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EDUCATION

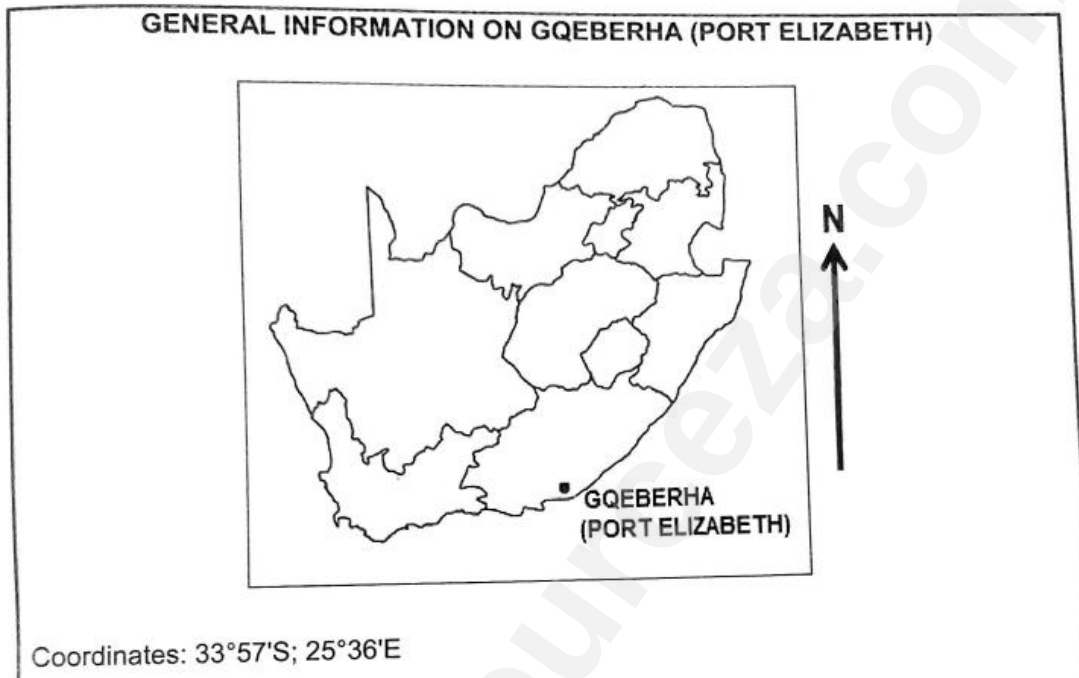
REPUBLIC OF SOUTH AFRICA

TYPE OF TASK: MAP WORK TASK

SUBJECT	:	GEOGRAPHY
GRADE	:	12
TERM	:	ONE
EXAMINER	:	EKURHULENI SOUTH
MODERATOR	:	EKURHULENI SOUTH
TIME	:	1 HOUR
TOTAL	:	60 MARKS
DATE OF IMPLEMENTATION	:	01 MARCH 2024
TERM WEIGHTING	:	75%
SBA WEIGHTING	:	15%

INSTRUCTIONS AND INFORMATION

1. A 1:50 000 topographical map 3325DC & DD & 3425 BA GQEBERHA (PORT ELIZABETH) and a 1: 10 000 orthophoto map 3325DC 23 GQEBERHA (PORT ELIZABETH) are provided.
2. The area demarcated in RED on the topographical map represents the area covered by the orthophoto map.
3. Show ALL calculations. Marks will be allocated for steps in calculation.



Gqeberha (Port Elizabeth) is a major seaport(harbour) and a densely populated city in the Eastern Cape in South Africa. It lies at Algoa Bay in the Indian Ocean

The residential area is on flat land, with an industrial sector at the North End. Gqeberha is characterised by a large number of green belts

The following English terms and their Afrikaans translations are shown on the topographical map

ENGLISH

International airport
River
Bridge
Furrow
Golf course
Firebreak

AFRIKAANS

Internasionale lughawe
Rivier
Brug
Voor
Gholfbaan
Voorbrandstrook

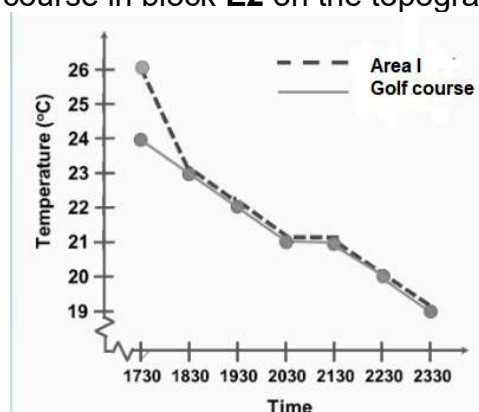
Question 1 – MAP SKILLS AND CALCULATIONS

- 1.1.1 Gqeberha is found in the ...
 A. Eastern Cape Province
 B. Western Cape Province
 C. Gauteng Province
 D. KwaZulu Natal Province (1x1) (1)
- 1.1.2 The scale of the orthophoto map:
 A. 1 cm represents 100m
 B. 1 cm represents 100cm
 C. 1 cm represents 500m
 D. 1cm represents 500cm (1x1) (1)
- 1.1.3 The contour interval on the topographic map:
 A. 20 m
 B. 20cm
 C. 20km
 D. 20mm (1x1) (1)
- 1.1.4 The coordinates 3425 refers to
 (i) 34°S Latitude
 (ii) 25° E Longitude
 (iii) 34°E Latitude
 (iv) 25°S Longitude
 A. (i) and (ii)
 B. (i) and (iii)
 C. (iii) and (iv)
 D. (ii) and (iii) (1x1) (1)
- Refer to the orthophoto map
- 1.1.5 Calculate the distance of the runway in kilometres (km) between 6 and 7
 Formula: **Actual Distance = Map Distance x Map Scale** (2x1) (2)
- Refer to the topographical map
- 1.1.6 Calculate the area in meters (m) of the block marked in red.
 Formula: **Area = Length x Breadth** (5x1) (5)
- 1.1.7 Calculate the true bearing of **F** in block **B3** from police station in block **C3** (2x1) (2)
- 1.1.8 Use your answer from question 1.1.7 above to calculate the magnetic bearing of **F** in block **B3** from police station in block **C3** for the current year.
 Formula: **Magnetic Bearing = True Bearing + Magnetic Declination** (5x1) (5)
- 1.1.9 What is the purpose of calculation the magnetic declination (MD) for the current year (1x2) (2)
(20)

QUESTION 2 - MAP INTERPRETATION

- 2.1 Refer to the topographical map and orthophoto map
- 2.1.1 A Topographic Map is _____ times smaller than and Orthophoto and shows _____ detail of an area.
 A, 5; more
 B 10; less
 C. 5; less
 D. 10; more (1x1) (1)
- 2.1.2 The index (reference) of the map sheet directly north-east of GQEBERHA 3325 DC is
 A. 3325 DB
 B. 3325 DA
 C. 3325 DD
 D. 3325 BD (1x1) (1)
- 2.1.3 The land use located at **F** in block **B3/4** on the topographical map is... (1x1) (1)
- 2.1.4 Map evidence indicates ... rainfall because of the... blue lines on the topographical map
 (i) Annual
 (ii) Seasonal
 (iii) Continuous
 (iv) Dashed
 A. (i) and (iii)
 B. (i) and (iv)
 C. (ii) and (iii)
 D. (ii) and (iv) (1x1) (1)
- 2.2 Refer to the river in block **B1 - A2** on the topographical map
- 2.2.1 In which stage (upper course, middle course or lower course) is the river (1x1) (1)
- 2.2.2 Give evidence from the topographical map to support your answer to QUESTION 2.2.1 (1x2) (2)
- 2.2.3 The river generally flows in a (south westerly / north easterly) direction (1x1) (1)
- 2.2.4 Give a reason for your answer to QUESTION 2.2.3 (1x2) (2)
- 2.3 Refer to the orthophoto.
- 2.3.1 The area shown in the orthophoto is generally (flat / steep) (1x1) (1)
- 2.3.2 Provide evidence from the orthophoto to support your answer to QUESTION 2.3.1 (1x2) (2)

2.4 Refer to graph below showing the temperature difference between **I** in block **B1** and golf course in block **E2** on the topographical map



- 2.4.1 With reference to the above graph, which area (**I** or the golf course) has a higher average temperature (1x1) (1)
- 2.4.2 Provide evidence from the topographical map to support your answer to QUESTION 2.4.1 (1x2) (2)
- 2.4.3 Discuss TWO possible reasons for this difference in temperature between the two areas shown in the above graph (2x2) (4)

Refer to block **D4** on the topographical map

- 2.5.1 Describe TWO significance of row of trees in block **D4** (2x2) (4)
- (24)**

QUESTION 3 - GEOGRAPHICAL INFORMATION SYSTEMS (GIS)

3.1.1 Refer to the table below. Match the definition in column A with the correct concept in column B. Write down the correct letter only eg. 3.3.1 d) Z

Column A	Column B	
a) Is the ability to ask questions (and get answers) about geographic features.	X. Data Sharing	(1x1) (1)
b) Allows others to use your data in their own analysis process	Y. Data Security	(1x1) (1)
	Z. Data Query	

- 3.2.1 (a) Does an orthophoto map consist of raster or vector data? (1x1) (1)
- (b) Motivate your answer (1x2) (2)
- 3.2.2 A orthophoto is an example of gathering data through remote sensing.
- (a) Define the concept of remote sensing (1x2) (2)
- (b) How can remote sensing be used by city planners to further develop Gqeberha? (1x2) (2)

Refer to the 1:50 000 topographical map 3325DC & DD & 3425 BA GQEBERHA (PORT ELIZABETH)

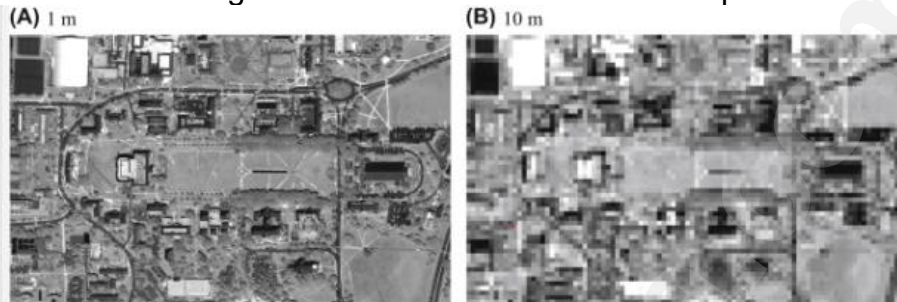
3.3 Refer to **Block A2** on the Topographical Map

3.3.1 **Identify** the following:

- (a) a natural Line feature
- (b) a man made polygon feature

(2x1)(2)

3.3.2 Refer to the images below of block **C5** on the orthophoto



- a) Which image A or B has a higher resolution ?
- b)Justify you answer, to QUESTION 3.3.2
- c) List TWO advantages of using image A for GIS analysis

(1x1)(1)

(1x2)(2)

(2x1)(2)

(16)

Total 60