KWAZULU-NATAL PROVINCE

EDUCATION

REPUBLIC OF SOUTH AFRICA

NATIONAL SENIOR CERTIFICATE

GRADE 12

MATHEMATICAL LITERACY P2

JUNE EXAMINATION

2025

Stanmorephysics.com

MARKS: 100

TIME: 2 hours

This question paper consists of 10 pages and an Addendum with 2 Annexures.

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INSTRUCTIONS AND INFORMATION

1. This question paper consists of FOUR questions. Answer ALL the questions.
2. Use the ANNEXURES in the ADDENDUM to answer the following questions.

   ANNEXURE A for QUESTION 1.2
   ANNEXURE B for QUESTION 2.2
3. Number the answers correctly according to the numbering system used in this question paper.
4. Start EACH question on a NEW page.
5. You may use an approved calculator (non-programmable and non-graphical), unless stated otherwise.
6. Show ALL calculations clearly.
7. Round off ALL final answers appropriately according to the given context, unless stated otherwise.
8. Indicate units of measurement, where applicable.
9. Maps and diagrams are NOT necessarily drawn to scale, unless stated otherwise.
10. Write neatly and legibly.

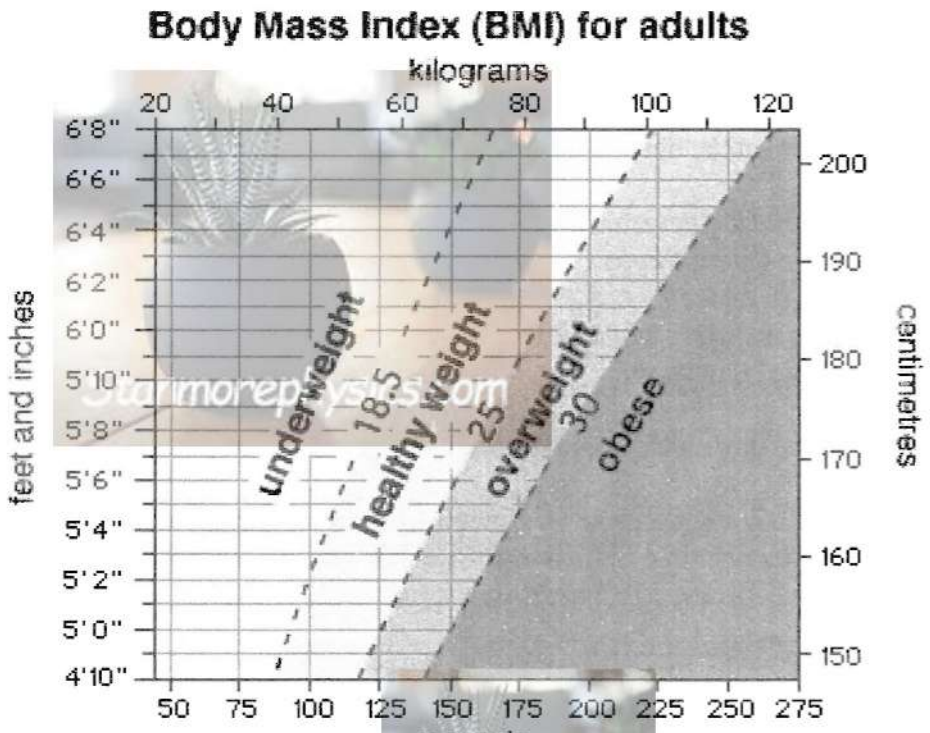


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QUESTION 1

1.1

Body mass index (BMI) is a measurement of body fat based on an individual's weight and height. The chart below shows the BMI values and corresponding status categories for adults.



NOTE: 1Kg = 2.20462 pounds

[Source: www.britanica.com]

Use the chart and the information above to answer the questions that follow.

1.1.1 Explain the term *BMI* status. (2)

1.1.2 Determine the BMI status of an adult with a BMI of less than 18,5. (2)

1.1.3 Identify the BMI of an adult who is 6'3" and weighs 185 pounds. (2)

1.1.4 Convert 225 pounds to kilograms, rounded off to two decimal places. (2)

1.1.5 Explain one disadvantage of having an obese BMI status. (2)

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1.2 The map in ANNEXURE A shows the Durban University of Technology and its different campuses.

Use the map in ANNEXURE A to answer the questions that follow.

1.2.1 Identify the type of map shown in ANNEXURE A. (2)

1.2.2 Write down the name of the national road shown on the map. (2)

1.2.3 Determine the general direction of the Department of Fashion and Textiles Campus from the City Campus. (2)

1.2.4 A car is traveling down Calder Road; identify the turn it must take to continue onto Jan Smuts Highway. (2)

1.2.5 Describe the relative position of the ML Sultan Campus. (2)

1.2.6 Steve Biko campus is approximately 7 minutes away from the City Campus by car. Determine the time of arrival at City Campus if a student leaves Steve Biko at 15:56. Write the answer in 12-hour time format. (3)

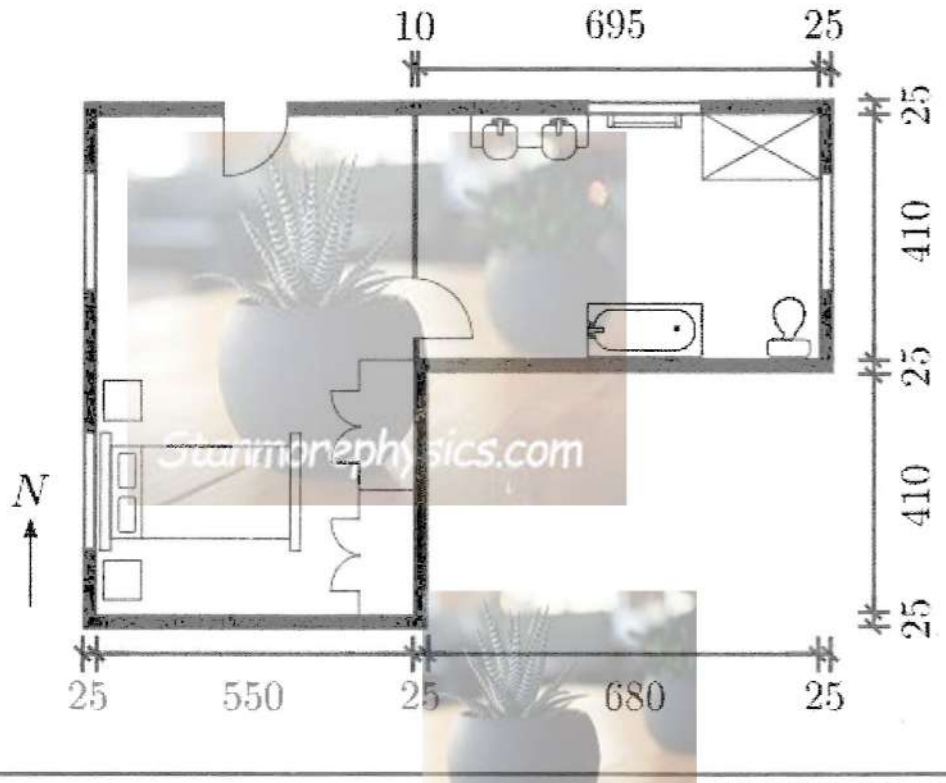
1.2.7 Name a road(s) that can be used to access all 4 campuses. (2)

[25]

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QUESTION 2

2.1 The drawing below shows a bedroom and an ensuite bathroom. The dimensions shown below are in centimetres.



[Source: www.mathspace.co]

Use the image and the information above to answer the questions that follow.

2.1.1 Identify the type of drawing shown above. (2)

2.1.2 Explain the difference between the image shown above and an elevation plan (2)

2.1.3 Describe the side of the drawing that would represent the west elevation. (2)

2.1.4 Measure the length of the above drawing and determine rounded off to the nearest whole number, the scale of the plan. (6)

2.2 ANNEXURE B shows the map of Cape Town and the tourist sites.

Use the map in ANNEXURE B to answer the questions that follow.

2.2.1 Name a famous tourist site, located off the mainland, north of the City Centre. (2)

2.2.2 Determine the total number of Bays on the map. (2)

2.2.3 Identify the type of scale shown on the map. (2)

2.2.4 Explain what the scale on the map represents. (2)

2.2.5 Use the scale on the map to calculate the actual distance in kilometres from Simon's Town to the Airport. (4)

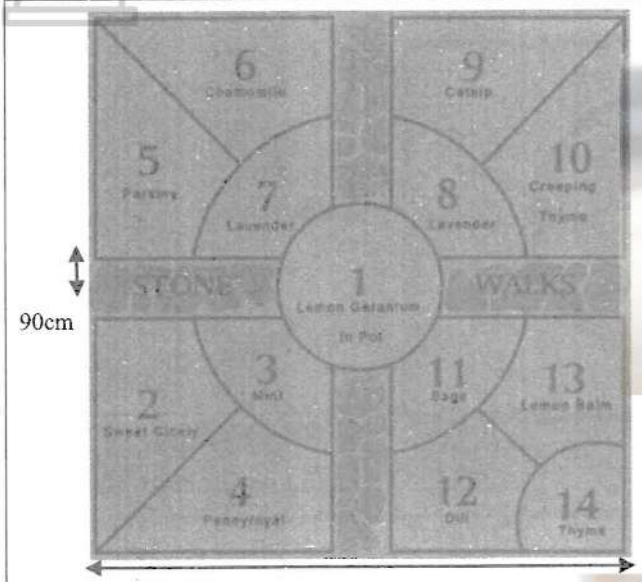
[24]



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QUESTION 3

3.1 A local nursery sells herbs and plans to fence their square herb garden as shown in the image. The garden is divided by stone walkways, each of which will have a gate for entering the garden. The width of each gate is 90 cm. The wooden fence is sold in lengths of 1.2 metres

IMAGE OF HERB GARDEN	WOODEN FENCING
	

(Source: www.Ourkokopelli.com)

Use the image and the information above to answer the questions that follow.

3.1.1 Determine the perimeter of the herb garden.

You may use the following formula: **Perimeter = 4 (side)** (2)

3.1.2 Determine the number of lengths of fencing required if 4 gates are needed. (5)

3.1.3 A length of fencing costs R330 and a gate costs R495. Calculate the total cost, including labour cost at R250 per day or part thereof, for a job that took 1,5 days. (4)

3.1.4 The herb garden contains 14 beds of herbs. Determine the probability, as a percentage, that lavender is planted. (4)

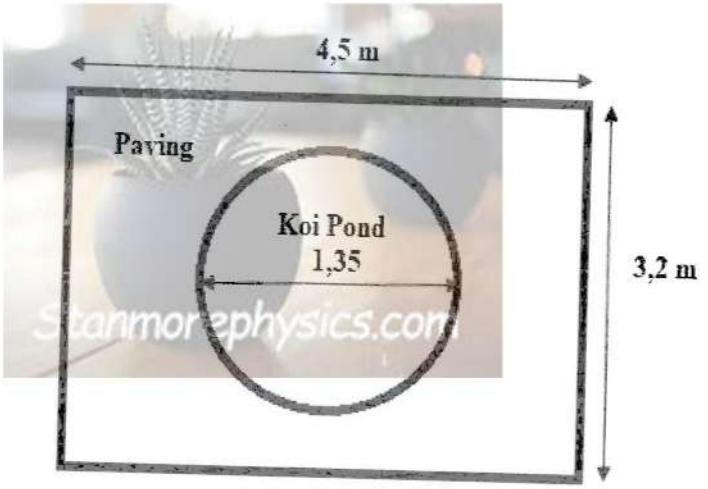
3.1.5 Determine the probability of roses being planted. (2)

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3.2

The local nursery has a koi pond in its garden. Koi are tropical fish. The image below shows the dimensions of the round Koi Pond along with the surrounding paving. The diameter of the Koi Pond is 1,35m

IMAGE OF A KOI POND



(Adapted from:https://images.app)

Use the information above and answer the questions that follows.

3.2.1 Determine the radius of the pond. (2)

3.2.2 Determine the area of the paving surrounding the koi pond.

You may use the formulae:

Area of a rectangle = length × breadth

Area of a circle = 3,142 × radius² (5)

3.2.3 Calculate the number of bricks needed to pave the area around the koi pond, if the area of one brick is $0,45m^2$. (3)

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QUESTION 4

4.1

Anne is a candy maker who designs the cylindrical sweet container shown below. The diameter of the cylinder is $\frac{2}{3}$ of its height.



(Source: https://m.made-in-china.com)

Use the image and information above to answer the questions that follow.

4.1.1 Calculate the surface area of the cylindrical sweet container.

You may use the formula:

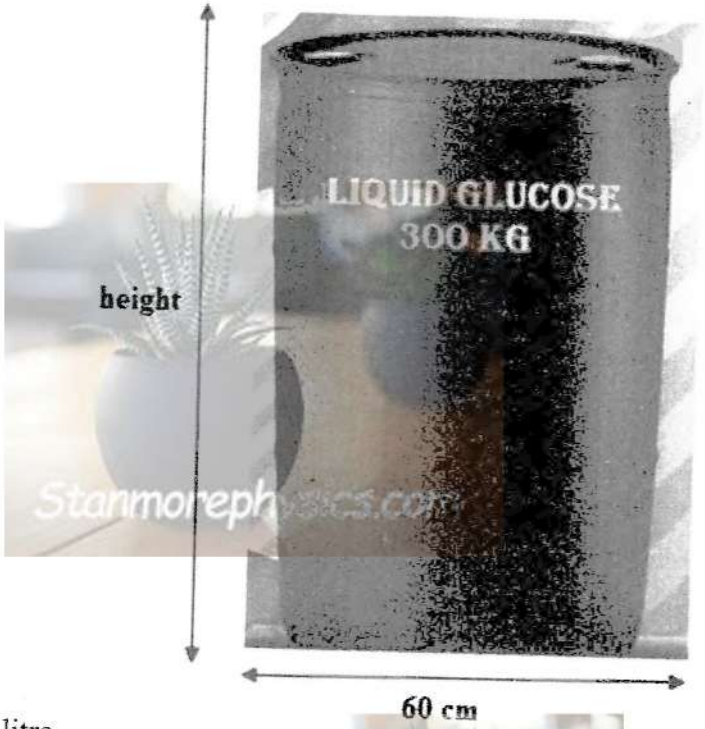
SA = 2 × 3,142 × r^2 + 2 × 3,142 × r × height (6)

4.1.2 Determine how many cylindrical containers can be made from 1m^2 of cardboard. (4)

4.1.3 The cylinder holds 0,45 kg of sweets, calculate how many sweets it will hold, if one sweet is 25g. (4)

4.2 The image below shows a cylindrical container holding 300 kg of liquid glucose which is used for making sweets.

CYLINDRICAL CONTAINER OF LIQUID GLUCOSE



NOTE: 1kg = 1litre

1 litre = 1 000cm^3

(Source: www.indiamart.com)

Use the image and information above to answer the questions that follow.

4.2.1 A claim was made that the height of the cylinder is 1m.
Verify, showing all calculations, if this claim is **CORRECT**.

You may use the formula:

Volume = 3,142 × r^2 × height (6)

4.2.2 Calculate the number of 250 ml bottles that can be filled with liquid glucose from the cylinder, if each bottle is filled to 95% of its capacity. (4)

[24]

TOTAL:100

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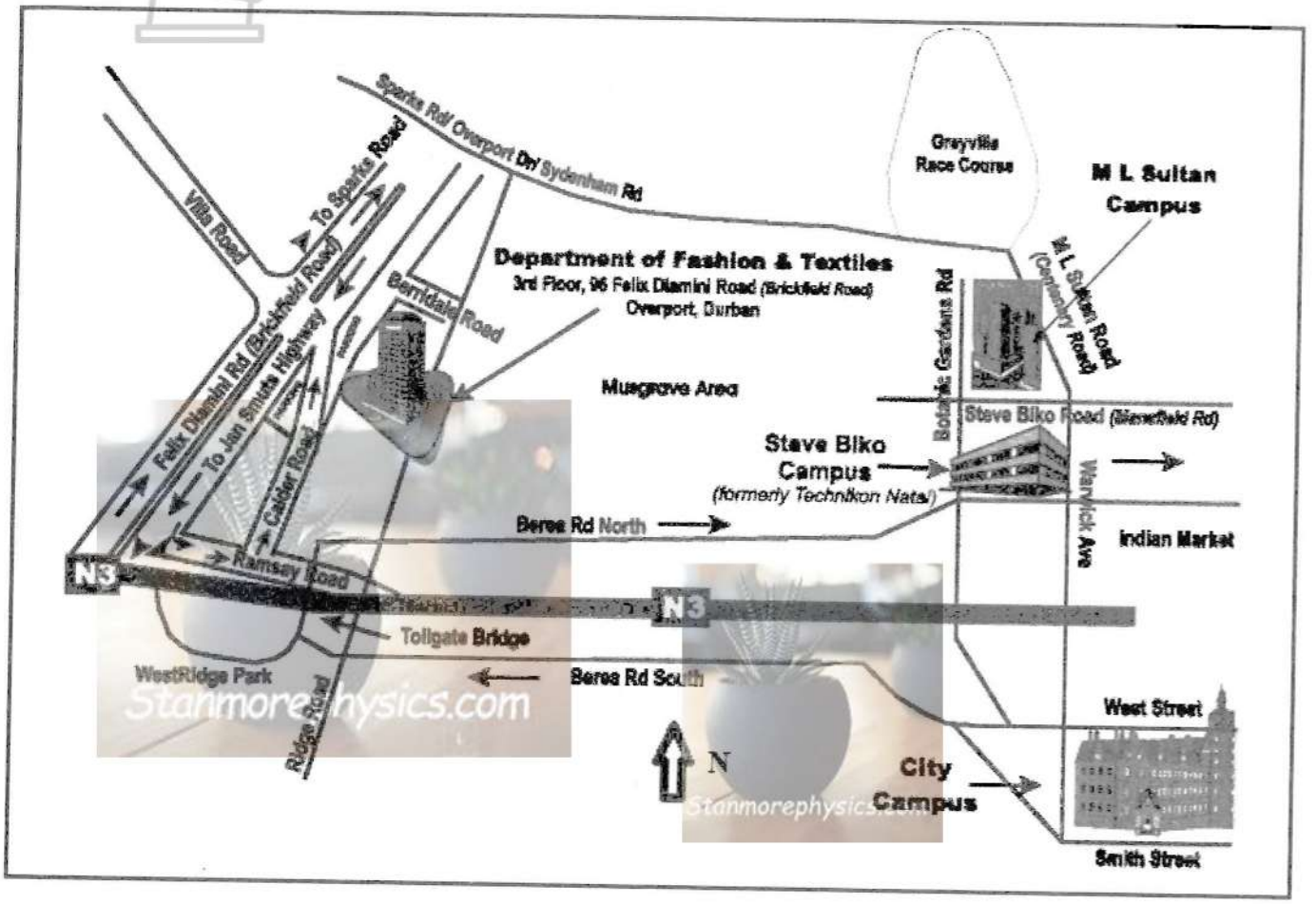
This Addendum consists of 3 pages with 2 Annexures.

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ANNEXURE A

QUESTION 1.2

MAP OF DURBAN UNIVERSITY OF TECHNOLOGY CAMPUSES



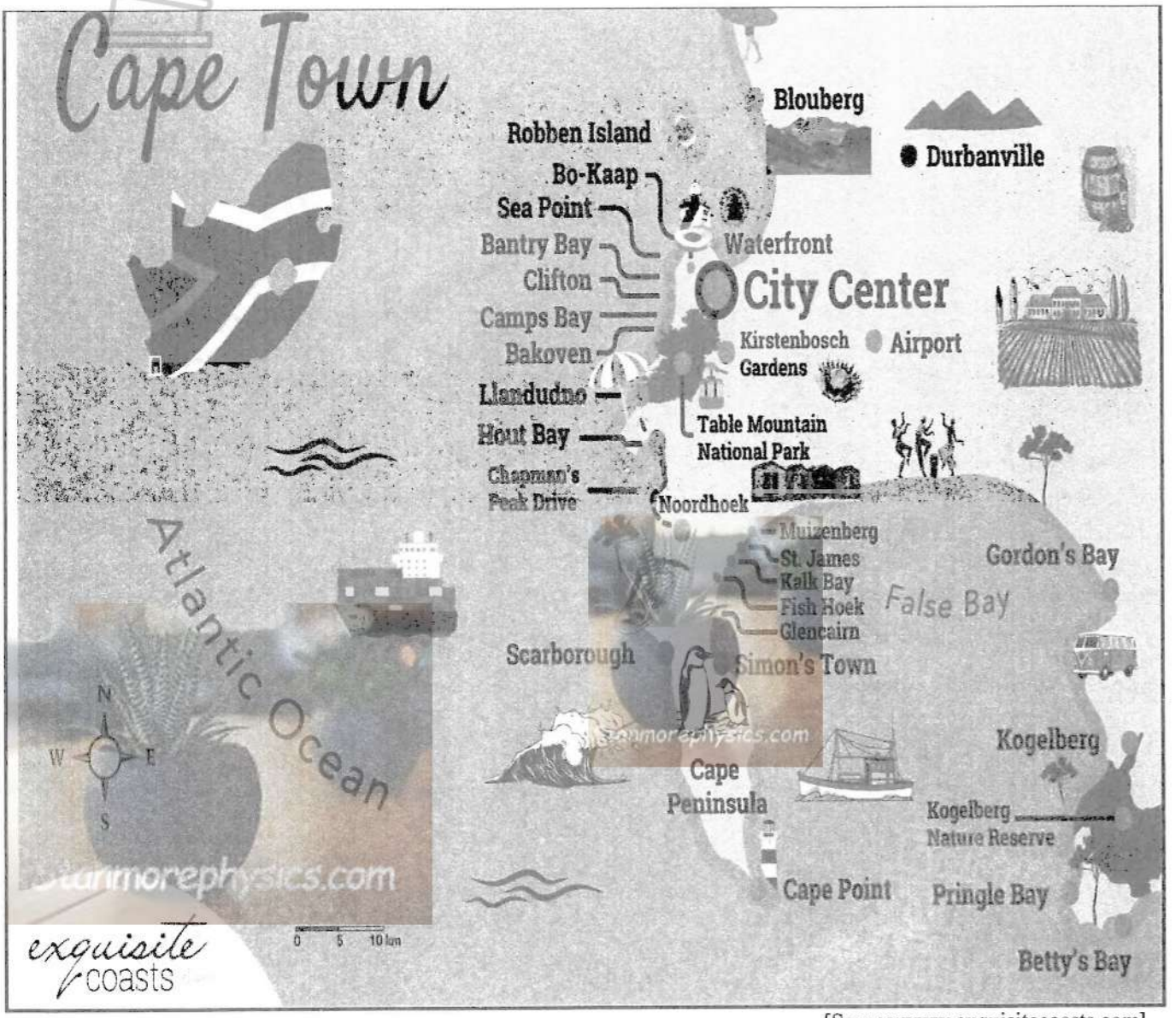
[Source.www dut.ac.za]

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ANNEXURE B

QUESTION 2.2

MAP OF CAPE TOWN SHOWING TOURIST SITES



[Source:www.exquisitecoasts.com]

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