDZ'. Explain fully what an IDZ is.

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(3)

3.1.2 The table has missing words at (a), (b) and (c). Fill in the missing words to complete the table.

(a) (High-order/ Medium-order/ Low-order) \_\_\_\_\_

(b) (Economic activity 1) \_\_\_\_\_

(c) (Economic activity 2) \_\_\_\_\_

(3)

3.1.3 Provide a reason for your answer to Question 3.1.2 (a).

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(2)

3.2 Identify THREE proofs from the topographic map 3217DD PATERNOSTER that commercial farming is occurring around Paternoster.

- \_\_\_\_\_  
\_\_\_\_\_
- \_\_\_\_\_  
\_\_\_\_\_
- \_\_\_\_\_  
\_\_\_\_\_

(6)

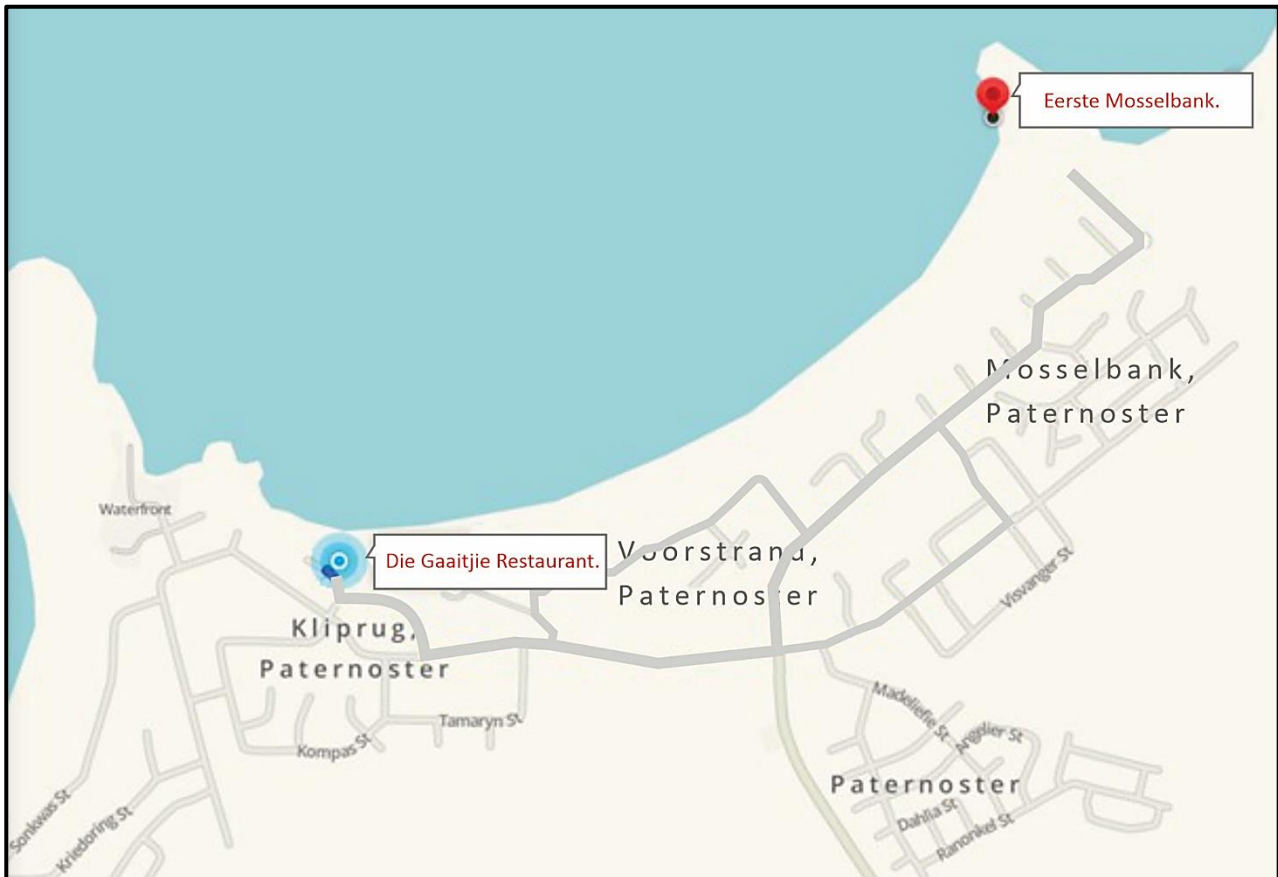
3.3 Using topographic map evidence, fill in the table below.

	Photograph	Sector of the economy	Alphanumeric block on map	Factor favouring this activity	Factor hindering this activity
Commercial farming		(1)	A to H, 5 to 8	(1)	(1)
Commercial fishing		(1)	A to H, 1 to 3	(1)	(1)
Tourism		(1)	E4	(1)	(1)
Salt works		(1)	(1)	(1)	(1)
Informal fishing		(1)	E4	(1)	(1)

**[30]**

**QUESTION 4 CLIMATE, SETTLEMENT AND GIS**

**Figure 10 – The coastline of Paternoster**



[Source: <<https://www.waze.com>>]

4.1 4.1.1 On the map above, in the area between Die Gaaitjie Restaurant and Eerste Mosselbank, draw arrows to show in which direction the winds will blow during the day, and another arrow to show the direction of the winds at night.

**KEY**

Day	
Night	

(2)

4.1.2 Briefly explain how these daytime winds form.

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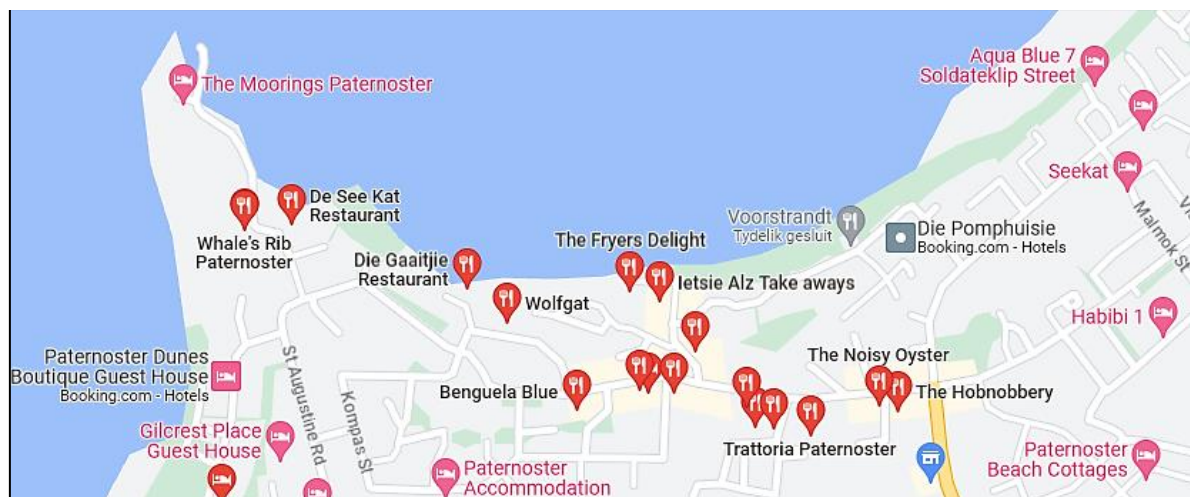
(4)

4.1.3 The farmers at Noodhulp (G6 on the topographic map) notice that their farm is noticeably cooler than Paternoster (E4), both in summer and winter. Fill in the table below to explain this.

	Noodhulp cooler	Paternoster warmer
Reason 1		
Reason 2		

(4)

Figure 11 – Restaurants in Paternoster



[Source: Google Maps]

4.2 The restaurants in Paternoster are grouped together thereby displaying *functional magnetism*.

4.2.1 Explain what *functional magnetism* means.

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(2)

4.2.2 What advantages are there to being grouped together?

For tourists \_\_\_\_\_

\_\_\_\_\_

For restaurant owners \_\_\_\_\_

\_\_\_\_\_

(4)

4.3 On a GIS programme, real-world items are represented by nodes, ways and boundaries. If you click on any feature, the programme will display fields.

Provide synonyms for these terms (used above) by selecting from the words below.

***Attributes/ Polygons/ Points/ Lines***

(a) Nodes \_\_\_\_\_

(b) Ways \_\_\_\_\_

(c) Boundaries \_\_\_\_\_

(d) Fields \_\_\_\_\_

(4)

4.4 You need to decide on the location of a new restaurant in Paternoster. On Figure 11, indicate clearly, with a star, where you would like to place your restaurant. The location must fulfil the following criteria:

- It must be north facing.
- It must have a view of the ocean.
- It must be within the main restaurant district.

(3)

**[23]**

<b>Q4 subtotal</b>
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**Total: 100 marks**



