



GRADE 10 EXEMPLAR EXAMINATION
2006

GEOGRAPHY: PAPER 1

MEMORANDUM

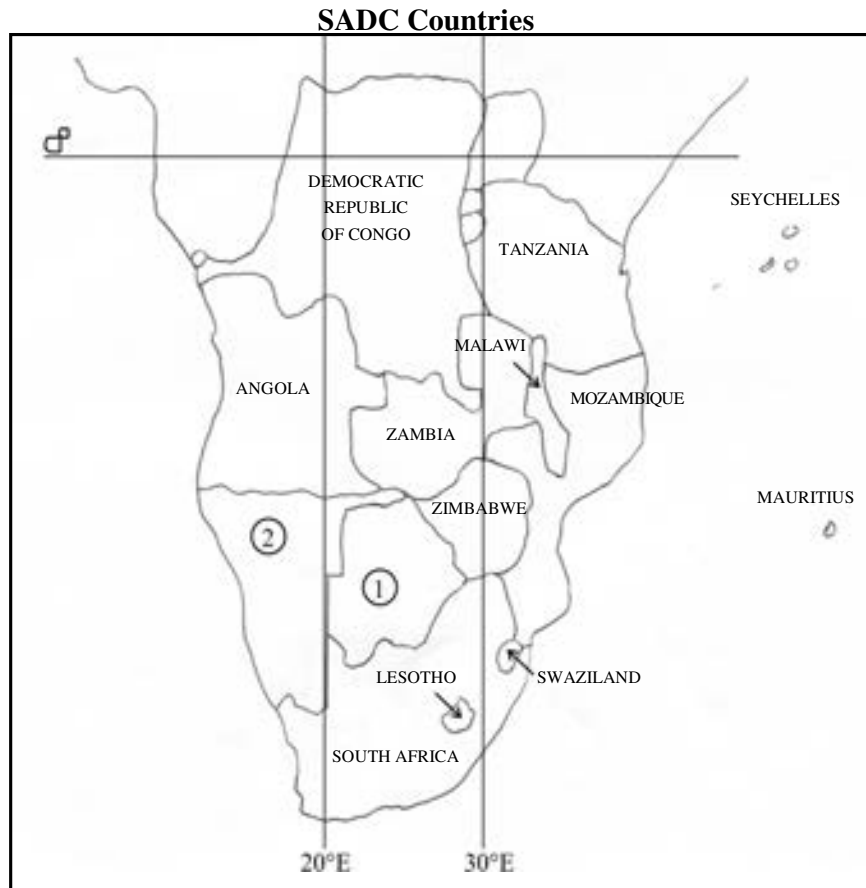
Time: 1 hour

100 marks

The marking memorandum is a working document.

QUESTION 1 Geographical Skills and Techniques

Study the map below which shows part of Africa and the SADC countries.



1.1 Name the SADC countries numbered 1 and 2 which are not named on the map.

1. Botswana

2. Namibia (1)

1.2 Through which one of these countries does the Equator pass:
Angola, Mozambique, Democratic Republic of Congo?

Democratic Republic of Congo (1)

1.3 Name ONE land-locked country which lies entirely south of 20°S.

Swaziland, Lesotho (1)

1.4 Name the country that has Zambia as one of its southern neighbours.

Democratic Republic of Congo (1)

1.5 What does the acronym SADC stand for?

Southern African Development Community (1)

5 x 2 = 10 marks

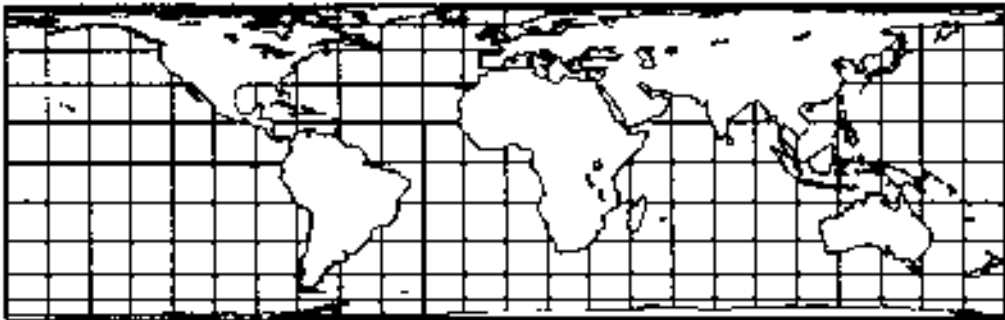
QUESTION 2 Map Projections

2.1 **State** why it is necessary to use map projections to draw maps of Earth.

Impossible to represent a spherical surface on a flat piece of paper

(1)

2.2 Study the map below which is drawn using the Lambert's Equal Area Cylindrical Projection.



2.1.1 **State ONE** advantage of using Lambert's projection.

Areas are correctly represented

(1)

2.1.2 **State ONE** disadvantage of using Lambert's projection.

Polar regions distorted

(1)

3 x 2 = 6 marks

QUESTION 3 Fieldwork

Answer **EITHER** 3.1 **OR** 3.2.

EITHER

3.1 **Describe** the results of any fieldwork investigation you have done this year. (Write your answer on a separate sheet of paper.)

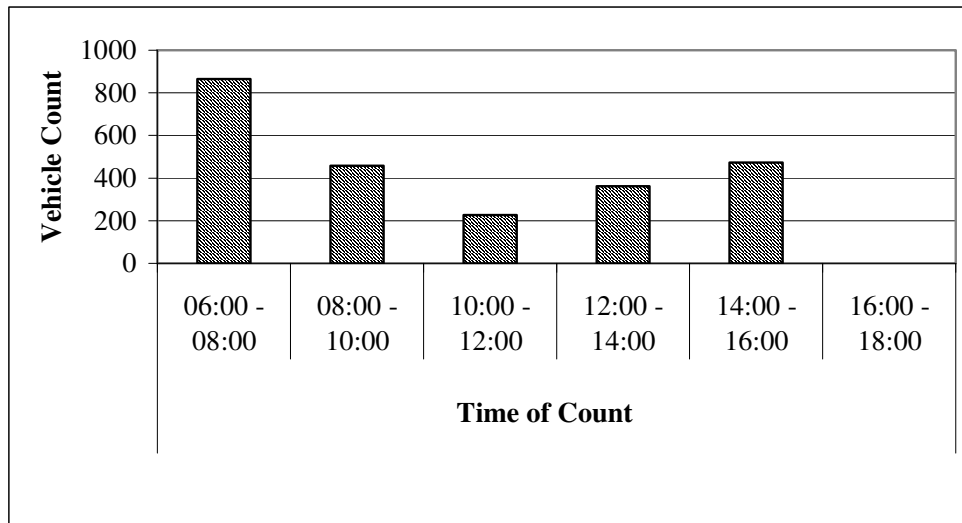
Mark allocation	Level descriptor
6	Outstanding work – cannot be faulted.
3 – 5	Satisfactory to good. At the higher range it has some omissions but covers the basics; at the lower range it meets the criteria bit lacks development.
1 – 2	Weak to poor. At the higher end it covers the criteria but has severe deficiencies in standard, at the lower end it has only minimal outline; sub-standard
0	Does not meet the criteria in any way.

(6)

OR

3.2 As part of their Geography fieldwork, a class did a traffic count on the road outside their school. The graphs they drew are shown below.

Graph 1: Vehicle Traffic Count

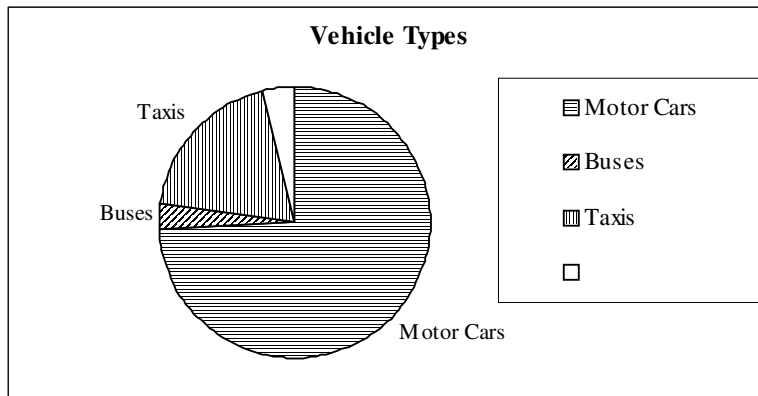


3.2.1 State approximately how many vehicles passed the counting point during the period 10:00 to 12:00. 205– 230 (1)

3.2.2 **Analyse** the reason(s) for the vehicle count during the period 10:00 to 12:00.
Relatively low: school has started, rush hour has finished.
Any acceptable reason.
 _____ (1)

3.2.3 **Estimate** the vehicle count for the period 16:00 to 18:00 and **explain** your answer.
 Estimated vehicle count Any realistic figure acceptable, e.g. 300
 Explanation Most pupils will have left the school by this time and this is normal commuter traffic or any acceptable answer.
 _____ (2)

Graph 2: Vehicle Types



3.2.4 **Estimate** the percentage of motor cars in the traffic count. 74% accept 70 – 80 % (1)

3.2.5 One category of vehicle types has been left blank. **Predict** the missing vehicle type and explain your choice.
Any acceptable answer, e.g.:
Motor cycle – learners coming to school on motor cycles
Bicycles – learners on bicycles
Trucks/lorries/vans – deliveries using the road (1)

6 x 2 = 12 marks

QUESTION 4 Geographic Information Systems (GIS)

4.1 **Explain** what is meant by a Geographic Information System.

A GIS combines layers of information about a place to give us

a better understanding of that place.

(2)

4.2 **Analyse** TWO data layers you would need for a GIS map to show the best location in the city for a new club catering for the teenage market.

Many acceptable answers such as:

1. **One would need to know if there were enough teenagers in the club's market area to ensure that the club's threshold population was big enough to make it viable.**

2. **One would need to know if the club was accessible by adequate transport routes.**

Other possible answers: the wealth of the target market, the availability of public transport, the crime statistics in the area. (4)

6 x 2 = 12 marks

QUESTION 5 Map and Photo Interpretation

- Carefully study the 1:50 000 topographical map extract 2829 DB Ladysmith and the accompanying orthophoto map (which is on a scale of 1:10 000) before answering the questions
- The map has grid lines with markings A to H and 1 to 8 that may be used to identify locations.
- On the final page there is also a translation of some words appearing on the maps.
- A magnifying glass and a calculator may be used.



Ladysmith has grown to become one of the largest industrial and commercial towns in KwaZulu-Natal. It is probably best known for the 118-day Siege of Ladysmith – one of the most famous campaigns during the Anglo-Boer War. There is also a display on Ladysmith Black Mambazo in the town's cultural centre. (AA of South Africa)

Topographic Map Skills

5.1 **State** the latitude and longitude of the spot height marked 1200 in A1.

Latitude 28° 30' 45"S (1)

Longitude 29° 45' 50"E (1)

5.2 **State** the area (km²) of the rectangle marked A1.

2,3 – 2,5 km² (1)

Working

5.3 A motorist is driving on the N11 towards Newcastle. On what bearing is the motorist travelling while driving in B5? Tick the correct box.

214°	124°	148°	34°
✓			

(1)

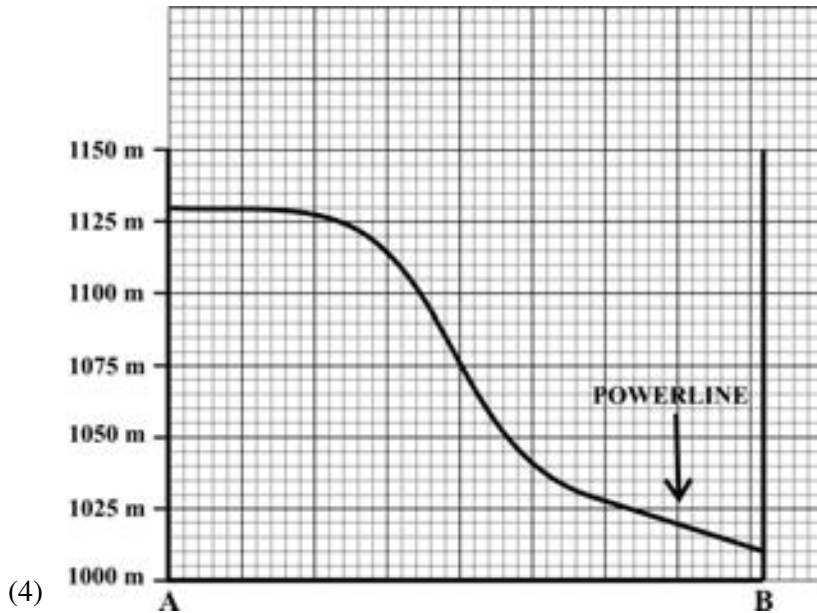
5.4 A canoeist paddles on the Klip River from Weirs (D1) to the N11 road bridge (E2). How far (to the nearest kilometre) does the canoeist paddle?

3 – 4 km (1)

5 x 2 = 10 marks

QUESTION 6 Cross-section, Gradient and Intervisibility

- 6.1 In the space below draw an accurate cross-section from the point marked A to the point marked B on the orthophoto map. Accurately mark and label the position of the power line where it crosses the line of the cross-section.



- 6.2 Calculate the average gradient between A and B on the orthophoto map.
- 6.2.1 Distance from A to B _____ **4 000** metres (1)
- 6.2.2 Drop in altitude from A to B _____ **720** metres (1)
- 6.2.3 Gradient from A to B 1: _____ **1:5 – 1:6** (1)
- 6.3 Under normal conditions could a person standing at A see a person at B? Tick the correct answer.

Yes	No
	✓

(1)

8 x 2 = 16 marks

QUESTION 7 Orthophoto Skills

7.1 Landform recognition.

Tick the box which best represents the landforms at the following places on the orthophoto map:

7.1.1 Line C to D

Valley	Spur	Saddle	Mesa
	✓		

(1)

7.1.2 Point E

Valley	Spur	Saddle	Mesa
		✓	

(1)

7.1.3 Line F to G

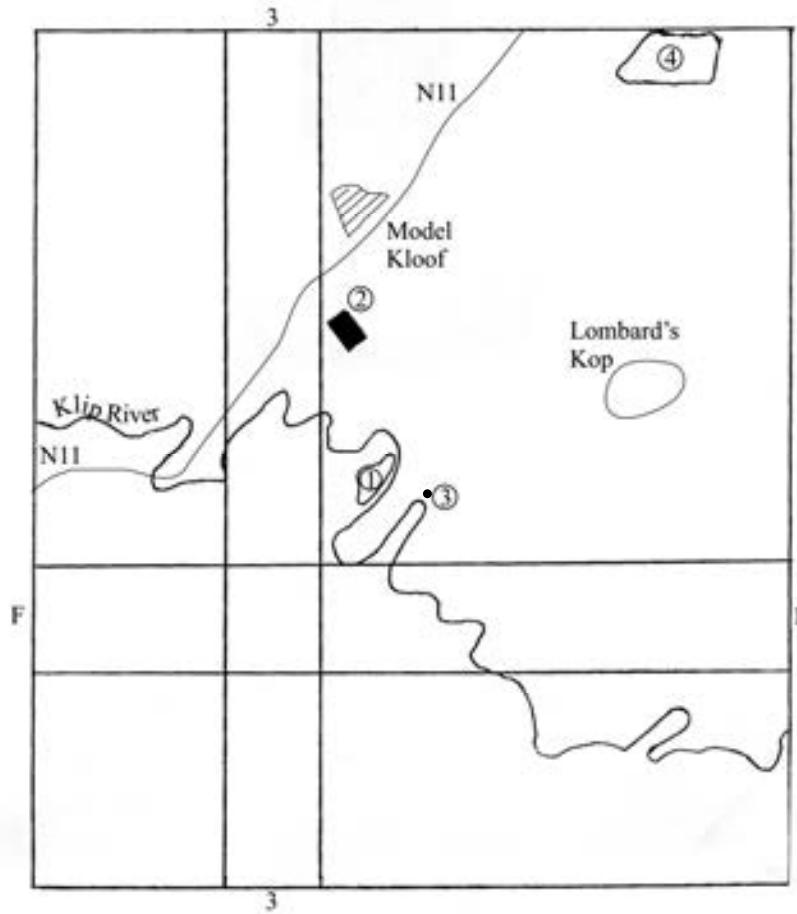
Valley	Spur	Saddle	Mesa
✓			

(1)

3 x 2 = 6 marks

QUESTION 8 Sketch Maps

The sketch map below shows the whole of the topographic map extract. Some grid lines and the Klip River (Kliprivier) have been marked in on the map.



8.1 Mark in and label the following on the sketch map:

8.1.1 The N11 National Road (1)

8.1.2 The suburb named Model Kloof (B4), and (1)

8.1.3 Lombardskop (D7). (1)

8.2 **Identify** the following:

8.2.1 The service provided at 1 Sewage works (1)

8.2.2 The tertiary economic activity at 2 Railway shed (1)

8.2.3 The primary economic activity at 3 Mining (1)

8.2.4 The primary economic activity at 4 Farming (1)

7 x 2 = 14 marks

QUESTION 9 Advertisement Design

You have bought a Bed and Breakfast guest house in Observation Hill (C2). In the space below design an advertisement that will attract guests to your B & B business. Include a slogan, geographical attractions and simple artwork where appropriate. Use information from the 1:50 000 map and 1:10 000 orthophoto map.

- 1. Little idea – would not attract anyone, no slogan, few geographical or historical attractions.**
- 2. Fair – some geographical and historical information taken from map and/or photo.**
- 3. Good – would attract guests, much relevant geographical and historical information taken from map and photo. Has good slogan and contact information. Could be used by the owner with alterations.**
- 4. Excellent – difficult to improve on it. Map and photo used well. Excellent slogan, contact information, perhaps a simple topological map to indicate position. The sort of design that could be used by the owner with little change.**

(4)

4 x 2 = 8 marks

QUESTION 10 Industry

Using a mind-map (spider diagram) **demonstrate** the industrial advantages of Ladysmith, i.e. show the factors that benefit factories/industry in Ladysmith.

3 x 2 = 6 marks

Mind-map/spider diagram

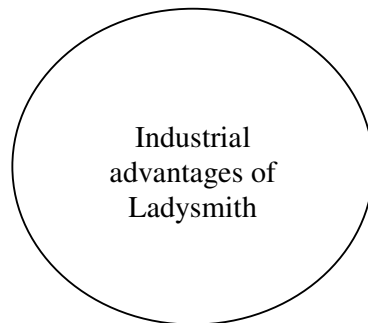
Any 6 valid points @ ½ each.

E.g. Flat land, labour, markets, power, raw materials, water

OR

3 valid points with extra information

E.g. Water from Klip River, skilled and unskilled labour from nearby suburbs, flat land in Ezakeni Pieters industrial area, power from Eksom grid, markets in Ladysmith, raw materials from surrounding agricultural areas and mines.

**Total: 100 marks**

GLOSSARY

WORD	MEANING
Analyse	Separate: examine and interpret critically.
Demonstrate	Show or make clear.
Design	Give a general idea of the topic by using art and words.
Describe	List the main characteristics of something, give an account of. A diagram or a map may be part of a description.
Estimate	Calculate roughly, make an approximate calculation.
Explain	To make clear, interpret and spell out the material you present. Give reasons for differences of opinion or of results, and try to analyse causes.
Identify	Give the essential characteristics of, to name.
Name	To state something; to list, give identify or mention.
Predict	To say what you think will happen; to foretell or say in advance.
State	To present information plainly without discussion.

Translation of words

Diggings	Grawe
Furrow	Sloot
Weir	Studam
Stream	Spruit
Brickworks	Baksteenmakery
Golf course	Golfbaan
Drive-In	Inryteater
Show Grounds	Skougronde
Hospital	Hospitaal
College	Kollege
Rifle range	Skietbaan
Aerodrome	Landingstrook
Clinic	Kliniek
Tank	Tenk
Canal	Kanaal
Sewage works	Rioolwerke
Conveyor belt	Vevoerband
Open cast mine	Oopgroefmyn
War graves cemetery	Oorloggrawe