

Province of the

**EASTERN CAPE**

EDUCATION

**NATIONAL**

**SENIOR CERTIFICATE**

**GRADE 11**

**NOVEMBER 2010**

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| **GEOGRAPHY P2**  **MEMORANDUM** |

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

**MARKS: 100**

**TIME: 1½ hours**

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| This memorandum consists of 7 pages. |

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| **SECTION A** | |  |
|  |  |  |
| **QUESTION 1: MULTIPLE-CHOICE QUESTIONS** | |  |
|  |  |  |
| 1.1 | C 🗸🗸 |  |
|  | |  |
| 1.2 | B 🗸🗸 |  |
|  | |  |
| 1.3 | C 🗸🗸 |  |
|  | |  |
| 1.4 | D 🗸🗸 |  |
|  |  |  |
| 1.5 | A 🗸🗸 |  |
|  |  |  |
| 1.6 | C 🗸🗸 |  |
|  |  |  |
| 1.7 | A 🗸🗸 |  |
|  |  |  |
| 1.8 | C 🗸🗸 |  |
|  |  |  |
| 1.9 | C 🗸🗸 |  |
|  |  |  |
| 1.10 | B 🗸🗸 (10x2) | (20) |
|  |  |  |
|  | **TOTAL SECTION A:** | **20** |

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| **SECTION B** | | | | | |  |
|  | | | | | |  |
| **QUESTION 2: MAPWORK TECHNIQUES AND CALCULATIONS** | | | | | |  |
|  | |  | | | |  |
| 2.1 | | Calculate the average gradient from trigonometrical station Δ 177 (block J11) to the spot height **.**139 (block G11). | | | |  |
|  | |  | | | |  |
|  | | GRADIENT = VI  HE **🗸**  VI = 612,8 – 139 m = 473,8 m **🗸**  HE = 9,0x0,5 = 4,5 km **🗸** (4,5x1 000) = 4 500 m  Gradient = VI/HE  = 473,8/4 500 m **🗸**  = 1:9,4 **🗸** **🗸**  (Range 1:9,4 – 1:9,6) **🗸🗸** | | | | (6) |
|  | |  | | | |  |
| 2.2 | | Calculate the vertical exaggeration of a cross section. The vertical scale is as follows: 1cm = 50 m; the horizontal scale is 1: 50 000. Show all calculations. | | | |  |
|  | |  | | | |  |
|  | | VE = VS **OR** VE = VS  HS **🗸** HS **🗸**  = 1/50 ÷ 1/500 **🗸** = 1/5 000 ÷ 1/50 000 **🗸**  = 1/50x500/1 **🗸** = 1/5 000x50 000/1 **🗸**  = 10 times **🗸**  = 10 times **🗸**  VS = 1 cm: 50 m **🗸** VS = 1 cm: 50 m (1 cm: 5 000 cm)**🗸**  HS = 1 cm : 500 m HS = 1 cm : 50 000 cm | | | | (5) |
|  | |  | | | |  |
| 2.3 | | Calculate the magnetic declination for the year 2010. Show all calculations. | | | |  |
|  | |  | | | |  |
|  | | Difference in years = 2010 – 2002  = 8 years **🗸**  Mean annual change = 8x6’ W  = 48’ W **🗸**  MD for 2010 = 23° 33’  +**🗸** 48’  23° 81’ W  24° 21’W **🗸🗸** | | | | (5) |
|  | |  | | | |  |
| 2.4 | | What is the straight line distance from P to Q on the orthophoto map? Give your answer in metres. | | | |  |
|  | |  | | | |  |
|  | | Distance P to Q = 12,5cmx10 000**🗸** **OR** 12,5 cm/10**🗸**  = 125 000 cm**🗸** = 1,25 km**🗸**  = 125 000/100 = 1 250 m **🗸🗸** = 1,25x1 000 = 1 250 m**🗸🗸** | | | | (4) |
|  | |  | | | |  |
|  | |  | | **TOTAL SECTION B:** | | **20** |
|  | |  | |  | |  |
| **SECTION C** | | | | | |  |
|  | | | | |  |  |
| **QUESTION 3: MAP INTERPRETATION AND ANALYSIS** | | | | | |  |
|  |  | | | | |  |
| 3.1 | 3.1.1 | | Is the system of farming shown on the topographical map and orthophoto map commercial or subsistence? | | |  |
|  |  | |  | | |  |
|  |  | | Commercial farming (2) | | |  |
|  |  | | (1x2) | | | (2) |
|  |  | |  | | |  |
|  | 3.1.2 | | Explain your answer to 3.1.1 by referring to evidence and examples on the map. | | |  |
|  |  | |  | | |  |
|  |  | | Boland agricultural College (2)  Dams (2)  Large farms(2)  Farm names (2)  Roads between farms (2)  Transport system (2)  Wind pumps (2)  Well known names e.g. Premier Estate (M8) (2)  Individually owned (2)  Factories (2) (Any 3) | | |  |
|  |  | | (3x2) | | | (6) |
| 3.2 | Environmental damage has taken place at I10 and J10 on the topographical map. Name the type of primary activity that is responsible for this damage. | | | | |  |
|  |  | | | | |  |
|  | Diggings (2)  Excavations (2) (Any 1) | | | | |  |
|  | (1x2) | | | | | (2) |

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| 3.3 | The Paarlberg Nature Reserve and Paarl have been intensely used for tourism/ecotourism. Justify this statement by giving THREE features from the map. | |  |
|  |  | |  |
|  | Caravan parks (2)  Camping sites (2)  Protected areas (2)  Woodland conservation(2)  Nature Reserve and Wild Flower Reserve (2)  Golf course (2)  Dams on Paarl Berg(2)  Recreation area (2)  Jan Philip’s Mountain Drive (2)  Hiking trails (2)  Wine route (2) (Any 3) | |  |
|  | (3x2) | | (6) |
|  |  | |  |
| 3.4 | List TWO potentially negative impacts of the caravan park on the surrounding environment marked H on the orthophoto map. | |  |
|  |  | |  |
|  | Pollution - litter (2)  Noise (2)  Destroyed natural vegetation (2)  Severe damage to the ecosystem (2)  [Any Two - Accept any reasonable answer] | |  |
|  | (2x2) | | (4) |
|  |  |  |  |
| 3.5 | Which factors influenced the site of the factories in Paarl on the topographical map? | |  |
|  |  | |  |
|  | Market (2)  Availability of raw material (2)  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)  Good labour supply from the surrounding residential areas (2) (Any 3) | |  |
|  |  | (3x2) | (6) |
|  |  |  |  |
| 3.6 | Refer to both the orthophoto map and the topographical map and identify the features/land-uses labelled K and J on the orthophoto map. | |  |
|  |  |  |  |
|  | K = | River (2) |  |
|  |  |  |  |
|  | J = | Recreation area (2) |  |
|  |  | (2x2) | (4) |

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| 3.7 | Fruit farming is an important economic activity in Paarl. List and explain any THREE factors that have favoured this type of activity in this area. | | | |  |
|  |  | | | |  |
|  | Mediterranean climate – winter rain(2)  Numerous rivers and dams(2)  Fertile soil found on banks of rivers (2)  Sheltered valley (2) (Any 3) | | | |  |
|  | (3x2) | | | | (6) |
|  |  | |  | |  |
| 3.8 | Which TWO factors determined the shape of Paarl? | | | |  |
|  |  | | | |  |
|  | River (2)  Mountains (2)  Roads (2) (Any 2) | | | |  |
|  | (2x2) | | | | (4) |
|  |  | |  | |  |
|  |  | | **TOTAL SECTION C:** | | **40** |
|  |  | |  | |  |
| **SECTION D** | | | | |  |
|  | | | | |  |
| **QUESTION 4: GEOGRAPHICAL INFORMATION SYSTEMS (GIS)** | | | | |  |
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| 4.1 | | Define the following concepts: | | |  |
|  | |  | |  |  |
|  | | 4.1.1 | | Geographical Information Systems (GIS): |  |
|  | |  | |  |  |
|  | |  | | Computer based technology and method for collecting, analysing, managing, modeling and presenting geographical data for a wide range of uses.(2) (Concept 1x2) |  |
|  | |  | | (1x2) | (2) |
|  | | 4.1.2 | | Describe THREE components of Geographical Information Systems (GIS). |  |
|  | |  | |  |  |
|  | |  | | People/users (2)  Software/computer programmes (2)  Data/information/maps/photos (2)  Applications (2)  Hardware/computers (2)  Procedure (2) (Any 3) |  |
|  | |  | | (3x2) | (6) |

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| 4.2 | Geographical Information Systems (GIS) is a computerized digital mapping system that represents objects in the real world as points, lines or areas (polygons). Name the following conventional signs indicated in the topographic map: | |  |
|  |  |  |  |
|  | 4.2.1 | The line object used for transport in block H1. |  |
|  |  |  |  |
|  |  | Secondary road (2) |  |
|  |  |  |  |
|  | 4.2.2 | The point object in block E3. |  |
|  |  |  |  |
|  |  | Trigonometrical station (2) |  |
|  |  | (2x2) | (4) |
| 4.3 | Data storage in GIS should be in a form of: | |  |
|  |  |  |  |
|  | 4.3.1 | Vector (2) |  |
|  |  |  |  |
|  | 4.3.2 | Raster (2) |  |
|  |  | (2x2) | (4) |
| 4.4 | Answer the following on *spatial resolution*. | |  |
|  | 4.4.1 | Define the term “spatial resolution”*.* |  |
|  |  |  |  |
|  |  | Refers to the detail with which a map depicts the location and shape of the geographic features (2) (Concept 1x2) |  |
|  |  | (1x2) | (2) |
|  | 4.4.2 | Does the orthophoto map or the topographical map have a higher spatial resolution? |  |
|  |  |  |  |
|  |  | Orthophoto map (2) |  |
|  | (1x2) | | (2) |
|  |  | |  |
|  | **TOTAL SECTION C:** | | **20** |
|  |  | |  |
|  | **GRAND TOTAL:** | | **100** |