

Platinum

Geography

Grade

12

Control Test Book



MASKEW MILLER
LONGMAN

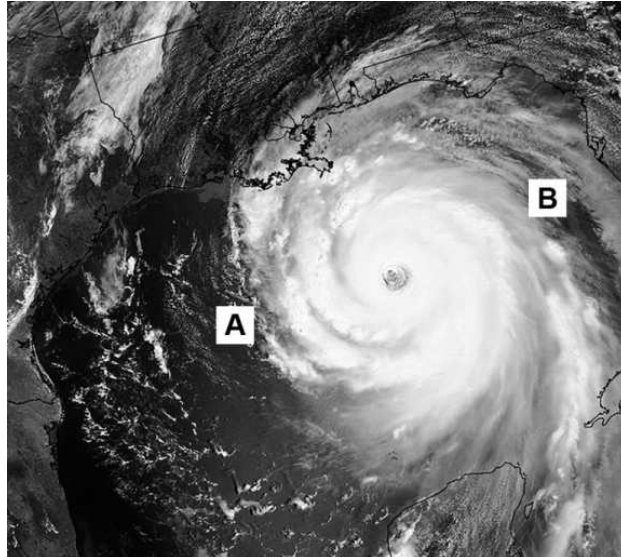
Grade 12

GEOGRAPHY
TEST ONE

Marks: 120

QUESTION 1

Carefully study the newspaper article, the map and the sketch as well as the Fact File before answering the questions below.



Satellite footage shows Katrina about 440 km south-southeast of the Mississippi delta

1.4m flee from hurricane city

BY FRANCIS HARRIS

NEW Orleans ordered an emergency evacuation of up to 1.4 million residents on Sunday night as Hurricane Katrina roared towards the city carrying winds of more than 280 km/hr.

The mayor, Ray Nagin, ordered police and firemen to fan out across the city and surrounding areas, instructing residents to leave immediately.

"This is a once in a lifetime event. The city of New Orleans has never seen a hurricane of this magnitude hit it directly. I wish I had better news for you, but we are facing a storm that most of us have feared."

The message was amplified by President George W Bush who, in a rare intervention, urged residents to head for high ground immediately.

"We cannot stress enough the dangers this hurricane poses to Gulf Coast communities," he said. "I ask citizens to put their safety and the safety of their families first by moving to safe ground."

Katrina was upgraded to the maximum strength category five storm as it headed landward from the Gulf of Mexico. Experts said that it would make landfall at around midday on Monday and that New Orleans was directly in its path.

Large parts of the French Quarter were boarded up and sandbagged. But despite the warnings to get out, some bars stayed open for hurricane parties.

Many of those stranded are tourists, including Britons. The Association of British Travel Agents estimated that up to 1,000 Britons were visiting the city.

The authorities said they would be accommodated in 10 emergency centres, including the New Orleans Saints football team's Superdome. They were advised to bring food and water for up to five days.

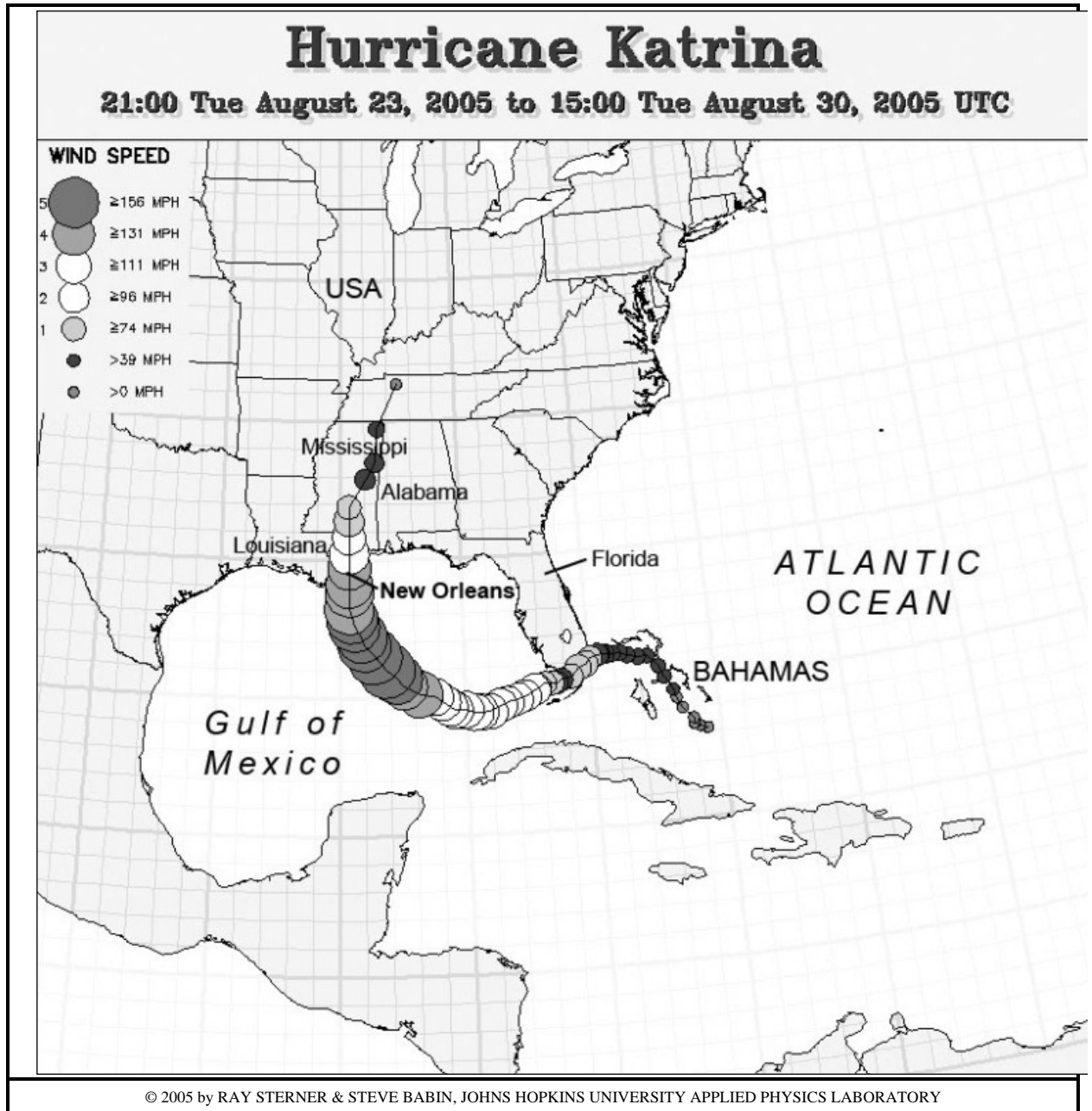
As 4,000 National Guardsmen were placed on alert to police the city, its motorways became congested one-way streets as up to eight lanes of traffic crawled northwards away from the storm. Authorities issued decrees allowing the commandeering of private buildings and vehicles.

Much of New Orleans lies 2 metres below sea level, but some areas are 6 metres below.

The storm was of a far lesser magnitude when it struck Florida last week. Even so it killed at least seven people and cut power to more than a million homes.

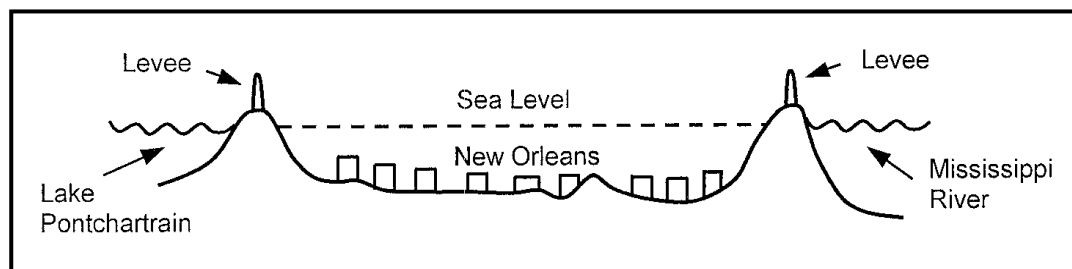
Source: *Weekly Telegraph* - Issue No. 736, 2005

Map showing path of Hurricane Katrina:



Note: 50 miles = 80 km

Sketch of disaster area (not drawn to scale):



Fact File: Hurricane Katrina: named on 25 August 2005 as it formed over the Bahamas. It struck New Orleans on 29 August.

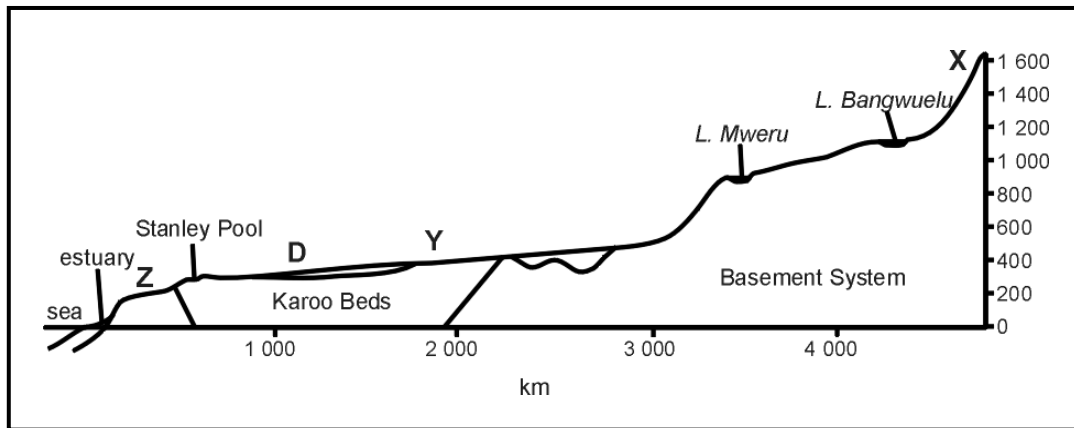
- death toll 1 277; 3 200 people missing (death toll could reach 10 000); 100 000 people displaced; 1,4 million people evacuated
- cost of losses: US\$100 billion
- strongest winds: 280 km/h Category 5 hurricane
- pressure: 920 mb
- rainfall: 25 mm per h
- storm surge 3 to 4 m
- 80% of city of New Orleans flooded (6 m under water). 70% of New Orleans lies below sea level
- area the size of Great Britain declared a disaster zone; Louisiana, Mississippi and Alabama suffer worst damage
- looting, violence and crime follow after hurricane struck
- oil industry disrupted by 1,4 million barrels per day

- 1.1 Explain why Hurricane Katrina formed over the Bahamas. (3x2) (6)
- 1.2 Explain why Hurricane Katrina formed in late August. (1x2) (2)
- 1.3 How many tropical cyclones (hurricanes) had occurred over the Atlantic by 25 August? (1x2) (2)
- 1.4 Draw and label a section through a mature tropical cyclone (hurricane) from A to B on the photograph. Indicate all climatological factors plus associated weather activity. (10x1) (10)
- 1.5 Explain why Hurricane Katrina did not severely affect states north of Louisiana, Mississippi and Alabama. (2x2) (4)
- 1.6 Using a mind map (spray diagram) demonstrate the impact Hurricane Katrina had on people and the environment. Your central 'bubble' should read: Impact of Hurricane Katrina on people and environment. Include at least five factors radiating out from this central point. (5x2) (10)
- 1.7 In a box 15 cm by 15 cm, design an advertisement advising residents what precautions they need to take when another tropical cyclone (hurricane) strikes. Include at least **three** points. (3x2) (6)

[40]

QUESTION 2

Study the following longitudinal river profile along the Congo River in Africa.



2.1 Copy the river profile onto your answer book and on it indicate:

- a) one temporary base level (1x2) (2)
- b) one knick point (1x2) (2)
- c) permanent base level (1x2) (2)

2.2 Copy and complete the following table:

| Fluvial characteristics | Point X | Point Y |
|-------------------------|---------|---------|
| Stream width | | |
| Stream load | | |
| Stream volume | | |
| Stream velocity | | |
| Type of stream flow | | |

(10x1) (10)

2.3 Does the longitudinal river profile of the Congo River show a graded river profile? Support your answer with evidence from the longitudinal river profile.

(3x2) (6)

2.4 River braiding occurs at point Z. Using an annotated sketch (drawing with labels), demonstrate how such features form.

(4x2) (8)

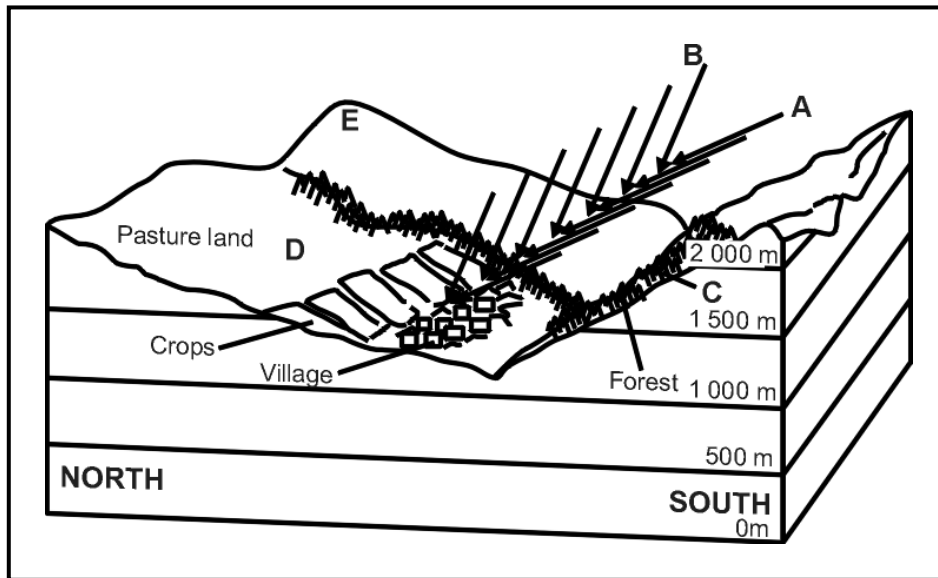
2.5 A dam is being constructed across the Congo River at point D. Write a report for the Minister of Water Affairs in which you:

- outline the fluvial changes in the river both upstream and downstream of the dam wall; and
 - list the benefits of the dam.
- (5x2) (10)

[40]

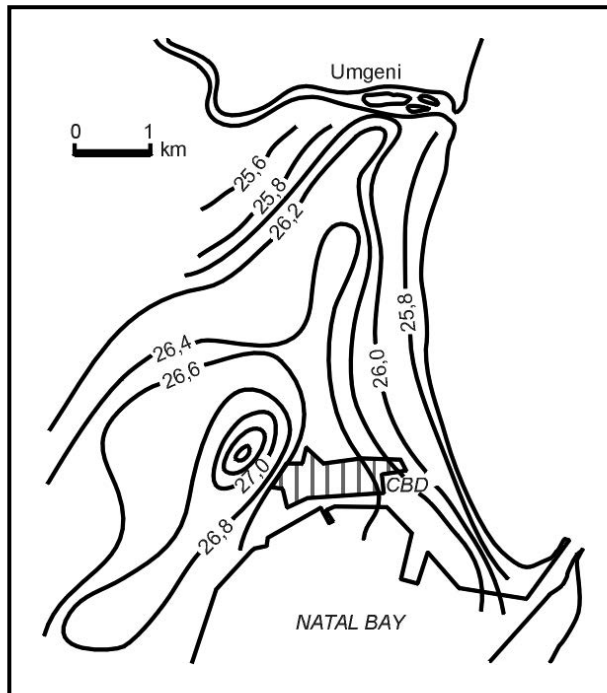
QUESTION 3

Refer to the diagram below which represents summer and winter conditions in a valley. A and B represent different angles at which the sun's rays strike the earth's surface during these seasons. Answer the following questions.



- 3.1 In which hemisphere is this valley situated? Provide a reason for your answer. 2+(2x1) (4)
- 3.2 Which season is represented by the sun's angles A and B respectively? Give a brief explanation for your choice. (4x2) (8)
- 3.3 Discuss, using microclimatological evidence, the choice of D as a suitable site for settlement in this valley. (3x2) (6)
- 3.4 What climatological problems could be encountered by situating a settlement at E? (2x1) (2)

Refer to the diagram below, indicating a heat island over the city of Durban, and answer the questions that follow.



- 3.5 Define the term 'heat island'. (1x2) (2)
- 3.6 Explain the influence of the Umgeni River to the north of Durban CBD on the pattern of the isotherms that indicate the heat island. (2x2) (4)
- 3.7 Describe the factors that have contributed to the development of this heat island. (4x2) (8)
- 3.8 *The amount of pollution emitted daily over Durban CBD has reached a very high level. This has resulted in an inversion layer of smog settling between the high-rise buildings. The situation is extremely unhealthy and puts those that work in the city at risk.*

You serve on a committee that is trying to solve the problem in Durban CBD described in the above paragraph. What would you suggest is done to manage or solve the problem? (3x2) (6)

[40]

[TOTAL: 120 marks]

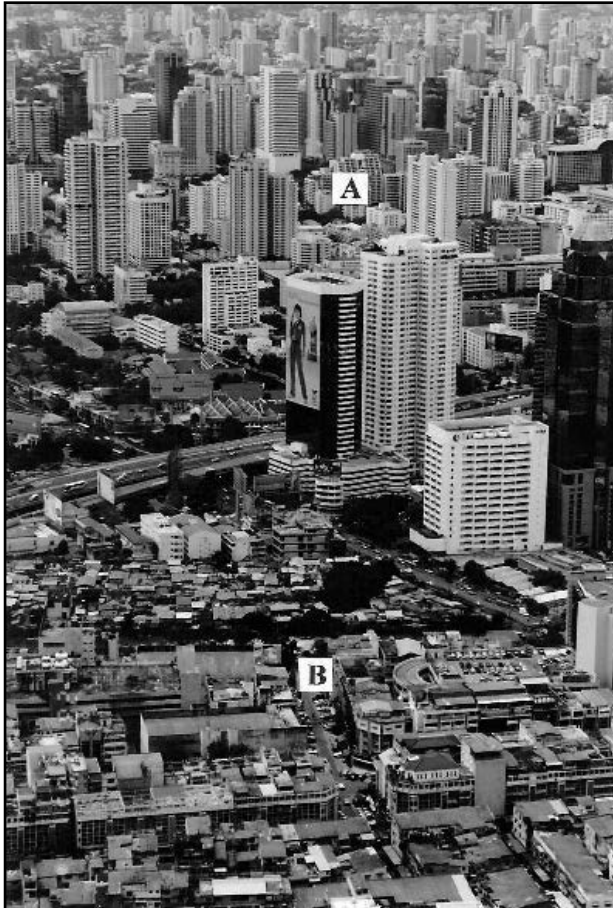
Grade 12

**GEOGRAPHY
TEST TWO**

Marks: 120

QUESTION 1

Carefully study this picture of an urban settlement.



- 1.1 Name the urban land use zones labelled A and B. (2x2) (4)
- 1.2 List **FOUR** functions occurring in zone A. (4x1) (4)
- 1.3 Explain why most buildings are 'skyscrapers' (tall buildings) in zone A. (2x2) (4)
- 1.4 Predict the impact that expanding urban settlements, such as the one shown in the picture above, will have on surrounding rural settlements. (3x2) (6)
- 1.5 Copy and complete the table below in your answer book.

| Problems experienced in urban settlements | Two solutions for each problem |
|---|--------------------------------|
| 1 Pollution | |
| 2 Blight | |
| 3 Congestion | |
| 4 Crime | |

- (8x1) (8)
- 1.6 List three pieces of evidence from the picture that suggest that this settlement is a 'third world city'. (3x2) (6)
- 1.7 In a box 15 cm x 15 cm, design an advertisement encouraging residents of the settlement shown in the picture to become more environmentally aware ("green") and to encourage sustainable urban living. You may wish to focus on one aspect or to include several strategies. Make sure you include a slogan, some sort of drawing and sufficient geographical information. (4x2) (8)

[40]

QUESTION 2

Carefully study the following photograph of a rural settlement.



- 2.1 Classify the type of rural settlement shown in the photograph above. (1x2) (2)
- 2.2 Comment on the:
- a) site, and
 - b) situation, of the settlement shown in the photograph above. (2x2) (4)
- 2.3 List **TWO** advantages and **TWO** disadvantages of living in this settlement. (4x2) (8)
- 2.4 Outline **FOUR** steps local government authorities could take to improve the quality of life for the people living in this settlement. (4x2) (8)
- 2.5 Predict the impact of HIV/AIDS on this settlement and the surrounding rural area. (3x2) (6)

Carefully study the following photograph illustrating urban renewal in a South African city. The front of an old building has been preserved and new 'loft' apartments called 'The Decks' are being built behind this façade.

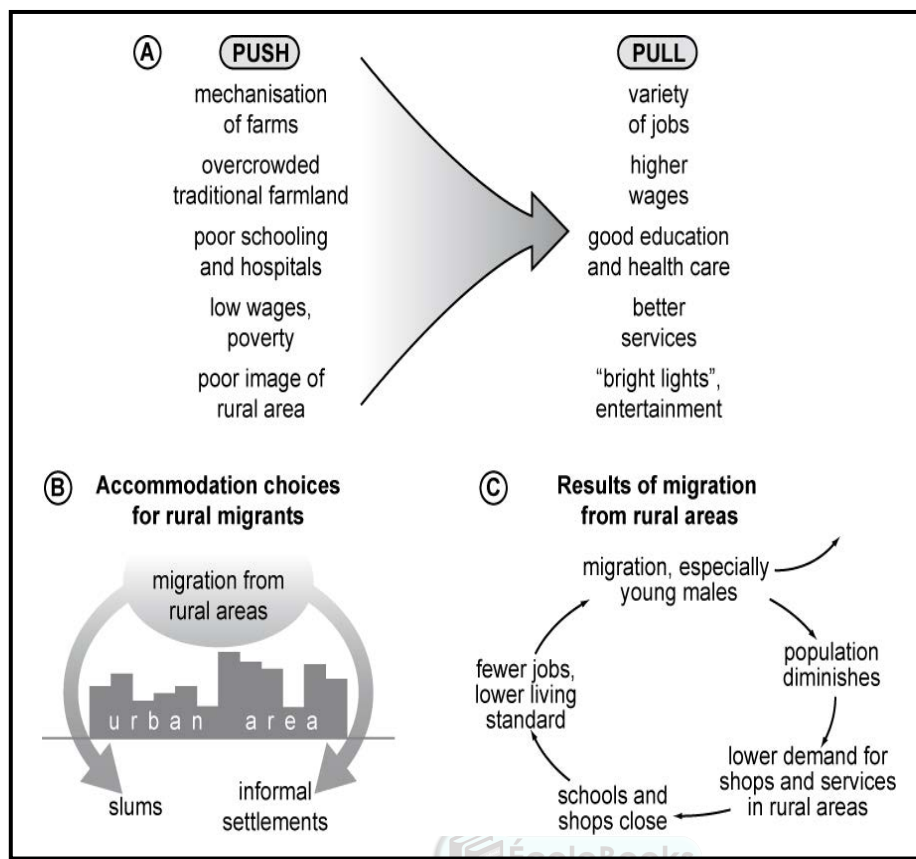


- 2.6 Explain why this example of inner city renewal is taking place. (2x2) (4)
- 2.7 Suggest reasons why it is necessary to preserve old buildings (even if it is only the façades) in South African cities. (2x2) (4)
- 2.8 List **TWO** disadvantages of living in an inner city loft apartment (like The Decks being built behind Hardware House). (2x2) (4)

[40]

QUESTION 3

Refer to the three diagrams below and answer the following questions.



- 3.1 Discuss and characterise the push and pull factors that have resulted in rural-urban migration occurring. (3x2) (6)
- 3.2 Which part of the population will be most influenced by the push factors? Provide reasons for your answer. (3x2) (6)
- 3.3 When rural–urban migration occurs it causes ‘rural depopulation’. Define this term. (2x1) (2)
- 3.4 Discuss the economic consequences for the rural area as a result of this movement of people. (4x2) (8)
- 3.5 Why do many rural migrants find it difficult to get employment in the urban area? (2x2) (4)
- 3.6 Many migrants end up living in urban slums or informal settlements. Where would each of these settlements be located in urban areas? (2x2) (4)
- 3.7 Explain why living in informal settlements is generally inexpensive. (2x2) (4)
- 3.8 Mention **THREE** problems associated with the growth of informal settlements. (3x2) (6)

[40]

[TOTAL: 120 marks]

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**GEOGRAPHY
TEST THREE**

Marks: 120

QUESTION 1

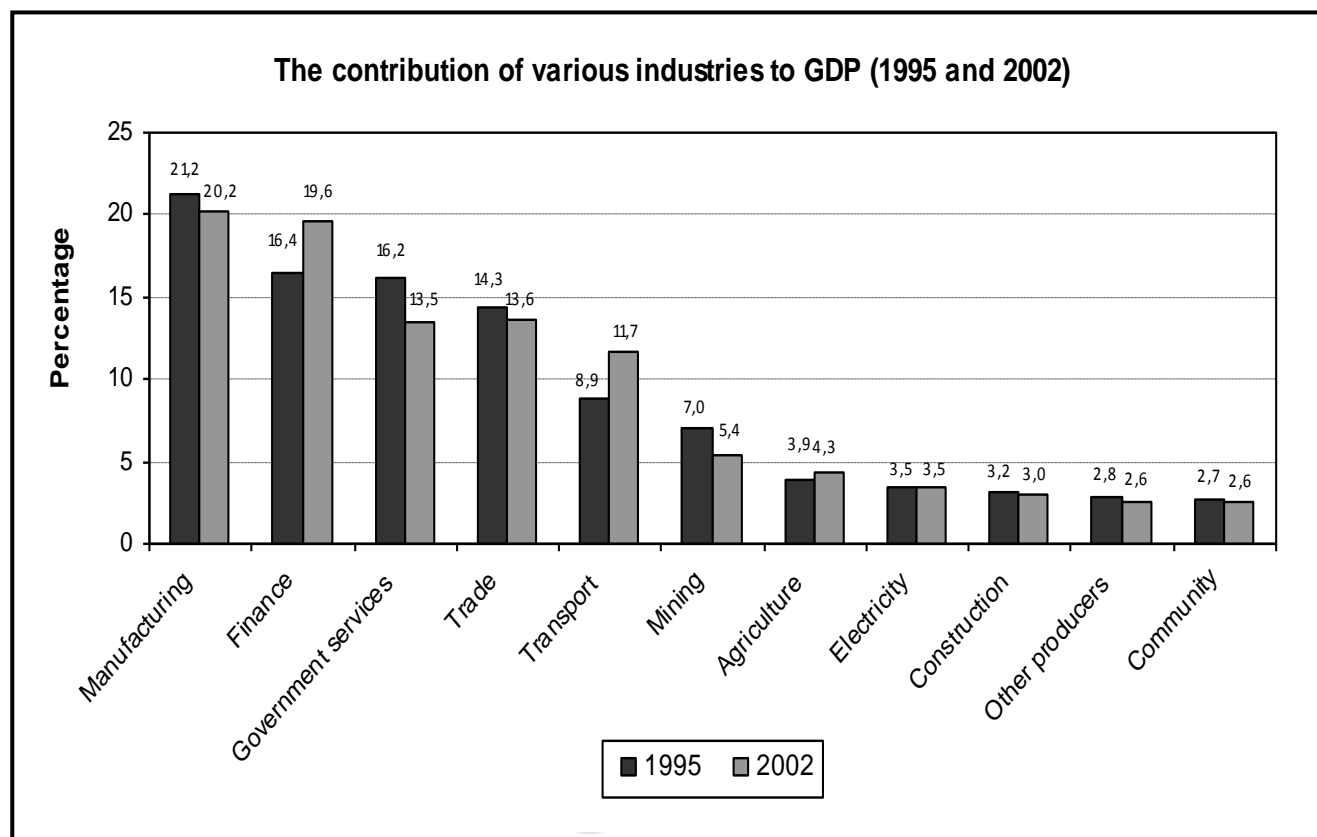
Match the definition/description in **Column B** with each term in **Column A**. Write the **letter only** of the correct answer next to the corresponding number.

| Column A | | Column B | |
|----------|------------------------|----------|--|
| 1.1 | Primary activities | A | A settlement with no clearly defined land-use zones with more than one centre |
| 1.2 | Secondary activities | B | Those parts of the economy concerned with research, gathering and disseminating information and administration. |
| 1.3 | Tertiary activities | C | Economic activities to do with specialised knowledge and skills associated with communication, control, production and management. |
| 1.4 | Quaternary activities | D | Those parts of the economy involved in making natural resources available for use or further processing, e.g. mining, agriculture, forestry, fishing, and hunting. |
| 1.5 | Informal activities | E | An entire urban settlement planned on a completely new site |
| 1.6 | Beneficiate | F | Those parts of the economy involved in the processing of raw materials, e.g. manufacturing, construction and power generation. |
| 1.7 | Dormitory town | G | A period of time allowed by the government in which taxes need not be paid by a business as an incentive. |
| 1.8 | New town | H | Those sectors of the economy that fulfil the exchange function and that provide market availability of commodities, e.g. wholesale and retail trade, transportation, and government. |
| 1.9 | Post-modern settlement | I | The tendency for a particular industry to remain in an area when the reasons for its locating there are no longer significant. |
| 1.10 | Quinary sector | J | A town on the outskirts of a large city from which people commute to work in the city |
| | | K | Part of the tertiary sector made up of self-employed people working in a range of activities often on the street. |
| | | L | A preliminary treatment process in which low grade ores are enriched at the mine, thereby reducing the amount of waste. |

(10x2) [20]

QUESTION 2

Carefully study the following graph illustrating the contribution of different economic sectors to South Africa's GDP (gross domestic product).



2.1 Define GDP. (1x2) (2)

2.2 Which economic sectors contributed the most and the least to South Africa's GDP in 2002? (2x1) (2)

2.3 Classify the economic sectors from the graph as primary, secondary, tertiary or quaternary:
 a) finance
 b) trade (2x2) (4)

2.4 As can be seen on the graph, manufacturing accounts for approximately 20% of South Africa's GDP. Manufacturing in South Africa is increasingly threatened by globalisation. A consequence of globalisation is cheap imports (e.g. cheap clothing and footwear from China). Copy and complete the table below into your answer book.

| Possible impact of increasing globalisation on South African economy | Solutions to counteract problems |
|--|----------------------------------|
| 1. | 1. |
| 2. | 2. |
| 3. | 3. |

(6x2) (12)

- 2.5 According to the graph, which economic sector grew the most between 1995 and 2002? Suggest a reason for this trend. (2x2) (4)
- 2.6 The PWV (Gauteng) region is often referred to as the 'industrial heartland' of South Africa since it accounts for close to half of the country's manufacturing output. Copy and complete the table below into your answer book.

| Factors favouring the location of manufacturing (industry) in PWV (Gauteng) | Environmental and social problems due to concentration of manufacturing in PWV (Gauteng) |
|---|--|
| 1. | 1. |
| 2. | 2. |
| 3. | 3. |
| 4. | 4. |

(8x2) (16)

[40]

QUESTION 3

Give one word or phrase for each of the definitions listed below.

- 3.1 A few farms joined together. (2)
- 3.2 Payment obligations that arise when a country imports and exports. (2)
- 3.3 Large scale movement of people from the rural to the urban areas. (2)
- 3.4 This method of mining is only possible if the deposit is close to the surface. (2)
- 3.5 A town that provides goods and services to the surrounding rural area. (2)
- 3.6 The largest iron and steel producing company in South Africa. (2)
- 3.7 When shops and offices locate alongside main roads leading out of towns. (2)
- 3.8 The special railway designed to transport iron ore. (2)
- 3.9 The land use zone where there is a mixture of functions. (2)
- 3.10 The amount of people per square kilometre in South Africa. (2)

(10x2) [20]

QUESTION 4

Refer to the table below and answer the following questions.

| Mineral | SA's percentage of world production | World position |
|----------------|-------------------------------------|----------------|
| Asbestos | 6 | 4 |
| Chromium | 76 | 1 |
| Coal | 11 | 4 |
| Diamonds | 24 | 2 |
| Iron | 7 | 5 |
| Manganese | 78 | 1 |
| Platinum Group | 79 | 1 |

- 4.1 Name **one** mineral that is obviously missing from the table. (1x2) (2)
- 4.2 Using the data listed above, explain why South Africa is considered one of the world's main mineral suppliers with regards to quantity and variety. Quote data from the table to substantiate your answer. (2x2) (4)
- 4.3 The discovery of minerals has played an important role in the development of the country. Discuss how they have led to the development of cities and harbours in South Africa. Quote actual examples in your answer. (4x2) (8)
- 4.4 *'The great success of mining in South Africa has not been without its cost. For many migrant labourers working on the mines this has led to the destruction of family life.'*
- Briefly explain how family life has broken down for many miners. (2x2) (4)
- 4.5 *'Gold mining has suffered as a result of price fluctuations due to a drop in the value of gold as well as production costs increasing. This has resulted in a number of mines closing.'*
- Discuss the negative impact that the closure of a mine has on the individual miner and his family. (3x2) (6)
- 4.6 Explain how mining was also responsible for developing the secondary industry in South Africa. Use actual examples in your answer. (3x2) (6)
- 4.7 Discuss how the discovery of minerals led to the expansion of the farming sector with regard to the provision of by-products for farmers and by providing a population that needs to be fed. (3x2) (6)
- 4.8 The mining sector has attracted much foreign investment to South Africa. What implications does this have for the economy of South Africa? (2x2) (4)

[40]

[TOTAL: 120 marks]

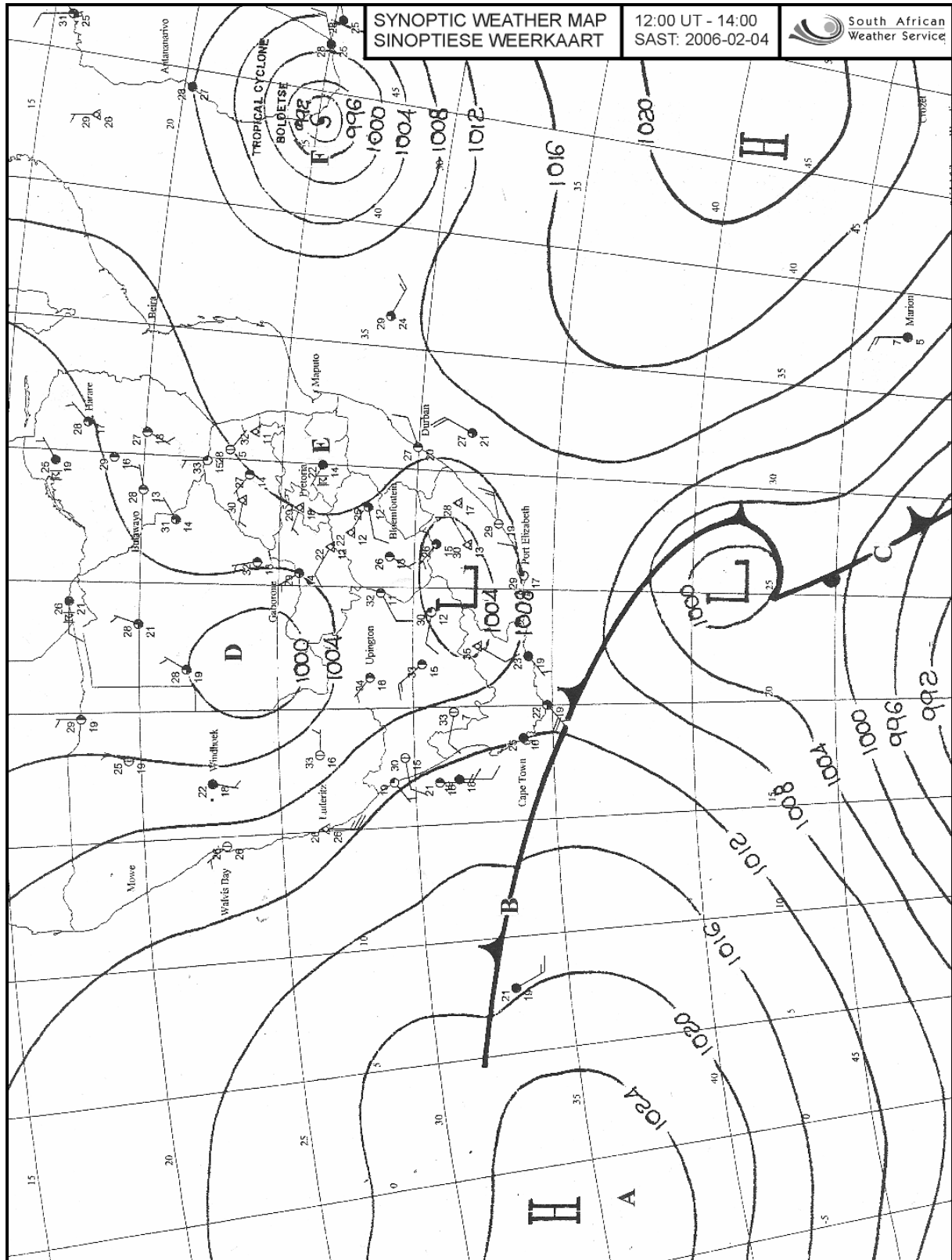
Grade 12

**GEOGRAPHY
TEST FOUR**

Marks: 120

QUESTION 1

Carefully study this synoptic weather map for 2006-02-04.



- 1.1 Identify the climatic features labelled A, B and C. (3x2) (6)
 1.2 Is the pressure high or low at D? (1x2) (2)
 1.3 Provide a full account (description) of the weather at the station marked E (SE of Tshwane (Pretoria)). (6x1) (6)
 1.4 List **TWO** facts from the synoptic chart that account for (explain) the location of tropical cyclone Boloetse (labelled F). (2x2) (4)
 1.5 State if the following statements are true or false, giving a reason for each decision.
 a) Durban is experiencing berg winds.
 b) Cape Town will experience showers in the next 24 hours.
 c) The LP cells over the interior are causing clear, stable weather. (3x2) (6)
 1.6 Copy and complete this table.
 Note: all three weather systems are present on the synoptic weather map.

| Weather system | ONE positive impact on human activities | ONE negative impact on human activities |
|-----------------------------|---|---|
| a) Mid-latitude cyclones | | |
| b) Tropical cyclones | | |
| c) Subtropical anticyclones | | |

(6x2) (12)

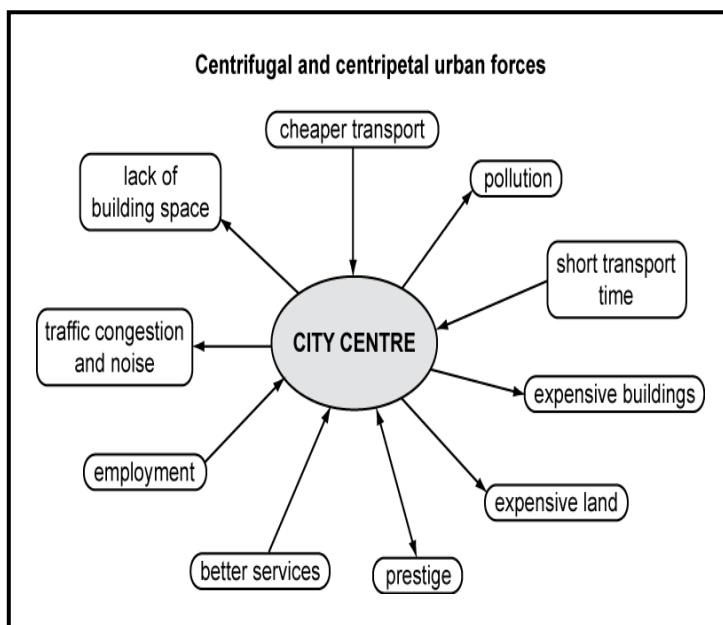
- 1.7 Predict the impact of weather system F on tourism along Madagascar's S.W. coast. (2x2) (4)

[40]



QUESTION 2

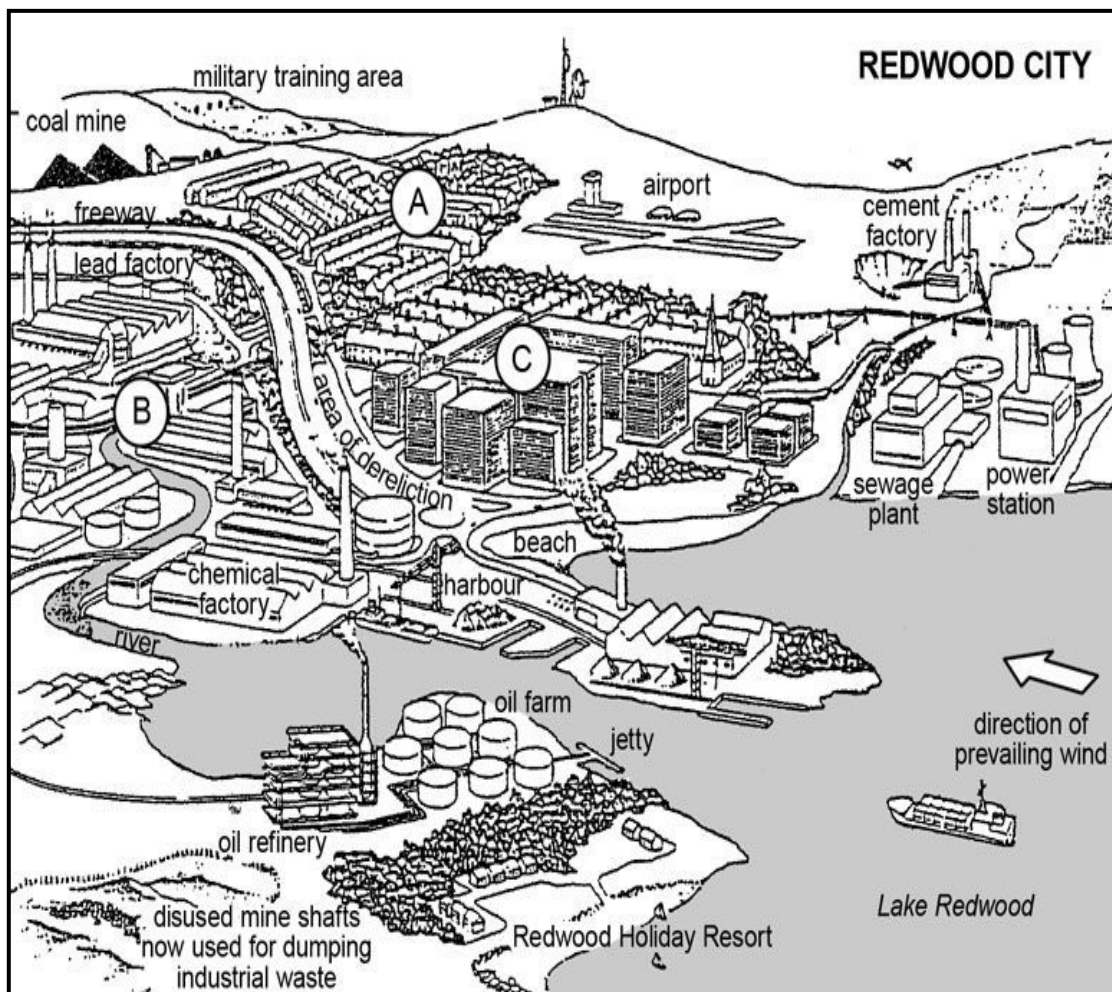
Refer to the diagram below indicating centrifugal and centripetal forces in a city and answer the following questions.



- 2.1 The city centre is usually the most popular place for urban functions to locate. Explain **TWO** reasons shown in the diagram to say why the city centre is so appealing. (2x1) (2)

- 2.2 In some cities, the city centre is no longer the most desired place for urban functions to locate. List **THREE** reasons why the city centre has lost its appeal in some cities. (3x2) (6)
- 2.3 Functions that were found in the city centre now **decentralise**. What does this mean? (2x2) (4)
- 2.4 If many companies decentralise, what will happen to the conditions in the city centre? (4x1) (4)
- 2.5 Discuss **TWO** ways in which both shoppers and companies could be attracted back to the city centre. (2x2) (4)

Refer to the diagram of Redwood City and then answer the following questions.



- 2.6 Explain why Redwood City can be described as a trade and transport city. (3x2) (6)
- 2.7 What physical factors have influenced the shape of Redwood City? (3x2) (6)
- 2.8 Give the names of the land-use zones A and B. (2x2) (4)
- 2.9 Why are the tallest buildings found in land use zone C? (2x2) (4)

[40]

QUESTION 3

- 3.1 Outline **FOUR** factors that promote the agricultural sector in South Africa. (4x2) (8)
- 3.2 Outline **FOUR** factors that limit the agricultural sector in South Africa. (4x2) (8)
- 3.3 Explain the meaning of 'food security'. Outline why 39% of South Africans experience food *insecurity*. (4x2) (8)
- 3.4 In 2005, for the first time, tourism contributed more than mining to South Africa's economy. List **FOUR** ways in which tourism benefits South Africa. (4x2) (8)
- 3.5 A new car factory employing 2 500 people is due to open near to where you live. Predict **FOUR** consequences (e.g. economic, environmental, social) this new operation will have on your settlement. (4x2) (8)

[40]

[TOTAL 120]

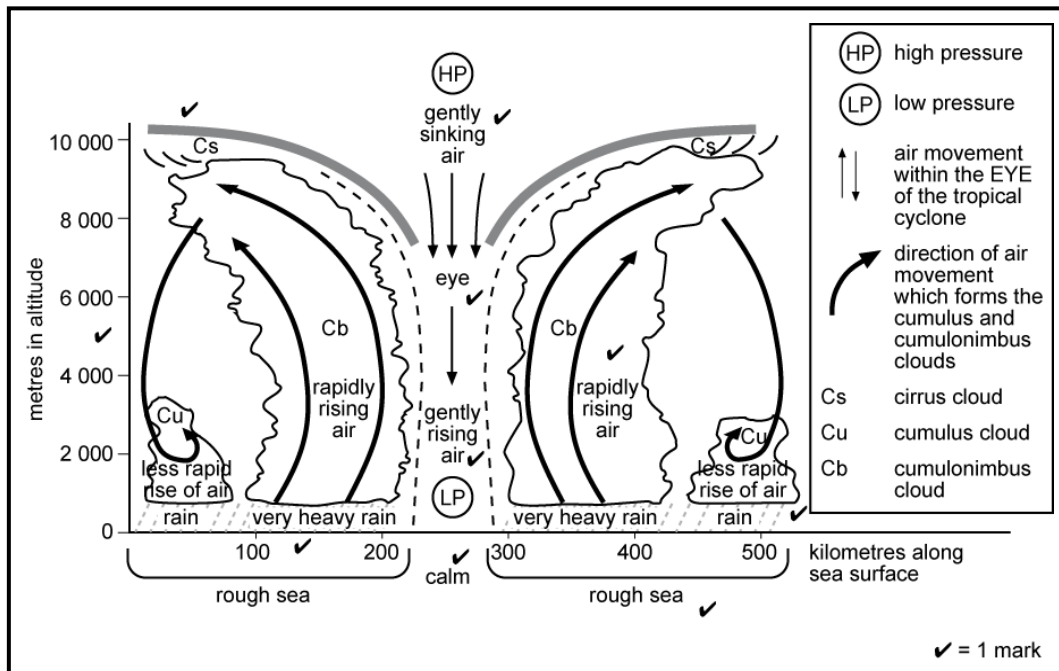


Grade 12

GEOGRAPHY
TEST ONE MEMO

QUESTION 1

- 1.1 The Bahamas are found in the tropics (20° to 25° North) ✓✓ (warm seas plus Coriolis Force) ✓✓, in the warm Atlantic/Caribbean/Gulf of Mexico (sea temperatures over 27°C) ✓✓ these conditions favour the formation of tropical cyclones. (3x2) (6)
- 1.2 Late August is late summer/early autumn in the northern hemisphere this is when sea temperatures will be warmest. ✓✓ (1x2) (2)
- 1.3 Hurricane Katrina was the 11th hurricane of the season (K is the 11th letter of the alphabet). ✓✓ (1x2) (2)
- 1.4 Section drawing from A to B through a mature tropical cyclone.



(10x1) (10)

- 1.5 Louisiana, Mississippi and Alabama were affected by the tropical cyclone as they are on the coast of the Gulf of Mexico where Katrina struck. States north of these states were not severely affected as Hurricane Katrina started to 'die out' as she moved into the interior.

Why? Because Katrina lost impetus and energy (cut off from the energy source which was evaporation from the warm tropical seas). ✓✓

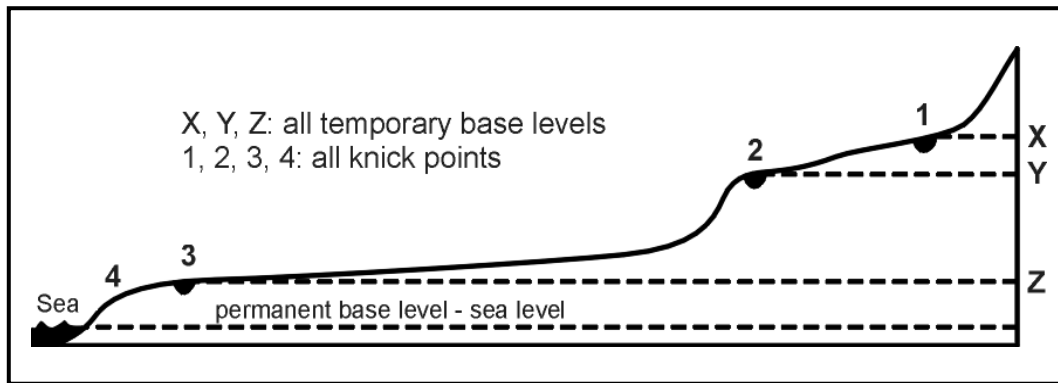
Also, there is more friction over land than sea, which contributes to the hurricane 'dying out' as it moves over land. ✓✓

(2x2) (4)

- 1.6 Impact of Hurricane Katrina: (any **five** of the following):
- **Environment:** flooding destroyed land, flora and fauna; mud and silt deposited; trees uprooted; coastline damaged; rivers burst banks (✓✓)
 - **Infrastructure:** roads, railway lines, electricity, gas, water, telephone lines, bridges, sewage pipes – all either damaged or destroyed (✓✓)
 - **People:** thousands killed, left homeless, injured, emotional trauma and suffering, families split, children orphaned; over 1 million evacuated; homelessness; loss of belongings (✓✓)
 - **Economy:** imports and exports negatively affected; oil industry disrupted; services/shops/businesses etc. affected (✓✓)
 - **Tourism:** New Orleans is famous tourist destination – tourists would stop arriving – bad for local economy (✓✓)
 - **Insurance industry:** very badly affected by increased claims and payouts (✓✓)
 - **Crime:** looting, theft, violence, even murder and rape; police services unable to work effectively (✓✓)
 - **Health:** injuries, hospitals over – crowded, shortage of medical supplies; spread of diseases in over crowded camps, dirty water and waste lying about – spread of diseases. (✓✓)
 - Any other **relevant** points acceptable (✓✓) (5x2) (10)
- 1.7 Advertisement: Warning to residents: what precautions should be taken when a hurricane strikes.
- Any **three** relevant points. Could include:
- evacuate (leave!) (✓✓)
 - secure homes (e.g. board up windows) (✓✓)
 - sand bags and drainage if in low-lying area (✓✓)
 - have emergency supplies of water, food etc. on hand (✓✓)
 - have emergency medical kits (✓✓)
 - have emergency power/lighting (e.g. gas, battery, torch, candles) (✓✓)
 - safety measures for pets and animals (✓✓)
 - map of safe emergency routes out of town (✓✓) (3x2) (6)
- [40]**

QUESTION 2

2.1 Longitudinal river profile



- one temporary base level ✓✓ (1x2) (2)
- one knick point ✓✓ (1x2) (2)
- permanent base level ✓✓ (1x2) (2)

2.2

| Fluvial characteristics | Point X | Point Y |
|-------------------------|---|---|
| Stream width | Narrow, 'V' shape, steep sides ✓ | More open 'U' shape, gentle sides ✓ |
| Stream load | Large boulders, stones, large-grained sand, mixed ✓ | Fine silt (dissolved and in suspension) ✓ |
| Stream volume | Less water ✓ | Far greater discharge ✓ |
| Stream velocity | Quite fast ✓ | Greatest velocity ✓ |
| Type of stream flow | Predominantly turbulent ✓ | Mainly laminar ✓ |

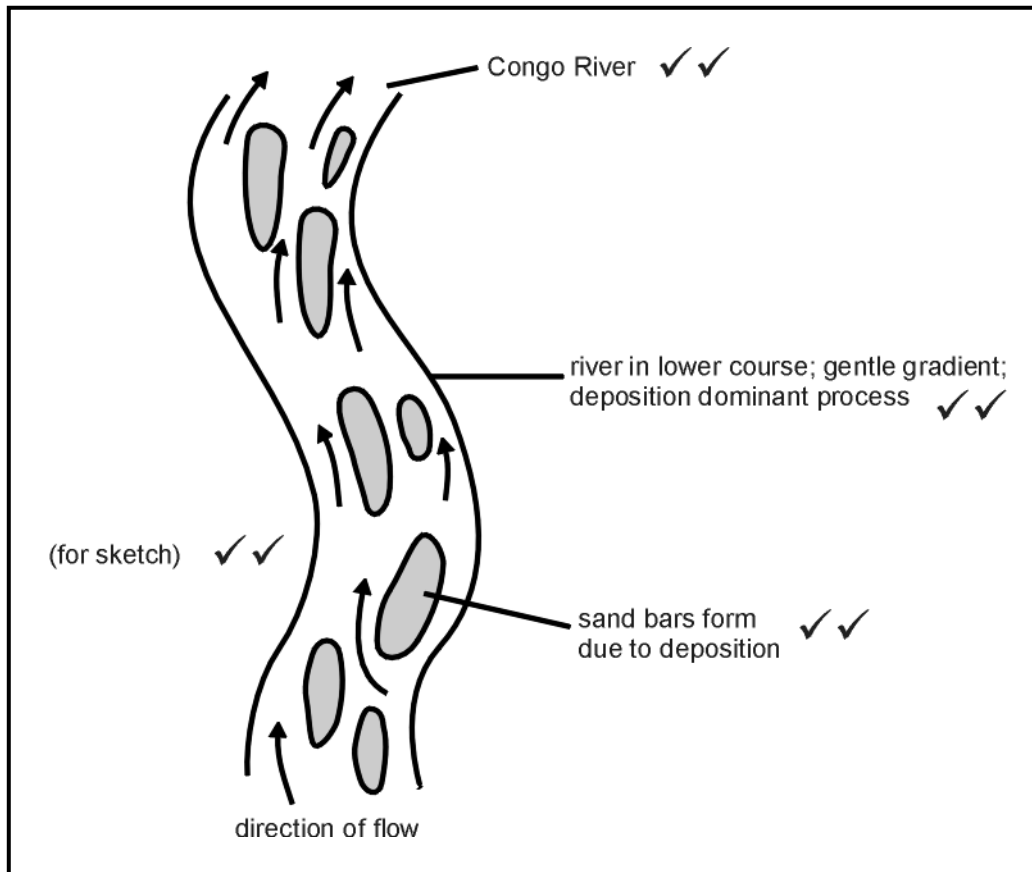
(10x1) (10)

2.3

No, profile is ungraded ✓✓ – there are several 'obstructions' in the profile (e.g. Lake Mweru, Lake Bangwuelu, Stanley Pool) , ✓✓ knickpoints present (just below Lake Mweru). A graded profile is perfectly smooth and concave. ✓✓

(3x2) (6)

2.4 River braiding



(4x2) (8)



2.5 Written in the form of a report for the Minister of Water Affairs:

- **Fluvial changes upstream:** river velocity will be 'checked' (halted/impeded) and the dam will deposit load, silt will build up behind dam wall, water will build up behind dam wall, and river width and depth will increase (✓✓ ✓✓ ✓✓)
- **Fluvial changes downstream:** dam could force river to run dry – river could cease to exist; when water released from dam (or during flood) river will be rejuvenated – velocity will increase, more erosion (✓✓ ✓✓ ✓✓)
- **Benefits of dam:** irrigation for farmers, water for domestic/industrial use, recreation (tourism – fishing, sailing, boating, water skiing, etc. – good income earner), possible energy source (hydro-electricity) (✓✓ ✓✓ ✓✓)

(5x2) (10)

[40]

QUESTION 3

- 3.1 Southern hemisphere ✓✓
 North-facing slopes receive more perpendicular radiation in this hemisphere as they face the equator ✓✓ 2+(2x1) (4)
- 3.2 A: winter ✓✓
Any **one** of the following:
- The sun's rays are more oblique (✓✓)
 - The sun's rays are more concentrated in the northern hemisphere at this time (✓✓)
- B: summer ✓✓
Any **one** of the following:
- The sun's rays are perpendicular (✓✓)
 - The sun's rays will provide more concentrated heating to the southern hemisphere at this time (✓✓) (4x2) (8)
- 3.3 Any **three** of the following:
- The north-facing slope is the warmest in the southern hemisphere (✓✓)
 - Mid-slope receives the most perpendicular radiation hottest part of the slope (✓✓)
 - Situated in the thermal belt at night so remains warm (✓✓)
 - Above the valley floor where frost can prevail (✓✓) (3x2) (6)
- 3.4 Radiation fog ✓
 Anabatic and katabatic winds ✓ (2x1) (2)
- 3.5 A concentration of heat above the CBD ✓✓ (1x2) (2)
- 3.6 Above the Umgeni River the isotherms are elongated ✓✓
 Temperatures are decreased around the Umgeni due to the water source ✓✓ (2x2) (4)

3.7 Any **four** of the following:

- Exhaust fumes of cars (✓✓)
- Construction in the CBD (✓✓)
- Air pollution from factories (✓✓)
- Lack of vegetation (✓✓)
- Little surface water (✓✓)
- Air conditioners and heaters (✓✓)
- High building density (✓✓)
- Artificial surfaces such as tar and glass retain heat (✓✓)

(4x2) (8)

3.8 Any **three** of the following:

- Add filters to chimneys of factories (✓✓)
- Add catalytic converters to car exhausts (✓✓)
- Encourage factories to locate out of CBD (✓✓)
- Limit hours of factory smoke (✓✓)
- Impose fines to law-breakers (✓✓)

(3x2) (6)

[40]

[TOTAL: 120 marks]

Grade 12

GEOGRAPHY
TEST TWO MEMO

QUESTION 1

- 1.1 A: Central Business District (CBD) ✓✓
B: Zone of transition/mixed residential-commercial district ✓✓ (2x2) (4)
- 1.2 Any four of the following:
Business, retail, government, financial, legal, residential, recreational, entertainment, public services, cultural, economic ✓✓✓✓ (4x1) (4)
- 1.3 Land is scarce, valuable and limited, therefore it must be utilised to the maximum – by building ‘up’ ✓✓, one can gain maximum usage out of a relatively small piece of land. ✓✓ (2x2) (4)
- 1.4 Any three of the following:
- Urban expansion will contribute to rural decline – people will move from adjacent rural areas to live/work in urban areas (✓✓)
 - Waste and pollution will ‘spill over’ into rural areas (✓✓)
 - Rural land will be lost to urban development; traditional way of life will be affected (✓✓)
 - Note: Learners could suggest that urban expansion might lead to a revival of rural settlements! This can be true. (✓✓)
 - People would leave polluted, crowded cities for the peace and quiet of rural areas. This could lead to a resurgence of a declining rural area. (✓✓) (3x2) (6)

1.5

| Problems experienced in urban settlements | Any TWO solutions for each problem |
|---|--|
| 1 Pollution | Use clean-burning fuels, tax private cars heavily, improve public transport systems, park-and-ride syndicates, flexi-time, catalytic converters on car exhausts, ban heavy industry in urban areas, fine culprits ✓✓ |
| 2 Blight | Renovate older buildings, demolish older buildings (not always recommended!), grant funds to uplift neglected areas, support self-help schemes, declare areas heritage areas and preserve valuable architecture with government subsidies ✓✓ |
| 3 Congestion | Decentralise, improve public transportation, tax vehicles entering built-up areas, more one-way streets, make surrounding suburban areas more attractive ✓✓ |
| 4 Crime | More policing, cameras, patrols, build community spirit (self-help), stricter laws/fines, more arrests, stricter legal system ✓✓ |

Credit must be given for any valid suggestion (one mark each). (8x1) (8)

1.6 Any three of the following:

- Spread out suburban areas, many centres (✓✓)
- High income alongside lower income areas (✓✓)
- Unrestricted growth (✓✓)
- Large/sprawling/fawst growing (✓✓)
- Mixed land use zones; contrasting living areas(✓✓)
- Narrow streets(✓✓)
- Densely populated(✓✓)
- Possible informal trading on streets(✓✓)
- Resembling westernised cities(✓✓)

(3x2) (6)

1.7 Advertisement for sustainable urban living and environmental awareness:

Suggest: appropriate slogan; ✓✓ appropriate image (drawing(s)) illustrating concepts of sustainability/environmental awareness/bad city living; ✓✓ geographical info pertaining to sustainable living and urban environmental awareness. ✓✓ ✓✓ Foundation ideas: pollution, congestion, waste, recycling, planting trees, rehabilitation of urban rivers/parks, cleaner energy sources, rooftop gardens, clean public transportationetc.

(4x2) (8)

[40]



QUESTION 2

- 2.1 Isolated, dispersed rural settlement ✓✓ (1x2) (2)
- 2.2 a) **Site:** on flat land, close to water (river, lake, dam), well vegetated (useful for building/roofing materials, fertile soil (good for agriculture), fuel from trees ✓✓
 b) **Situation:** most likely far from other settlements (no evidence of other settlements close by) ✓✓ (2x2) (4)
- 2.3 **Advantages:** close to water, fertile soils for farming, looks like tropical (sub-tropical) climate (e.g. bananas, palms), peaceful, tranquil, quiet, fishing, can use boat for transport/fishing, etc. – any **two** ✓✓ ✓✓
Disadvantages: remote, isolated, boring (?), far from services (schools, hospital, shops, etc), mosquitoes/ malaria/ diseases (water), dangerous, no electricity etc. – any **two** ✓✓ ✓✓ (4x2) (8)
- 2.4 Any four of the following:
- Supply basic services (e.g. water, electricity, sewage) (✓✓)
 - Improve transport networks (✓✓)
 - Build schools, hospitals, clinics, etc. (✓✓)
 - Educate and train farmers (✓✓)
 - Create employment opportunities (✓✓)
 - Meet basic needs (✓✓)
 - Support self-help schemes (✓✓)
 - Embark on development strategies (✓✓) (4x2) (8)
- 2.5 Death, illness, loss of labour, decrease in productivity, emotional suffering, economy will deteriorate, abandoned villages, orphaned children, poverty, unemployment, rural depopulation, rural-urban migration – any **three** ✓✓ ✓✓ ✓✓ (3x2) (6)
- 2.6 The old, former building (Hardware House), probably built in the 1930s/40s, had become obsolete, i.e. its original function was no longer required nor suitable. ✓✓ The space in the inner city is valuable and desirable. Therefore, keep the old façade but build something that is needed and in keeping with modern trends (demands). ✓✓ (2x2) (4)
- 2.7 It is culturally, aesthetically and historically important to preserve old buildings in South African cities; ✓✓ part of our heritage/past/history; cannot replace them; important for tourists visiting our cities, cannot destroy valuable 'history'. ✓✓ (2x2) (4)
- 2.8 **Disadvantages:**
 In the centre of the city therefore noisy, polluted, lots of traffic, crime, grime, litter, dangerous, no parking, small space, no garden/trees, crowded, cramped, far from suburbs, gangs, prostitutes, graffiti, could be expensive etc. – any **two** ✓✓ ✓✓ (2x2) (4) [40]

QUESTION 3

- 3.1 What is lacking in the rural area can be found in urban areas, ✓✓
e.g. better health and school facilities ✓✓, employment ✓✓, etc. (3x2) (6)
- 3.2 Young males ✓✓ will be most likely to need to find good jobs and make money to support a family. ✓✓
Young men will leave more readily than older men. ✓✓
Young women also migrating in growing numbers. ✓✓ (3x2) (6)
- 3.3 When farming areas are abandoned by people ✓ who migrate to the cities in large numbers. ✓ (2x1) (2)
- 3.4 Any **four** of the following:
- Population of working age is predominantly female (✓✓)
 - Rest of the population is old or very young (✓✓)
 - Lower demand for shops and services in rural areas (✓✓)
 - Schools and shops close down (✓✓)
 - Fewer jobs available (✓✓)
 - Remaining young people are forced to leave rural area (✓✓)
 - Ghost town develops (✓✓)
 - Productivity of rural area decreases (✓✓) (4x2) (8)
- 3.5 Any **two** of the following:
- Rural migrants do not have the necessary skills (✓✓)
 - Too many migrants coming in for the number of jobs offered (✓✓)
 - Poor education levels (✓✓)
 - Poorly developed English language/communication skills (✓✓) (2x2) (4)
- 3.6 Transition zone **or** Zone of decay ✓✓
On open land/rural-urban fringe ✓✓ (2x2) (4)
- 3.7 Land is not bought ✓✓ homes can be constructed using found and recycled material ✓✓
Little or no rent payable – as very few if any services are provided ✓✓ (2x2) (4)

3.8 Any three of the following:

- Overcrowding (✓✓)
- Lack of sanitation facilities (✓✓)
- Lack of running water (✓✓)
- Lack of electricity (✓✓)
- Increased pollution and litter (✓✓)
- High crime rates (✓✓)
- Gangs (✓✓)
- High rate of unemployment among residents (✓✓)
- Fire/flood risk (✓✓)

(3x2) (6)

[40]

[TOTAL: 120 marks]



Grade 12

GEOGRAPHY
TEST THREE MEMO

QUESTION 1

- 1.1 D ✓✓ (2)
- 1.2 F ✓✓ (2)
- 1.3 H ✓✓ (2)
- 1.4 B ✓✓ (2)
- 1.5 K ✓✓ (2)
- 1.6 L ✓✓ (2)
- 1.7 J ✓✓ (2)
- 1.8 E ✓✓ (2)
- 1.9 A ✓✓ (2)
- 1.10 C ✓✓ (2)
- [20]**

**QUESTION 2**

- 2.1 **GDP:** Gross Domestic Product: the value of the goods and services which all the employed people in a country produce in a year ✓✓ (1x2) (2)
- 2.2
- Most – manufacturing ✓
 - Least – other producers and community ✓
- (2x1) (2)
- 2.3
- a) Finance – tertiary (with elements of quaternary) ✓✓
 - b) Trade – tertiary ✓✓
- (2x2) (4)

2.4

| Possible impact of increasing globalisation on South African economy | Solutions to counteract problems |
|--|---|
| 1. Jobs will be lost ✓✓ | 1. Work shifts; redeploy labour in other jobs; train and re-skill labour ✓✓ |
| 2. Sales of local SA goods drop ✓✓ | 2. Become more competitive; price goods correctly; lower profit margin; look for markets not threatened by cheap imports ✓✓ |
| 3. Counterfeit ('copy') clothing and footwear floods SA market ✓✓ | 3. Fine/confiscate illegal 'copy' goods being sold (e.g. 'designer' clothing/footwear); police imports into SA ✓✓ |

(Accept any other geographically appropriate points.)

(6x2) (12)

2.5

Finance (grew 3,2%) ✓✓

Banks grew a lot between 1995 and 2002 more clients, more loans, more business, more accounts opened, more trade, markets grew, economy grew, more construction, more overseas investment ✓✓

(2x2) (4)

2.6

| Factors favouring the location of manufacturing (industry) in PWV (Gauteng) | Environmental and social problems due to concentration of manufacturing in PWV (Gauteng) |
|---|--|
| 1. Labour ✓✓ | 1. Pollution ✓✓ |
| 2. Market ✓✓ | 2. Congestion, overcrowding, time delays/ traffic jams ✓✓ |
| 3. Energy/power ✓✓ | 3. Land shortage ✓✓ |
| 4. Transport/infrastructure ✓✓ | 4. High cost of living ✓✓ |

- Other favourable industrial factors: raw materials, water, capital
- Other problems: crime, stress, ill-health

(8x2) (16)

[40]

QUESTION 3

- 3.1 Rural hamlet ✓✓ (2)
- 3.2 Balance of trade ✓✓ (2)
- 3.3 Rural depopulation ✓✓ (2)
- 3.4 Open cast mining ✓✓ (2)
- 3.5 Central place town ✓✓ (2)
- 3.6 Ispat Iscor ✓✓ (2)
- 3.7 Ribbon development ✓✓ (2)
- 3.8 Sishen-Saldanha railway ✓✓ (2)
- 3.9 Rural-urban fringe ✓✓ (2)
- 3.10 Population density ✓✓ (2)



[20]

QUESTION 4

- 4.1 Gold ✓✓ (1x2) (2)
- 4.2 Any **two** of the following:
- Chromium, manganese and platinum occupy first position in the world (✓✓)
 - All seven minerals are in the top five positions in the world (✓✓)
 - South Africa produces a wide variety of minerals as seen from the table (✓✓) (2x2) (4)
- 4.3 Any **four** of the following:
- Many immigrants came to SA to see if they could find gold (✓✓)
 - They brought with them good technical skills (✓✓)
 - Areas where minerals were discovered became towns and later cities (✓✓)
 - E.g. Johannesburg, Kimberley (✓✓)
 - Minerals from the mines formed the raw materials for the secondary industry (✓✓)
 - E.g. iron ore for steel (✓✓)
 - Exports brought in much revenue for SA (✓✓)
 - Large-scale employment opportunities on mines (✓✓)
 - Harbours were built to export minerals (✓✓)
 - E.g. Richards Bay, Saldanha Bay (✓✓) (4x2) (8)
- 4.4 Any **two** of the following:
- Migrant workers are often separated from their family (✓✓)
 - They work on the mines in SA (✓✓)
 - Family remains back home (✓✓)
 - Women become the dominant parent (✓✓)
 - Many miners take on new families in the city and do not return home (✓✓) (2x2) (4)
- 4.5 Any **three** of the following:
- If mines close miners are unemployed (✓✓)
 - No money to send home (✓✓)
 - Very difficult to find another job with limited skills (✓✓)
 - Often have to rely on women to go out and get a job (✓✓)
 - Men sit at home and often turn to drink (✓✓)
 - Men are no longer the bread winner and this is not seen as good for the head of the family (✓✓) (3x2) (6)

4.6 Any **three** of the following:

- Mining provides the raw material for many secondary industries (✓✓)
 - E.g. Iron ore reserves led to the development of ISPAT ISCOR (✓✓)
 - E.g. Copper led to the development of the electrical machinery industry (✓✓)
 - E.g. Coal led to the development of the petrochemical industry SASOL (✓✓)
 - E.g. Coal for Electricity ESCOM (✓✓)
 - A combination of minerals is often used to create a product to sell at a higher value than the original mineral (✓✓)
 - It took time for the secondary industry to develop; most minerals were exported in their raw state (✓✓)
- (3x2) (6)

4.7 Any **three** of the following:

- Additional food needed to be produced for the miners (✓✓)
 - Minerals were processed to make farm machinery (✓✓)
 - A by-product of petrochemicals is fertiliser which is used by farmers (✓✓)
 - Pipes for irrigation (✓✓)
 - Steel to construct sheds for farmers (✓✓)
 - Steel to construct dams for water storage (✓✓)
 - Materials to construct roads and railways to transport food (✓✓)
- (3x2) (6)



4.8 Any **two** of the following:

- Foreign investment means more money for SA (✓✓)
 - This improves our economy (✓✓)
 - Gives the country more money to expand industrial development (✓✓)
- (2x2) (4)

[40]

[TOTAL: 120 marks]

Grade 12

GEOGRAPHY
TEST FOUR MEMO

QUESTION 1

- 1.1 A: South Atlantic high pressure cell/anticyclone ✓✓
 B: Cold front ✓✓
 C: Occluded front ✓✓ (3x2) (6)

- 1.2 low pressure ✓✓ (1x2) (2)

- 1.3
- 100% cloud cover ✓
 - Wind direction is NW ✓
 - Wind speed 5 knots ✓
 - Air temperature is 22°C ✓
 - Dew point temperature is 14°C ✓
 - Thunderstorm activity ✓ (6x1) (6)

- 1.4 Tropical cyclone Boloetse is located at 25°S (i.e. in the tropics), (✓✓) over the warm Indian Ocean (Mozambique Channel), (✓✓) away from the equator (for Coriolis Force), (✓✓) on the east coast of southern Africa (✓✓) all are locational requirements for the formation of a tropical cyclone – accept any **two** (2x2) (4)

- 1.5 a) False ✓ – the winds are on-shore (blowing from the sea). ✓
 b) True ✓ – a cold front is approaching that will bring showers. ✓
 c) False ✓ – the LP cells are associated with unstable atmospheric conditions, cloud, rain and thunderstorm activity ✓ (3x2) (6)

1.6

| Weather system | One positive impact on human activities | One negative impact on human activities |
|-----------------------------|--|--|
| a) Mid-latitude cyclones | Rain good for farmers, dams filled, good for indigenous vegetation, cooler temperatures sometimes necessary for certain plant types ✓✓ | Flooding, bad for tourism, rough seas, flights and ships delayed, storms affecting people ✓✓ |
| b) Tropical cyclones | None! (could mention rainfall 'good' for farmers) ✓✓ | Flooding, damage to property and farmlands, infrastructure, bad for tourism, bad for fishing, diseases, death, homelessness ✓✓ |
| c) Subtropical anticyclones | Pleasant weather clear, dry, blue skies in winter on highveld ✓✓ | Dry, arid conditions, assist in 'trapping' pollution over cities like Johannesburg; respiratory ailments and allergies ✓✓ |

(6x2) (12)

1.7 Any **two** of the following:

- Negative impact on tourism (✓✓)
- Strong winds and high seas keep people away (✓✓)
- Damage to beaches, hotels, airport, infrastructure, etc. (✓✓)
- People could be killed, injured, stranded, etc. (✓✓)

(2x2) (4)

[40]

QUESTION 2

2.1 Any **two** of the following:

- Cheaper transport (✓)
- Prestige (✓)
- Better services (✓)
- Employment (✓)
- Short transport time (✓)

(2x1) (2)

2.2 Any **three** of the following:

- Pollution (✓✓)
- Expensive buildings (✓✓)
- Expensive land (✓✓)
- Traffic congestion and noise (✓✓)
- Lack of space for building (✓✓)

(3x2) (6)

2.3 Functions now relocate ✓✓ to the suburbs and outlying areas ✓✓

(2x2) (4)

2.4 Any **four** of the following:

- Services will lose customers and close down (✓)
- Traffic congestion will decrease (✓)
- Land value could decrease (✓)
- City centre loses popularity (✓)
- Empty office blocks (✓)
- Vagrants move in (✓)
- Buildings decay (✓)
- Crime increases (✓)

(4x1) (4)

- 2.5 Any **two** of the following:
- Shopping streets with no traffic (✓✓)
 - Policing to stop crime (✓✓)
 - City cleaned up and greenery added to make it more attractive (✓✓)
 - Parking areas close by (✓✓)
 - Modern taxi ranks (✓✓)
 - Attractive activities and entertainment (✓✓) (2x2) (4)

- 2.6 Any **three** of the following:
- City lies at a break of bulk point (✓✓)
 - One mode of transport is replaced by another at this point (✓✓)
 - E.g. rail to ship (✓✓)
 - Ports are classified as trade and transport cities (✓✓)
 - Goods have to be unloaded and reloaded at this point (✓✓)
 - Its location favours the development of certain industries (✓✓)
 - E.g. Grain silos, sugar refineries and oil refineries (✓✓) (3x2) (6)

- 2.7 Any **three** of the following:
- Coastline (✓✓)
 - Hilly landscape (✓✓)
 - Mineral reserves (✓✓)
 - River (✓✓) (3x2) (6)



- 2.8 A: Residential area (✓✓) or Hostels (✓✓)
 B: Industrial area ✓✓ (2x2) (4)

- 2.9 Any **two** of the following:
- This is the CBD (✓✓)
 - Land value is very high here (✓✓)
 - Therefore very tall buildings are built here (✓✓)
 - Competition for land is high therefore build tall (✓✓) (2x2) (4)

[40]

QUESTION 3

3.1 Any **four** of the following:

- Range of climates many different types of crops possible (✓✓)
- Frost not such a great problem (✓✓)
- Established tradition of subsistence farmers (✓✓)
- Abundant flat land (✓✓)
- Rivers, dams and lakes for water (✓✓)
- Good research and government assistance (✓✓)
- GM crops; exotic crops (✓✓)
- Any relevant and appropriate fact (✓✓)

(4x2) (8)

3.2 Any **four** of the following:

- Shortage of water; insufficient rain (✓✓)
- Shortage of arable land (only 7% arable) (✓✓)
- Irrigation necessary but expensive and wasteful of water (✓✓)
- Poverty; HIV/AIDS (✓✓)
- Soil quality and depth; soil erosion (✓✓)
- Foreign competition (✓✓)
- Drought; pests; fires (✓✓)
- High cost of equipment, fertilisers (✓✓)
- Any relevant and appropriate point (✓✓)

(4x2) (8)

3.3 Food security: there is food security when all people at all times have enough food (or are able to buy it) to meet their needs for a healthy and productive life. ✓✓✓✓

Food insecurity is when people do not have enough food at all times and live in fear of hunger and starvation. 39% of South Africans live in poverty and experience food insecurity. ✓✓✓✓

(4x2) (8)

3.4 Any **four** of the following:

- Tourism creates jobs (for every 10 to 15 tourists visiting SA one job is created) (✓✓)
- Tourists spend money which is good for the economy (✓✓)
- A good, positive image is created overseas which will attract more tourists (✓✓)
- Some tourists may come back as investors or even do business here (✓✓)
- Any relevant and appropriate point (✓✓)

(4x2) (8)

3.5 Jobs created; money earned; money spent in local area; businesses increase turnover; (multiplier effect); improvement in quality of life (can afford better housing, education, diet, healthcare ...), other investors/businesses attracted which leads to further growth, cumulative causation ... (✓✓ ✓✓)

Environment may be destroyed more pollution; more traffic; more water/electricity consumed; natural vegetation destroyed; natural ecosystems and food chains disturbed (✓✓ ✓✓)

Socially, there could be more alcoholism, prostitution as income grows; social upliftment and improvement also possible, i.e. 'better quality of life for all'; mobility of skills (✓✓ ✓✓)

(4x2) (8)

[40]

[TOTAL: 120 marks]



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