



# basic education

Department:  
Basic Education  
**REPUBLIC OF SOUTH AFRICA**

## NATIONAL SENIOR CERTIFICATE

**GRADE 12**

**GEOGRAPHY P2**

**EXEMPLAR 2014**

**MARKS: 75**

**TIME: 1½ hours**

**NAME:**

**GRADE/CLASS:**

MARK SCORED	Q1	Q2	Q3	Q4	TOTAL
MARKER					
SENIOR MARKER					
CHIEF MARKER					
MODERATOR					
<b>TOTAL</b>	<b>15</b>	<b>20</b>	<b>25</b>	<b>15</b>	<b>75</b>

**This question paper consists of 12 pages and  
1 page for rough work and calculations.**

**RESOURCE MATERIAL**

1. An extract from topographical map 3424BB HUMANSDORP
2. Orthophoto map 3424BB 1 HUMANSDORP
3. **NOTE:** The resource material must be collected by schools for their own use.

**INSTRUCTIONS AND INFORMATION**

1. Write your name and class/grade in the spaces on the cover page.
2. Answer ALL the questions in the spaces provided in this question paper.
3. You are supplied with a 1 : 50 000 topographical map 3424BB of HUMANSDORP and an orthophoto map of a part of the mapped area.
4. You must hand the topographical map and the orthophoto map to the invigilator at the end of this examination session.
5. You must use the blank page at the back of this question paper for all rough work and calculations. Do NOT detach this page from the question paper.
6. Show ALL calculations and formulae, where applicable. Marks will be allocated for these.
7. You may use a non-programmable calculator.
8. The following English terms and their Afrikaans translations are shown on the topographical map:

**ENGLISH**

Brick works  
Caravan park  
Diggings  
Golf course  
River  
River mouth  
Sewage works  
Wetland

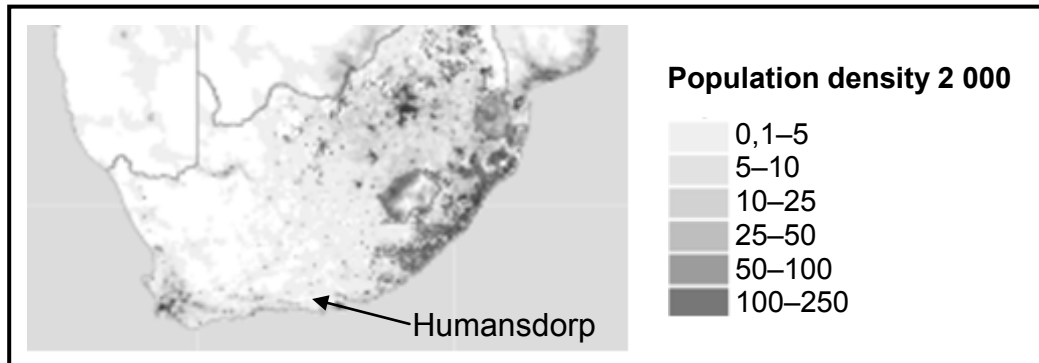
**AFRIKAANS**

Steenmasonry  
Karavaanpark  
Uitgrawings  
Golfbaan  
Rivier  
Riviermond  
Rioolwerke  
Vlei

**GENERAL INFORMATION ON HUMANSDORP**

Humansdorp is a small town in the Eastern Cape with a population of around 35 000. This town is the centre of the Cacadu municipal district's industry and farming. It is also considered the gateway to the coastal town of Jeffreys Bay, which is 16 kilometres away. Humansdorp is a 50-minute drive away from Port Elizabeth. It is eco-friendly and maintains its small-town charm with various hiking trails and forest walks.

**FIGURE 1**



**QUESTION 1: MULTIPLE-CHOICE QUESTIONS**

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 write only the letter (A–D) in the block next to the question.

1.1 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

1.2 The town of Jeffreys Bay is a/an ...

- A recreational town.
- B industrial town.
- C educational town.
- D gap town.

1.3 The shape of the town of Humansdorp is ...

- A circular.
- B linear.
- C T-shaped.
- D Y-shaped.

1.4 Wavecrest in block **B11** has a/an ... street pattern.

- A grid
- B planned irregular
- C radial
- D unplanned irregular

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

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

1.6 The general flow direction of the river in block **D8** on the topographical map is ...

- A southerly.
- B northerly.
- C easterly.
- D north-westerly.

1.7 Primary activities are limited at **X** owing to ...

- A a lack of transport.
- B non-perennial streams.
- C marshes.
- D distance from markets.

1.8 The feature found at **P** in block **B11** is a ...

- A sand island.
- B sandy beach.
- C bay.
- D coastal rock.

1.9 The province that Humansdorp is located in is (the) ...

- A Western Cape.
- B Eastern Cape.
- C KwaZulu-Natal.
- D North West.

1.10 The feature labelled **1** on the orthophoto map is ...

- A diggings.
- B a dry pan.
- C perennial water.
- D sewage works.

1.11 The slope formed between **5** and **6** on the orthophoto map is a/an ... slope.

- A concave
- B terraced
- C convex
- D even

1.12 The natural feature marked **5–6** on the orthophoto map is a ...

- A saddle.
- B hill.
- C ridge.
- D valley.

1.13 The index number of the map sheet northeast of Humansdorp is ...

- A 3424BB.
- B 3324DC.
- C 3424DD.
- D 3325CC.

1.14 The grid reference/coordinates/position of trigonometrical station 140 in block **B3** is ...

- A  $34^{\circ}01'20''S$   $24^{\circ}47'44''E/34^{\circ}01,3S$   $24^{\circ}47,7E$ .
- B  $34^{\circ}02'40''S$   $24^{\circ}48'16''E/34^{\circ}02,7S$   $24^{\circ}48,3E$ .
- C  $34^{\circ}01'20''E$   $24^{\circ}47'44''S/34^{\circ}01,3E$   $24^{\circ}47,7S$ .
- D  $34^{\circ}02'40''E$   $24^{\circ}48'16''S/34^{\circ}02,7E$   $24^{\circ}48,3S$ .

1.15 The city/town located 68 km from the mapped area is ...

- A Clarkson.
- B Port Elizabeth.
- C Hankey.
- D Plettenberg Bay.

(15 x 1)

**[15]**

**QUESTION 2: MAP CALCULATIONS AND TECHNIQUES**

- 2.1 Calculate the straight-line distance, in kilometres, between trigonometrical station 294 in block **F1** and trigonometrical station 94 in block **E1**. Show ALL calculations.

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(3 x 1) (3)

- 2.2 Determine the present magnetic bearing of trigonometrical station 290 in block **F8** from trigonometrical station 292 in block **D9**.

**Formula:** Present magnetic bearing = true bearing + present magnetic declination

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(6 x 1) (6)

2.3 Calculate the average gradient between trigonometrical station 290 in block **F8** and trigonometrical station 292 in block **D9**. Show ALL calculations.

**Formula:**  $\text{Gradient} = \frac{\text{vertical interval}}{\text{horizontal equivalent}}$

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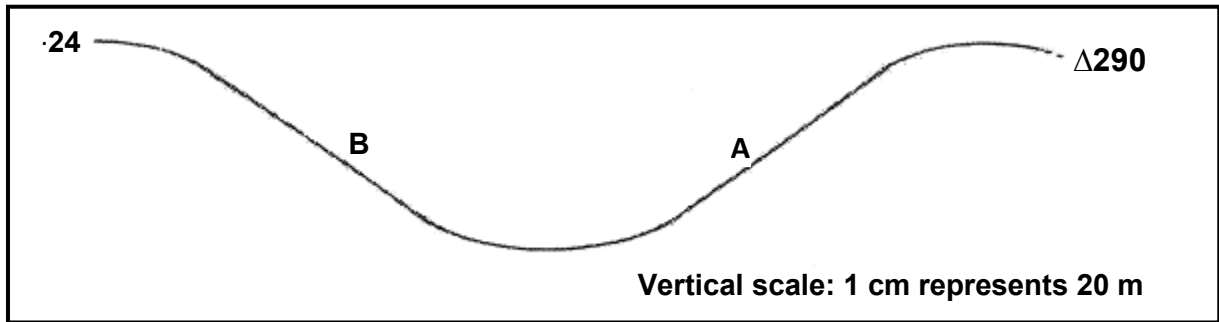
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(6 x 1) (6)

2.4 Refer to the cross-section from spot height 24 in block **F7** to trigonometrical station number 290 in block **F8** below and answer the questions that follow.



2.4.1 If you stand at **A**, will you be able to see a person at **B**?

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(1 x 1) (1)

2.4.2 Give ONE reason for your answer to QUESTION 2.4.1.

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(1 x 1) (1)

2.4.3 Calculate the vertical exaggeration of the cross-section. Show ALL calculations.

**Formula:**     **Vertical exaggeration** =  $\frac{\text{vertical scale}}{\text{horizontal scale}}$

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(3 x 1)

(3)  
[20]



**QUESTION 3: APPLICATION AND INTERPRETATION**

3.1 Refer to points **3** and **4** on the orthophoto map.

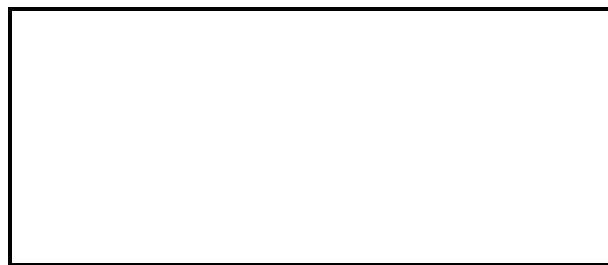
3.1.1 Name the landform that is found between points **3** and **4** on the orthophoto map.

\_\_\_\_\_ (1 x 1) (1)

3.1.2 Name the type of wind that will occur at this landform during the night.

\_\_\_\_\_ (1 x 2) (2)

3.1.3 Draw a simple, labelled free-hand cross-section to show the wind identified in QUESTION 3.1.2.



(1 x 2) (2)

3.2 In which stage of development is Krom River in block **I5**? Give a reason for your answer.

Stage: \_\_\_\_\_

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

\_\_\_\_\_ (1 + 2) (3)

3.3 Give a possible explanation why so many marshes developed in the mapped area.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ (1 x 2) (2)

3.4 Study the table below showing the average annual midday temperatures for areas **5** and **11** on the orthophoto map and answer the question that follows.

Area <b>11</b>	Area <b>5</b>
24,5 °C	19 °C

Area **11** has a higher average temperature than area **5**. Give ONE possible reason for this difference in temperature.

\_\_\_\_\_ (1 x 2) (2)

3.5 Find residential area **12** on the orthophoto map. Also refer to the topographical map. Is residential area **12** a high- or low-income residential area? Give a reason for your answer.

Income area: \_\_\_\_\_

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

\_\_\_\_\_ (1 + 2) (3)

3.6 State whether zone **10** on the orthophoto map is a light or heavy industrial area. Give a reason for your answer.

Type of industrial area: \_\_\_\_\_

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

\_\_\_\_\_ (1 + 2) (3)

3.7 Jeffreys Bay has a roughly linear shape. Explain why this is the case.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (2 x 2) (4)

3.8 Refer to FIGURE 1 on page 3. Is FIGURE 1 a political or thematic map? Give a reason for your answer.

Type of map: \_\_\_\_\_

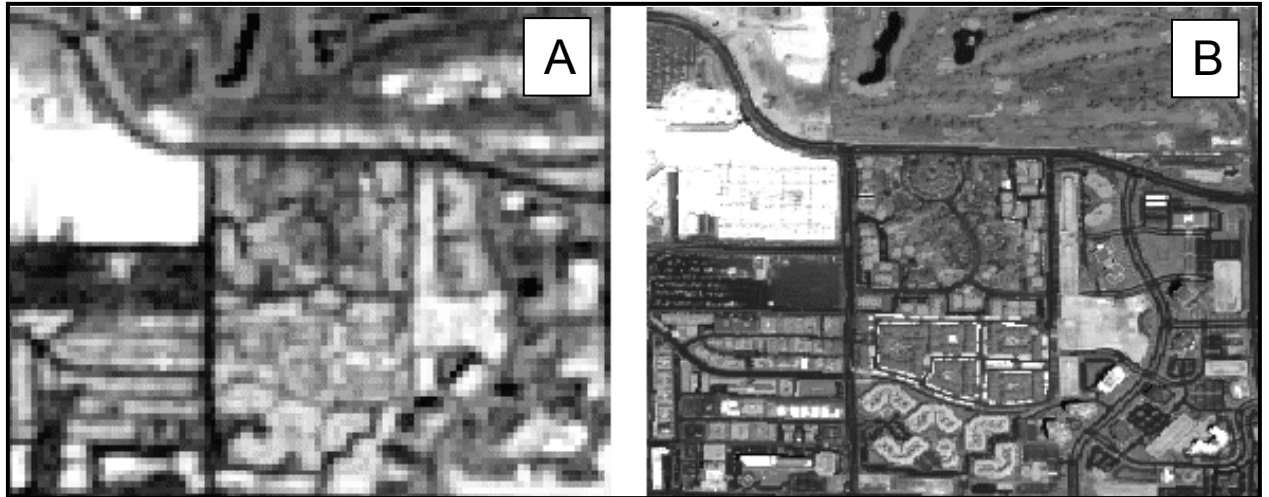
Reason: \_\_\_\_\_

\_\_\_\_\_ (1 + 2) (3)

**[25]**

**QUESTION 4: GEOGRAPHICAL INFORMATION SYSTEMS (GIS)**

4.1 Refer to the images below illustrating spatial resolution and answer the questions that follow.



4.1.1 Define the term *spatial resolution*.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ (1 x 1) (1)

4.1.2 Which image, **A** or **B**, has a better spatial resolution? Give a reason for your answer.

Image: \_\_\_\_\_

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

\_\_\_\_\_ (1 + 2) (3)

4.2 Buffering plays an important role in flood prevention at Kleinriviermond (Klein River mouth) in block **I6**.

4.2.1 Define the term *buffering*.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ (1 x 1) (1)

4.2.2 You want to build a holiday resort near Kromriviermond (Krom River mouth), but you are concerned about the Krom River flooding. Explain how you could use buffering to assist you with this problem.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ (1 x 2) (2)

4.3 Refer to block **E7** on the topographical map.

4.3.1 Identify the following in block **E7**:

(a) A point feature: \_\_\_\_\_ (1 x 1) (1)

(b) A line feature: \_\_\_\_\_ (1 x 1) (1)

(c) An area/polygon feature: \_\_\_\_\_

\_\_\_\_\_ (1 x 1) (1)

4.4 You are asked to do a paper GIS to determine the accessibility of Humansdorp. Name the main data layer you would use in your investigation and give a reason for your answer.

Main layer: \_\_\_\_\_

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

\_\_\_\_\_ (1 + 2) (3)

4.5 Explain why data manipulation is important in a GIS.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ (1 x 2) (2)

**[15]**

**TOTAL: 75**

## **ROUGH WORK AND CALCULATIONS**