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St Alban's College

Geography Mapwork

Form 4

28 July 2015

Examiner: P. Bossenger

Time: 1½ Hour

Moderator: D. Mukhari

Total: 100 marks

NAME: _____

Instructions:

1. Use the topographical map 3424BB HUMANSDORP and Orthophoto map 3424BB 1 HUMANSDORP.
2. Answer ALL the questions in the spaces provided on the question paper.
3. The topographic map has grid lines with markings A to I and 1 to 15 that may be used to identify locations.
4. Show ALL calculations. Marks will be allocated for calculations.
5. You may use a non-programmable calculator.
6. The following English terms and their Afrikaans translations are shown on the topographical map.

English	Afrikaans
Brick works	Steenmasonry
Caravan Park	Karavaanpark
Diggings	Uitgrawings
Sewage Works	Rioolwerke
River	Rivier
River Mouth	Riviermond
Golf Course	Gholfbaan
Wetland	Vlei

Question 1: Multiple Choice Downloaded from eduresourceza.com

The questions below are based on the 1:50 000 topographical map 3424BB HUMANSDORP, as well as the orthophoto map of a part of the mapped area. Various options are provided as possible answers to the following questions. Choose the answer and tick only in the block next to your answer.

1.1 The index of the map sheet northwest of Humansdorp is ...

A	3324DC.	
B	3324DD.	
C	3325CC.	
D	3424BA.	

1.2 The co-ordinates of trigonometrical station 140 in block B3 are ...

A	34°01'20"S24°47'44"E.	
B	34°02'40"S24°48'16"E.	
C	34°01'20"E24°47'44"S.	
D	34°02'40"E24°48'16"S.	

1.3 The slope south of Kwa Nomzamo (C2) is ...

A	gentle.	
B	steep.	
C	convex.	
D	terraced.	

1.4 The major primary activity visible in the mapped area is ...

A	fishing.	
B	mining.	
C	forestry.	
D	crop farming.	

1.5 The feature at P on the topographic map is ...

A	an anti-erosion wall.	
B	sand banks.	
C	tidal walls	
D	coastal rocks.	

1.6 The scale of the topographical map is ... than the scale of the orthophoto map.

A	10 times larger	
B	5 times larger	
C	5 times smaller	
D	10 times smaller	

1.7 The contour interval on the orthophoto map is ...

A	20 meters.	
B	10 meters.	
C	5 meters.	
D	50 meters.	

1.8 The orthophoto map is covering blocks on the topographic map

A	B1, B2, B3	
B	C1, C2, C3	
C	B1, B2, B3 and C1, C2, C3	
D	C1, C2, C3 and D1, D2, D3	

1.9 The feature numbered **1** on the orthophoto map is a ...

A	soccer field.	
B	sewage works.	
C	dam.	
D	marsh.	

1.10 The landform marked 3–4 on the orthophoto map is a ...

A	spur.	
B	hill.	
C	ridge.	
D	valley.	

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Question 2: Mapskills and calculations

2.1 Block E1 on the topographical map is covered by cultivated land. **Calculate** the area of this block in km².

(a) Breadth = _____ km (1)

(b) Length = _____ km (1)

(c) Area = _____ km² (2)

Working out:

2.2 **Calculate** the time it would take a motorist to travel to Plettenberg Bay along the N2 from the intersection with Main Road 330 (A2). The motorist drives at an average speed of 115km/h.

(4)

Working out:

2.3 **Calculate** the magnetic bearing of trigonometrical station 94 in block E1 from spotheight 97 in block D1 for 2015.

- (a) Difference in years = _____ (1)
- (b) Total annual change = _____ (1)
- (c) Magnetic declination 2015 = _____ (2)
- (d) Magnetic bearing = _____ (2)

Working out:

2.4 **Calculate** the average gradient of Main Street on the orthophoto map from point 7 to 8.

- (a) Difference in height = _____ m (2)
- (b) Distance between two points: _____ m (2)
- (c) Gradient 1: _____ (2)

Working out:

2.5 **Identify** the man-made feature marked 2 on the orthophoto map. (2)

2.6.1 Determine the height of the dam wall marked W in blocks F1 and F2 on the topographical map. (2)

_____ m

2.6.2 Calculate the distance of the dam wall at W (F2) in metres. (2)

2.7 **Draw** a cross-section from R (D4) to S (A7) on the topographical map. Remember to add all applicable labels. Make the vertical scale: 1cm represents 10m. (8)

2.7.1 On the cross section mark off the R102 and N2 highway. (2)



2.7.2 **Calculate** the vertical exaggeration of the cross section.

(4)

Working out:



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Question 3: Interpretation

Refer to both the topographical map and the orthophoto map in answering the questions below.

3.1 **Name** the ocean AND current that you find on the east coast near Humansdorp. (4)

Ocean: _____

Current: _____

3.2.1 In which direction is the Seekoeirivier flowing in E2 and F7? (2)

Direction: _____

3.2.2 Provide **proof** from the topographic map to support your answer in question 3.2.1 . (4)

Proof 1: _____

Proof 2: _____

3.3 **Identify** the season in which most streams will flow around Humansdorp. (2)

Season: _____

3.4 Find **proof** from the topographic map that the farmers around Humansdorp irrigate their crops. (4)

Proof 1: _____

Proof 2: _____

3.5 Paradise Beach (G9) is a new urban development. With reference to its location, **name TWO** strategies that can be implemented to ensure sustainable development of the coastline. (4)

(a) _____

(b) _____

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Question 4: Renewable energy Downloaded from eduresourceza.com

Use the following fact file on Jeffreys bay to answer the questions that follow

	Located between Jeffreys Bay and Humansdorp in the Eastern Cape, the Jeffreys Bay Wind Farm site spans 3700 hectares. The site's optimal wind conditions, relatively flat topography, minimal environmental constraints and its close proximity to the 132kV Eskom grid line, make it an ideal wind energy resource.
	Jeffreys Bay has grown from a sleepy little fishing town over the past few years and is one of the fastest expanding urban areas in the country. Jeffreys Bay is a popular tourist destination because of its surfing opportunities and the world renown Blue Flag beach. Fynbos and subtropical vegetation are found around Jeffreys Bay Population: 27 107
	Jeffreys Bay is one of the five most famous surfing destinations in the world. Jeffreys Bay is famous for abundant seashells
	The Seekoei and Krom River lagoons host numerous water birds, and are also ideal for watersports like canoeing, boardsailing, and fishing. Every year, migrating whales make their way to Hermanus and Witsand to give birth, and whales can be seen breaching almost every day during the season.

4.1 **Explain** the meaning of “Blue Flag” Beach. (2)

4.2 **Explain** why it is important for a coastal town to be classified as a “Blue Flag” beach? (2)

- 4.3 **List** TWO strategies the Municipality of Jeffreys Bay can implement to ensure that the beach stays a “Blue Flag Beach”. (4)

- 4.4 **Explain** the meaning of a ‘wind farm’. (2)

- 4.5 Briefly discuss why it is important to develop the wind farm near Jeffreys Bay. (2)

- 4.6 Create a pamphlet in which you promote Jeffreys Bay as an investment opportunity. Marks will be awarded for – (8)

General information	2 marks
Favouring factors for industries	4 marks
Creativity	2 marks

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