



education

Department:
Education
REPUBLIC OF SOUTH AFRICA

SENIOR CERTIFICATE EXAMINATION – 2008

**GEOGRAPHY P2
STANDARD GRADE
MAY/JUNE 2008
MEMORANDUM**

MARKS: 75

This memorandum consists of 7 pages.

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

Refer to the 1:50 000 topographical map 3319 CB and the 3319 CB 15 orthophoto map of Worcester (attached) to answer the following questions:

Various possible (answers) options are provided for the following questions / statements. Write only the letter (A – D) next to the question number (1.1 – 1.10) in the block provided on the right – hand side of the page.

1.1 The angle that is formed between the true north and magnetic north is referred to as...

- A gradient.
- B magnetic declination.
- C vertical exaggeration.
- D geographic bearing.

1.2 The contour interval on the orthophoto map is ... metres.

- A 20
- B 5
- C 50
- D 60

1.3 The type of scale shown on the orthophoto map is a ... scale.

- A word scale
- B line scale
- C Richter scale
- D ratio scale

1.4 The feature found at J (block A6) on the topographical map is a ... feature.

- A cultural feature
- B physical
- C climatic
- D volcanic

1.5 The type of farming found at K on the orthophoto map is...

- A subsistence.
- B nomadic.
- C pastoral.
- D commercial.

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1.6. The number 33 in the map reference number 3319 CB Worcester refers to...

- A longitude.
- B contour line.
- C latitude.
- D isobars.

C

1.7 The recreational feature found at grid reference 33° 39' 20"S and 19° 27'30"E is ...

- A a golf course.
- B Florian Park.
- C Esselen Park.
- D Johnson Park.

C

1.8. The man-made feature found at block B/C9 on the topographical map is a ...

- A dam.
- B reservoir.
- C lake.
- D sewage works.

A

1.9. The type of economic activity found at M on the orthophoto map is...

- A primary.
- B secondary.
- C tertiary
- D quarternary .

C

1.10 If one travels in a south-easterly direction on the road labelled N on the orthophoto map the next town will be ...

- A De Doorms.
- B Worscester.
- C Robertson.
- D Caledon.

C

TOTAL SECTION A: 10 x 2 = (20)

SECTION B

QUESTION 2: MAPWORK TECHNIQUES AND CALCULATIONS

2.1 Calculate the average gradient from spot height • 212 (block E12) to trigonometrical station 207 (block C8). Show all calculations. Use the formula:

$$\frac{VI}{HE} \quad \text{OR} \quad \frac{\text{Rise}}{\text{Distance}} \quad \text{OR} \quad \frac{\text{Height}}{\text{Distance}}$$

$$\begin{aligned} \text{Gradient} = \frac{VI}{HE} \sqrt{} &= \frac{289,5 - 212}{14,1 \text{ cm} \sqrt{} \times 0,5} \\ &= \frac{77,5M \sqrt{}}{7,05 \sqrt{} \times 1000} \\ &= 1: 90,96 \sqrt{} \end{aligned}$$

$$\begin{aligned} \text{OR} \quad \frac{VI}{HE} \sqrt{} &= \frac{289,5 - 212}{141 \text{ mm} \sqrt{} \times 50\ 000} \\ &= \frac{77,5m \sqrt{}}{7050m \sqrt{}} \\ &= 1: 90,96 \sqrt{} \end{aligned}$$

(Range 1:90,3 - 1:91,6)

(Range 1:90,3 - 1:91,6)

$$\begin{aligned} \text{Gradient} = \frac{VI}{HE} \sqrt{} &= \frac{289,5 - 212}{14,1 \text{ cm} \sqrt{} \times 500} \\ &= \frac{77,5m \sqrt{}}{7,05 \sqrt{} \times 1000} \\ &= 1: 90,96 \sqrt{} \end{aligned}$$

(Range 1:90,3 - 1:91,6)

(5)

2.2 Calculate the magnetic declination for the year 2007. Show all calculations.
Difference in years = 2007 – 1997

$$= 10 \text{ years} \sqrt{}$$

$$\text{Mean annual change} = 10 \times 2' W$$

$$= 20' W \sqrt{}$$

$$\begin{aligned} \text{MD for 2007} &= 23^\circ 12' \\ &\quad + \sqrt{} \frac{20'}{23^\circ 32' W} \sqrt{} \end{aligned}$$

(5)

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- 2.3 Calculate the area in square kilometers (km²) of block G8 on the topographical map. Use the following formula:

Length x Breadth (Given Length 3,7cm; Breadth 3cm)

$$\text{length} \quad 3,7 \times 0,5 = 1,85 \checkmark$$

$$\text{breadth} \quad 3 \times 0,5 = 1,5 \checkmark$$

$$\text{AREA} \quad 1,85 \times 1,5 \checkmark \\ = 2,8 \text{ km}^2 \checkmark \checkmark \quad (5)$$

TOTAL SECTION B: [15]

SECTION C

QUESTION 3: RELIEF AND DRAINAGE

- 3.1 Identify the following physical features on the topographical map :

P (block E7): *Braided streams/sand island* (2)

Q (block D5): *Marshes and vlei/swamp* (2)

2x2 = (4)

- 3.2 Give TWO physical factors favoured the location of the Brandvleidam?

- *Mountains form the natural dam walls* (2)

- *High altitude reduces the evaporation rate* (2)

- *Surrounded by a large catchment area providing good water supply* (2)

[Any TWO]

2x2 = (4)

- 3.3 In which general direction is the Breërvier flowing? Give one reason for your answer.

Answer: *South eastwards* (2)

1x2 = (2)

Reasons: *The contour heights decreases south-eastwards* (2)

The spot heights decreases south-eastwards (2)

Most tributaries join the main river at acute angles south-easterly (2)

[Any ONE]

1x2 = (2)

- 3.4 Identify the drainage pattern found in block H 7.

dendritic (2)

1x2 = (2)

- 3.5 Suggest ONE physical factor hindering the northwards expansion of the town of Worcester.

Mountains (1)

(1)

TOTAL SECTION C: [15]

SECTION D

QUESTION 4: SETTLEMENT AND ECONOMIC ACTIVITIES

4.1 The residential area of Van Riebeeckpark, S on the orthophoto map, is a high income residential area.
Give TWO reasons to support this statement.

Houses are large (2)
Stands are large (2)
High lying – scenic view (2)
Low density (2)
[Any TWO]

2x2 = (4)

4.2. 4.2.1 Identify the urban functional zone, on the boundary of Worcester, where the sewage works (block D/E 10) is situated.

rural-urban fringe (2)

1x2 = (2)

4.2.2 Give ONE reason why is it located here?

away from the built up area (smell / odour)(2)
cheaper land (2)
open space (2)
[Any ONE]

1x2 = (2)

4.3 Identify the land-use found at K and M on the orthophoto map. Choose your answers from the list below.
(cultivated lands, orchards and vineyards, school, hospital)

K - Orchards vineyards (2)
M - Hospital (2)

2x2 = (4)

4.4 The industrial area of Worcester (block C10) has an ideal (good) location.
List TWO factors that influenced its' location.

-good transport network(road/ rail) (2)
-flat land for expansion (2)
-cheaper land away from city centre (2)
away from built up area –less threat of pollution (2)
-water supply from Worcester dam (2)
-good labour supply from the surrounding residential areas (2)
[Any TWO]

2x2 = (4)

4.5 Identify the type of street pattern found in the CBD of Worcester.

gridiron (2)

(1)

- 4.6 Environmental damage has taken place at C12 on the topographical map. Name the type of primary activity that is responsible for this damage.

diggings / excavations (2) 1x2 = (2)

- 4.7 Fruit farming is an important economic activity in Worcester. List any THREE factors that have favoured this type of activity in this area.

-Mediterranean climate – winter rainfall (2)

-numerous rivers and dams (2)

-fertile soil found on banks of rivers (2)

-sheltered valleys (2)

[Any THREE]

3x2 = (6)

TOTAL SECTION D: 25
GRAND TOTAL: 75