



Province of the  
**EASTERN CAPE**  
EDUCATION

**NATIONAL  
SENIOR CERTIFICATE**

**GRADE 12**

**SEPTEMBER 2011**

**GEOGRAPHY P2**

**NAME:** \_\_\_\_\_

**MARKS: 100**

**TIME: 1½ hours**

		MARKS	MOD
Q1	20		
Q2	20		
Q3	40		
Q4	20		

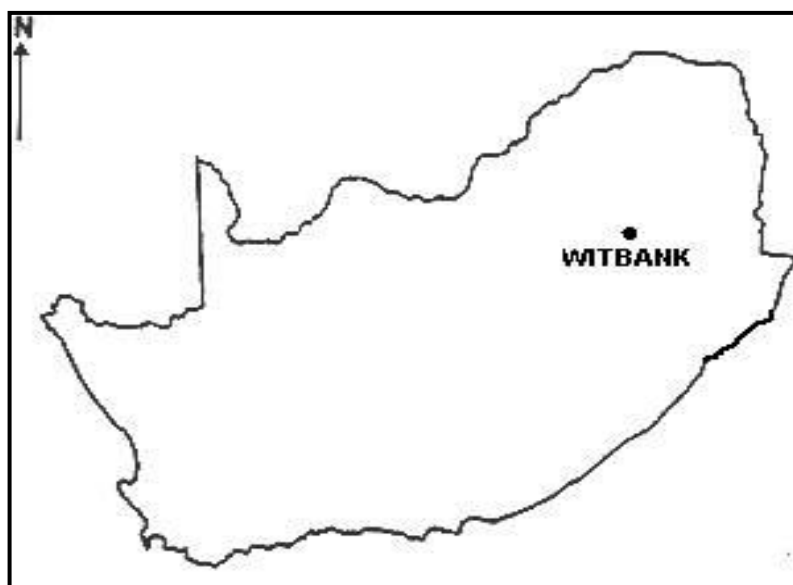
TOTAL MARK	MOD
100	100

\_\_\_\_\_  
This question paper consists of 10 pages.  
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**INSTRUCTIONS AND INFORMATION**

1. Write your NAME and in the space provided on the cover page.
2. Answer ALL the questions in the spaces provided ON THIS QUESTION PAPER.
3. You are supplied with a 1:50 000 topographical map (2529 CC WITBANK) and an orthophoto map (2529 CC 15 WITBANK) of a part of the same area.
4. The topographical map and the orthophoto map must be handed over to the invigilator at the end of the examination session.
5. NOTE: The resource material (topographical map and orthophoto map) must be collected by the schools for their own future use.
6. A non-programmable calculator may be used.
7. The following English terms or their Afrikaans translations are shown on the 1:50 000 topographical map:

ENGLISH	AFRIKAANS
Aerodrome	Vliegveld
Golf course	Gholfbaan
Diggings	Uitgrawings
Hospital	Hospitaal
Sewerage works	Rioolwerke
Shaft	Skag
Slimes Dam	Slykdam

**POSITION OF WITBANK WITHIN SOUTH AFRICA**

**SECTION A****QUESTION 1: MULTIPLE-CHOICE QUESTIONS**

The following questions/statements are based on the 1:50 000 topographical map 2529 CC WITBANK and the orthophoto map of the same area. Various options are provided as possible answers to the following statements/questions. Choose the correct answer and write only the letter (A – D) in the block next to the question/statement.

- 1.1 In the title reference number of the map of Witbank, the figure 25 refers to the ...

A longitude.  
B scale.  
C latitude.  
D height above sea level.

- 1.2 The map reference of the topographic map directly south of the map 2529 CC Witbank is ...

A 2629 BA.  
B 2629 AA.  
C 2529 AA.  
D 2529 CA.

- 1.3 The exact location(grid reference) of the reservoir, marked H on the orthophoto map is ...

A 29°13'45"E 25°53'30"S.  
B 25°52'30"S 29°14'20"E.  
C 25°53'30"S 29°13'44"E.  
D 29°14'20"S 25°54'30"E.

- 1.4 An orthophoto map refers to a/an ...

A vertical aerial photo.  
B oblique aerial photo.  
C the photo from which a map is drawn.  
D an aerial photo with contours superimposed on it.

- 1.5 The true bearing from spot height 1559 in block F6 to the Witbank station is ...

A 40°.  
B 215°.  
C 45°.  
D 165°.

1.6 The land-use marked A on the orthophoto map is a/an ...

- A residential zone.
- B zone of transition.
- C industrial zone.
- D commercial zone.

☐

1.7 The man made feature marked B on the orthophoto map is a/an ...

- A dam.
- B slimes dam.
- C excavation.
- D sportsfield.

☐

1.8 Ground water is used around Witbank for agricultural purposes. One piece of evidence to prove the use of ground water on the topographical map is the presence of ...

- A rivers.
- B dams.
- C wind pumps.
- D taps.

☐

1.9 Witbank can hierarchically be classified as a ...

- A hamlet.
- B town.
- C village.
- D city.

☐

1.10 The aerodrome in block A7 is found in the ...

- A slum zone.
- B residential area.
- C CBD.
- D rural-urban fringe.

☐

(10x2) (20)

**TOTAL SECTION A: 20**

**SECTION B****QUESTION 2: MAPWORK TECHNIQUES AND CALCULATIONS**

- 2.1 Calculate the average gradient from spot height  $\cdot$  1560 (block J5) to trigonometrical station 64 (block K6).

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(5)

- 2.2 Using the topographical map determine the time a train takes to travel from Witbank station (block C8) to Blackhill station (block I4) if it travels at a speed of 80 km/h?

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(6)

- 2.3 Calculate the vertical exaggeration of a cross section. The vertical scale is as follows: 1 cm = 30 m; the horizontal scale is 1:50 000. Show all calculations.

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(5)

- 2.4 Calculate the distance from E to B shown on the photo? Give your answer in metres.

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(4)

**TOTAL SECTION B: 20**

**SECTION C****QUESTION 3: MAP INTERPRETATION AND ANALYSIS**

3.1 3.1.1 Identify the type of mining found in the Witbank area.

(2)

3.1.2 Use map evidence (TWO examples) to explain how mining causes environmental destruction.

(2x2)

(4)

3.1.3 Refer to Greenside in block I6 and indicate the services and facilities that support this mine.

(2x2)

(4)

3.1.4 Explain why the area in the vicinity of block G8 is unsuitable for use as arable land.

(2x2)

(4)

3.1.5 KwaGuqa is growing towards the west. Give ONE reason that is visible on the topographical map, why it is impossible for this township to extend to the north.

(2)

3.2 Study the rural land-use in the vicinity of Vlaklaagte (25°59'20"S 29°08'20"E) and answer the following questions.

3.2.1 Which rural settlement pattern is predominant in the area?

\_\_\_\_\_ (1x2) (2)

3.2.2 Mention TWO factors favouring agriculture in the region of Vlaklaagte.

\_\_\_\_\_  
\_\_\_\_\_ (2x2) (4)

3.3 Refer to both the orthophoto map and the topographical map and identify the features/land-uses labelled I and C on the orthophoto map.

I \_\_\_\_\_

C \_\_\_\_\_ (2x2) (4)

3.4 There are several "green areas" like G on the orthophoto map that are important to the town. Give the geographical term for these green areas.

\_\_\_\_\_ (2)

3.5 Explain why these green areas are important to the urban environment.

\_\_\_\_\_  
\_\_\_\_\_ (2)

3.6 The industries/factories at A on the photo are located on the outskirts of Witbank. Explain briefly why the industries are located there.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (3x2) (6)

- 3.7 What is the general street pattern of Die Heuwel in block C10?  
Mention ONE advantage of the street plan to the motorists of Die Heuwel.

Street pattern =

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Advantage =

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(2x2)

(4)

**TOTAL SECTION C: 40**

## SECTION D

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

- 4.1 Explain the following concepts:

4.1.1 Geographical Information Systems (GIS):

(1x2)

(2)

4.1.2 Remote Sensing:

(1x2)

(2)

- 4.2 Differentiate between *spatial* and *attribute* data.

*Spatial* data:

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(1x2)

(2)

*Attribute* data:

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(1x2)

(2)

- 4.3 Give TWO examples of spatial data found on the topographical map and orthophoto map.

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(2x2) (4)

- 4.4 Name TWO of the main data inputs of a GIS.

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(2x2) (4)

- 4.5 Give TWO examples of Attribute data found in or around the hospital on the topographical map.

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(2x2) (4)

**TOTAL SECTION D: 20**

**GRAND TOTAL: 100**