



NATIONAL SENIOR CERTIFICATE EXAMINATION
NOVEMBER 2014

GEOGRAPHY: PAPER I
MARKING GUIDELINES

Time: 3 hours

300 marks

These marking guidelines are prepared for use by examiners and sub-examiners, all of whom are required to attend a standardisation meeting to ensure that the guidelines are consistently interpreted and applied in the marking of candidates' scripts.

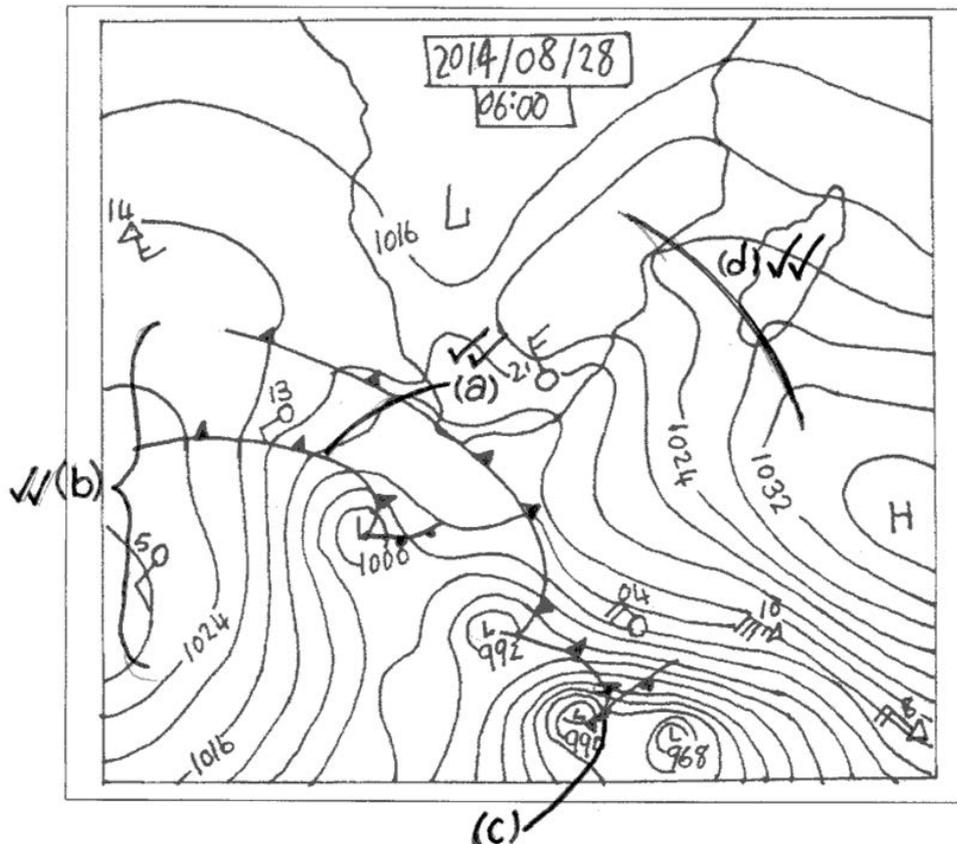
The IEB will not enter into any discussions or correspondence about any marking guidelines. It is acknowledged that there may be different views about some matters of emphasis or detail in the guidelines. It is also recognised that, without the benefit of attendance at a standardisation meeting, there may be different interpretations of the application of the marking guidelines.

SECTION A GEOGRAPHICAL ISSUES

QUESTION 1 GEOGRAPHICAL CASE STUDY: CENTRAL DRAKENSBERG/ UKHAHLAMBA WORLD HERITAGE SITE, KWAZULU-NATAL (KZN)

- 1.1 1.1.1 (a) TRUE (1)
- (b) FALSE: Tropical cyclones result in flood conditions in coastal areas of KZN. (3)
- (c) FALSE: Mid-latitude cyclones passing KZN occur in the **westerlies** and travel from **west to east**. (3)
- (d) FALSE: Hot/warm winds blowing down the Drakensberg are called Berg winds. (3)

1.1.2



(8)

1.1.3 **Weather App for the central Drakensberg for Sat 30 August 2014**

Cloud cover	Overcast/8/8/App symbol of clouds(2)
Precipitation	Showers/will occur/rain(2)
Air temperature	< 20°C (less than 10°C will result in snow and frost)(2)

(6)

1.1.4 (a) and (b) on the Answer Sheet. (4)

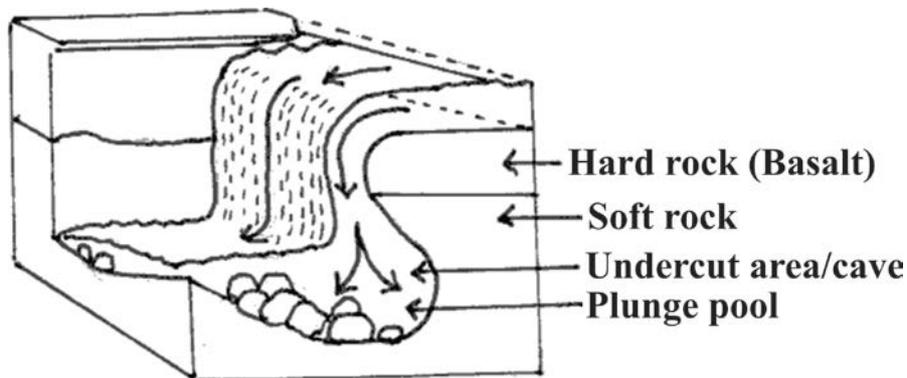
- 1.1.5
 - The Drakensberg Sun Hotel faces west/north/northwest to maximize afternoon sunlight (aspect).
 - Is placed in the thermal belt for warmth in winter.
 - Is located in a picturesque valley to attract tourists.
 - Terraced – flat
 - Above the flood plain
 - Road
 - Dam tourism
 (Both settlement and climatic factors can be accepted)

(2 × 2 = 4)

1.2 1.2.1 (a) to (d) on the Answer Sheet. (8)

- 1.2.2
- Managing drainage basins and catchment areas investigates how human activities can impact water resources. Wetlands are protected by the Ramsar convention.
 - Wetlands store water, acts as water sponges.
 - Water quality, ecosystems services such as cleaning and filtering water.
 - Biodiversity, habitat to many plants, birds, animals. (2 × 2=4)

1.2.3



(2 marks for the drawing, 2 × 3 for correct labels) (8)

Also accept rapids/cascades/temporary base level

1.3 1.3.1 (a) Small-scale farming: Farming that uses a small and sometimes economically viable amount of land. It is farmed intensively and mostly profitably. Limited capital and technology. (2)

(b) Subsistence farming: farming to feed oneself and family, no excess is produced for sale. Limited capital and technology. Traditional methods used. (2)

1.3.2 Factors that hinder small scalesubsistence farming:

- Evidence of soil erosion in the photographs.
- Migration of men to urban areas, women, children and the elderly are left to farm the land.
- Water scarcity and variability.
- Lack of capital and financial support.
- Lack of skills and no mechanisation (labour intensive).
- Poverty limits agricultural development.
- High altitude – snow
- Lack of power
- Lack of access to transport
- Far from markets
- Steep slopes
- Other relevant points. (2 × 3=6)

1.3.3 Food security is the access that individuals, households, communities and nations have to sufficient quantity food at all times. (2)

1.3.4 (a) Northern Cape – 86% (accept 85% – 88%) (2)

(b) Eastern Cape – 55% (accept 54% – 56%) (2)

- 1.3.5 In KZN Food security has improved/shown an increase/is better from 53% to 86% between 1999 and 2008.
(2 marks for mentioning an improvement/shown an increase and 2 marks for giving data off the graph) (4)
- 1.4 1.4.1 (a) Pattern – dispersed/isolated (2)
(b) Function – subsistence farming (accept farming/residential for the Bata Shoe factory)/unifunctional (2)
- 1.4.2 Situation (evidence from the photograph and Fact File):
- 37 km from Estcourt so labour can commute easily.
 - 24 km from the Drakensberg Sun
 - Access to a good, tarred road to transport shoes/raw materials.
 - Central KZN
 - Local labour supply– residents of Emoyeni are nearby (labour-oriented).
 - Access to Durban harbour. (2 × 2=4)
- 1.4.3 (a) Retailer: A person/industry that purchases goods/finished products such as shoes and sells them at a profit. (2)
(b) Manufacturer: A person/industry that produces/makes a product from raw materials. (2)
(c) Labour-oriented industry: Industry that is located near a good supply of labour, generally cheaper, unskilled labour. (2)
(d) Apartheid government's industrial development strategy: The Nationalist Party created incentives schemes to attract industries to former homeland areas where the labour supply was located. The Group Areas Act restricted migration so industries were moved to where labour was located. Many of these industries were located on the SA-Homeland border. (2)

1.4.4 **Explore** the possible effects of rural depopulation on the settlement of Emoyeni.

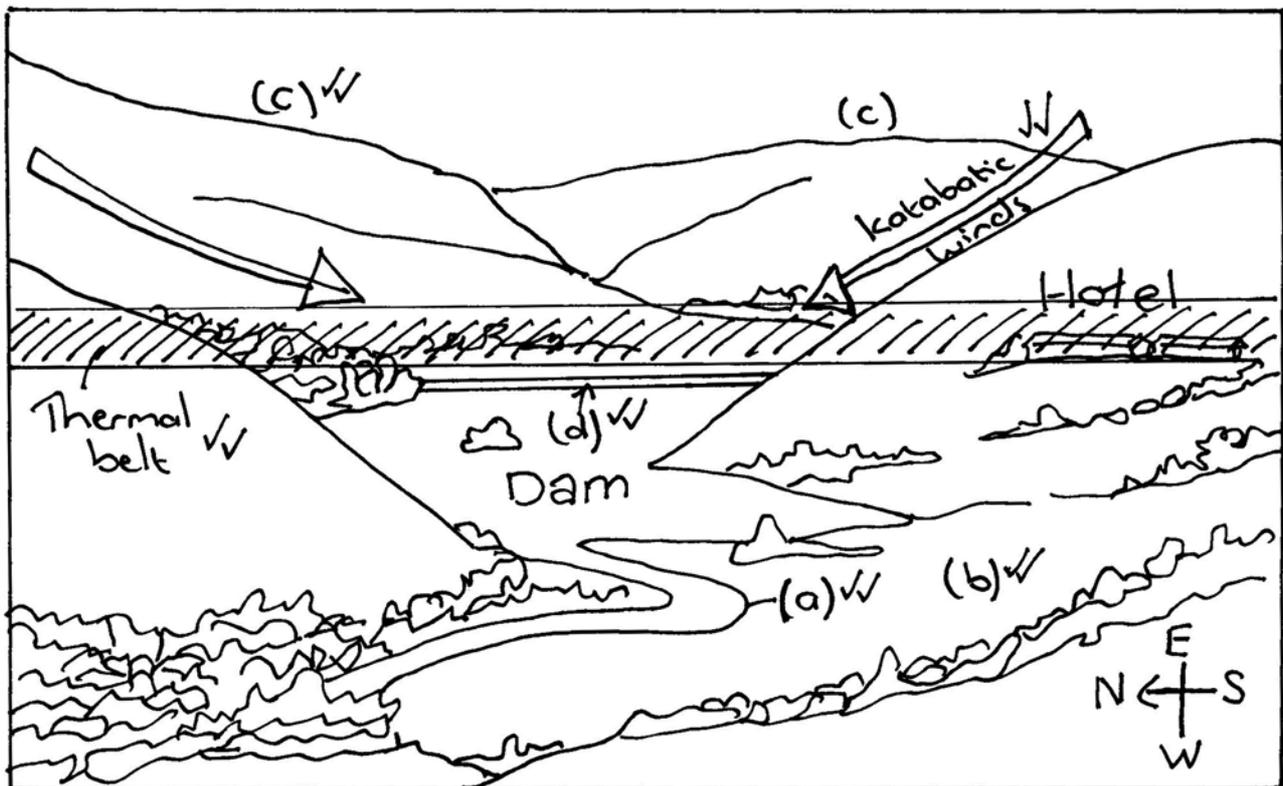
- Services (schools, shops) will decline and more people will move away.
- Young men are more mobile and they tend to leave women and the elderly behind/sex-ratio changes (although not always the case).
- The cycle of rural decline/decay is exacerbated.
- Resources are not used to develop the rural economy.

Discuss how tourism and the Bata Shoe factory can be used to address rapid rural-urban migration.

- Employment opportunities can be provided in the local hotels (Drakensberg Sun) and establishments – guides, catering, cleaning, etc.
- The Bata Shoe factory can employ unskilled young men in shoe manufacturing and prevent the trend of migration to urban settlements.

(6 × 2=12)

Figure 2: Field sketch of the Drakensberg valley (Photograph 1) – Question 1.1.4 and Question 1.2.1



100 marks

QUESTION 2

- 2.1 2.1.1 (a) late summer
 (b) east to west in the northern hemisphere
 (c) clockwise direction in the southern hemisphere
 (d) hurricanes in the Gulf of Mexico (8)
- 2.2 2.2.1 (a) A high resolution satellite image is a digital image showing more image detail.
 Resolution is the capability of sensor to observe or measure the smallest object clearly with distinct boundaries. In digital imagery, resolution depends upon the size of pixel.
 The smaller the size of pixel, the higher the resolution will be and the clearer the object/s in the image. Greater number of pixels or smaller pixel size also acceptable.
 High quality image, high definition image is also acceptable.
 Candidates stating “can see more, or shows more” are awarded 1 mark only for such a response.
 Candidates should show an understanding of the terms. (2)
- (b) Accept any TWO 'textbook' characteristics of a tropical cyclone
 Swirling mass of clouds with a distinct eye, large mass of cumulonimbus clouds
 Round, compact shape
 Circulation: anticlockwise spiral of clouds noted (4)
 Presence of a vortex
 Along the eastern side of the continent
 Over the ocean
 Date indicated on the photo – being in late summer/autumn
 Name of the tropical cyclone as indicated by the heading – tropical cyclones are named
- 2.2.2 Usagi is referred to as 'super-typhoon' Usagi as the storm's minimum pressure was 882 hPa, (very low pressure also acceptable) making it the deepest and most intense storm since 1984 (or in very long time, specific reference to the date not necessary).
 Storm is likely to cause serious damage as indicated in the fact file. (2)
- 2.2.3 'Super-typhoon' Usagi caused less destruction when it reached Laos as this country is far inland, and the typhoon would have moved a fair distance over land. The moisture source would have been cut off and the storm would have lost its momentum and energy source, thus becoming less intense.
 Increased friction as typhoon moves over land. Moisture supply is cut-off.
 Less latent heat. The storm has also been downgraded to a tropical storm as indicated on Figure 5. Laos also has had sufficient warning and a number of days to prepare for the storm which may result in less damage.
 Any TWO (4)

2.2.4 Consequences of a storm such as Usagi hitting southern Taiwan and a megacity such as Hong Kong.

Any THREE consequences

- damaging winds which would uproot trees, overturn boats and cars; rip off roofs of the houses
- torrential rain which could bring about severe flooding and landslides
- massive waves and a dangerous storm surge which could cause flooding of low-lying areas
- Economic consequences e. crop damage, job losses
- Long term consequences are also acceptable
- Candidates are also able to argue the fact that Hong Kong is a more developed city which will have the necessary warning systems, adequate support as far as emergencies are concerned and clean up processes, which may mean that this will be less of a disaster area.
- Any relevant observation

If candidates only make reference to a weather phenomena eg. Heavy rain, strong winds etc – no marks are awarded.

Bullet points are accepted despite the question indicating that paragraph format is required. (6)

2.3 2.3.1 A – South Atlantic High (St Helena High)

B – South Indian High (Mauritius High) (2)

Also accepting Sub-tropical high pressure belt (2 marks)

2.3.2 The south-easter/Cape Doctor/could also be referred to a black south-easter (2)

2.3.3 (a) Automated/automatic weather station (2)

Not accepting electronic/computerized weather station

(b) Weather description

- Air temperature of 23°C
- Dew point temperature 21°C
- Overcast conditions, 8/8 cloud cover/full cloud cover
- Raining
- South-easterly wind at 60 knots/96km/hr wind
- Winds blowing towards the NW
- Low pressure 1016 – 1020hPa (6)

[Each point is worth 2 marks, learners need only mention 3 relevant conditions]

2.3.4 Typical weather conditions associated with a cut-off low pressure system

Intense weather associated with heavy rainfall

May rain for a number of days – continuous rainfall

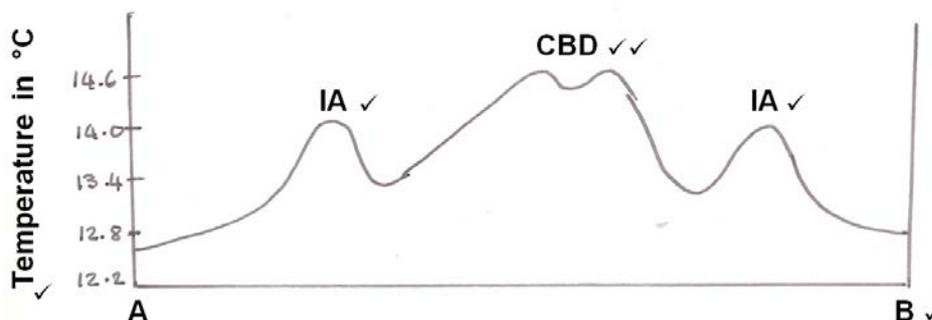
Flooding

Strong winds/onshore winds (4)

2.3.5 The South Atlantic High and South Indian High are situated to the south of the country. These cells created a blocking effect and pushed the cut-off low over the interior of the country. The low pressure system remained stationary (remains trapped) for a few days, drawing in warm moist air from the South Indian High. (4)

2.4 2.4.1 Isotherm – a temperature line joining all places with the same temperature. (2)

2.4.2



Marks allocated

A – B orientation

Temperature axis labelled

Identification of CBD

Industrial areas × 2

Correct shape of the graph curve

(6)

2.4.3 (a) The CBD/city centre experiences the warmest temperatures (14.6 °C). (2)

(b) Candidates can choose any ONE factor below:

- Artificial surfaces – such as tar, glass and concrete which easily reflect, absorb and retain heat, thereby pushing up temperatures in the urban area.
- Artificial heat sources – urban areas have artificial heat sources (air conditioners, industrial sites, cars and so on, which generate heat over a CBD.)
- Pollution – urban areas experience increased levels of pollution which act to trap heat in the lower atmospheric levels.
- The surface shape of the city – this allows for the absorption of heat for longer periods of a day thereby increasing heat.
- Candidates may refer to the concept of an urban heat bubble, which is greatly compacted at night, keeping the air warm above the built-up areas.
- Candidates may also refer to the fact that city centre areas have fewer trees/green belts and bodies of water. As a result there is less evapo-transpiration over this part of the city.

Allow for relevant or suitable interpretation.

If candidates only mention the point, e.g. *Artificial surfaces* without an explanation only 1 mark will be awarded. (2)

2.4.4 Formal residential areas consume more energy compared to informal residential areas. The energy is used in heating homes, in hot water heating (geysers), air conditioners, parked cars in garages (release heat after use). Buildings are larger and comprised of artificial surfaces reflecting and absorbing heat. There are many artificial. Pollution is not accepted in the context of this question, since overall residential areas produce less air pollution due to lack of industry and open fires.

Candidates could also answer this question by arguing from the point of view of informal settlements noting these areas remain cooler, due to the presence of less developed land and open veld areas, and less formalized building structures absorbing and maintaining less heat. (4)

2.5	2.5.1	D
	2.5.2	C
	2.5.3	G
	2.5.4	F

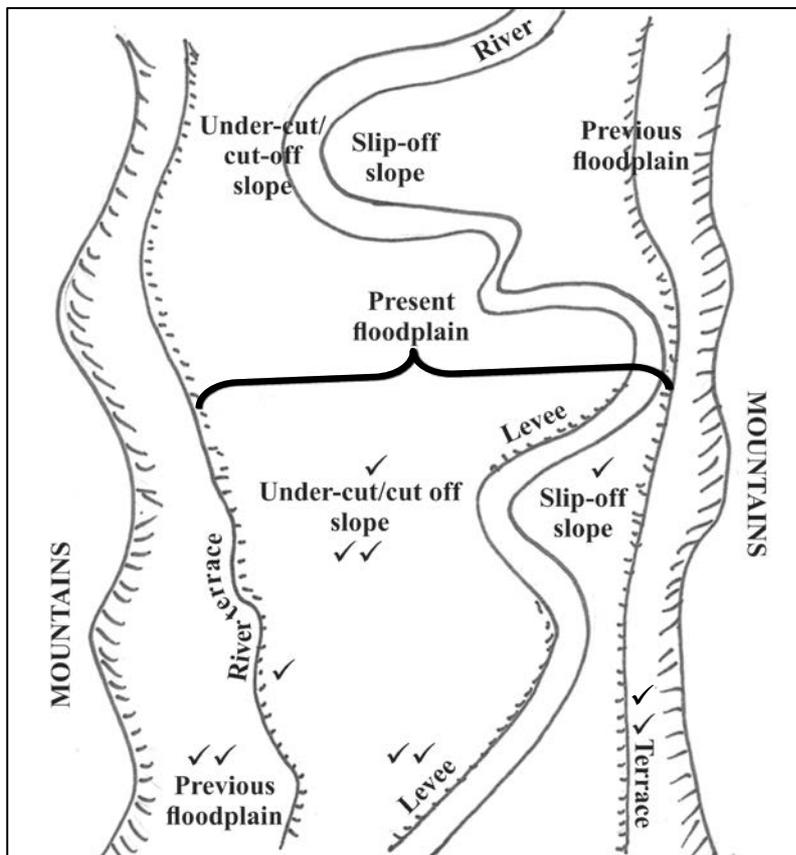
(8)

2.6 2.6.1 With the aid of well-labelled sketch, **identify and label** the following features:

- the under-cut and slip-off slopes of a meander (accepted on any section of a meander)
- a previous floodplain
- levee
- river terraces.

(Also accept an oblique view-sketch.)

(Also accept accurate channel cross section sketch)



(8)

2.6.2 ONE advantage and ONE disadvantage of farming along this river.
Accept any reasonable answer.

Advantages	Disadvantages
Fertile soil (alluvium) Good water supply Flat land	Flooding (high runoff); could have lots of rocks, stones Frost pocket – limits the crops that can be grown Accessibility is difficult (remote area)

(4)

- 2.7 2.7.1 **Episodic rivers** are never supplied with groundwater and will only flow after a heavy downpour, causing a flash flood for a day or so. (2)
 A river which does not penetrate the dry season/wet season water table.
 No base flow.
 A river which does not penetrate the water table.

- 2.7.2 The municipality of Laingsburg has commissioned the local Water Department to carry out a study to make recommendations for a catchment area management strategy. 1½ to 2 page report to **analyse** the contributing factors listed below.

Learners need to mention at least ONE point from each of the below sub-headings including a catchment strategy. This will make up a total of 10 marks.

Thereafter the remaining 3 points can be awarded from any of the below sections.

Evidence of analysis and explanation will be rewarded in this report. Bullet points will be accepted, provided there is sufficient analysis and insight in each point. Short phrases with limited explanation will only be awarded one mark for the point stated.

Contributing factors such as:

- **shape and size of the drainage basin**
 Large, round or circular basin (*pear-shaped not accepted*) – runoff in all the tributaries covers about the same distance before it reaches the point of outflow of the drainage basin
 Covers a large area – will have a larger runoff or discharge
 Dendritic stream pattern.
- **river flow and rainfall patterns**
 Low rainfall, which means most of the rivers are non-perennial
 Learners are not penalized for not identifying this catchment area contains non-perennial streams since this was not clearly marked on the map provided
 Rivers only flow after a heavy rainstorm
 Less vegetation cover results in increased runoff, for example: sparsely grassed areas.
 Flow is constricted due to the poort/river gap.
- **drainage density and stream ordering**
 Generally medium-low drainage density as most rivers are dry; after a rainstorm, the density will change for a short period of time
 Three main tributaries confluence just before Laingsburg
 Large volume of water passes through the town at the same time
 4th order drainage basin which means that there is a higher chance of basin flooding.
- **surface vegetation**
 Natural vegetation is sparse due to overgrazing (sheep, goats), also due to this area falling within a arid area – the Karoo.
 This reduces infiltration and increases surface run-off, increasing the chances/risk of flooding

- **includerecommendations for a catchment area management strategy to be implemented**

Build dams upstream from Laingsburg

Prevent over-grazing by sheep; make sure vegetation/grass and scrub has opportunity to recover (rotational grazing)

Working for water type projects – remove alien vegetation

Planting of indigenous vegetation

River channeling, diversion of streams, weirs

Educate farmers on importance of good water management strategies

Recommendations should be incorporated in the contributing factors.

At least ONE recommendation should be included in the report

100 marks

SECTION C RURAL AND URBAN SETTLEMENT AND ECONOMIC GEOGRAPHY OF SOUTH AFRICA

QUESTION 3

3.1	3.1.1	B
	3.1.2	A or D
	3.1.3	C
	3.1.4	D
	3.1.5	D

(2 × 5 = 10)

- 3.2 3.2.1 (a) **Gated developments:** Controlled/security/single access developments with strictly controlled entrances. Developments surrounded by a security wall. (2)
- (b) **Urbanisedrurality:** Settlements in a rural environment that are multifunctional and not only involved in primary activities, urban services are on offer in a rural setting. (2)

- 3.2.2
- Restaurants, coffee shops, wine tasting
 - Golf courses
 - Walking trails
 - Tennis courts
 - Beautician
 - Fishing in the lagoon
 - Bird watching
 - Crèches, nursery school
 - Health spas/gyms
 - Travel agents
 - Club house
- (1 mark each) (4)

- 3.2.3 Rural gated developments are growing in popularity due to:
- Urban decay, congestions and crime in urban cities
 - They offer security and community living
 - Idyllic settings, improved life style, less or no air pollution
 - Telecommuting opportunities, improved access to broadband
 - Other relevant suggestions
- (3 × 2=6)

- 3.2.4 Possible answer: Social justice issues address land reform and the ills of colonialism and Apartheid. Gated rural communities cater for the upper middle class and are not accessible to the majority of citizens. Access to resources; gated rural developments provide urban resources to rural areas.

Opinion: They do OR do not address these issues (2 marks for an opinion either way).

Justify: Examples must be given. (3 × 2 reasons must be given for the informed opinion.) (8)

- 3.3 3.3.1 (a) 62 % (accept 61% – 63%)
 (b) 23% (accept 22% – 24%)
 (c) 18% (accept 17% – 19%)
 (d) 15% (accept 14% – 16%)
 (1 mark each) (4)

3.3.2 The Citi Bike project:

Advantages:

- Reduce traffic congestion
- Reduce air pollution from private cars/saves fuel
- Healthier, fitter commuter population
- Decreases need to build extra roads
- Encourages densification (2 × 2=4)

Disadvantages:

- Cycle lanes will need to be built, storage facilities, capital cost
- Possible road hazard if separate cycle lanes are not in place, motorists will need to be educated
- Theft of bikes will need to be addressed
- Commuter time increased (perhaps not in rush hour)
- Accept relevant ideas (2 × 2=4)

- 3.4 3.4.1 (a) 12% (2)
 (b) 27% (2)

3.4.2 **Break-of-bulk point** – a location to which goods are transported by one mode of transport (road and rail) and moved to another mode of transport (ship). (2)

- 3.4.3
- **Transport:** Western Cape has a good network of road and rail and good ports and harbours (Saldanha). However, it is far from the economic hub of Gauteng is great and harbours such as Richard's Bay are closer to export raw materials from the interior.
 - **Supply of raw material:** Lacks mineral resources of any consequence.
 - **Power supply:** Good, Mosgas, wind and nuclear plants (Koeberg) are located here. Or poor power supply, inconsistent power
 - **Labour:** Over-abundance of unskilled workers. Labour disputes and strikes, farm workers strikes affecting the fruit and wine industry. (4 × 3=12)

3.5

3.5.1	C
3.5.2	E
3.5.3	A
3.5.4	F

(4 × 2 = 8)

3.6 3.6.1 **Informal trading** is those involved in niche markets, do not pay company tax nor adhere to formal legal requirements, standards and procedures. It contributes a significant part of the SA economy. For example, street trading and spaza shops. (Photographs 12 and 13) (2)

3.6.2 **Comment** on some of the challenges facing South Africa's informal traders:

- Lack of work premises, exposed to the elements
- Xenophobia
- Sanitation issues
- Street children/join parents
- Fighting over space/customers
- Excessive government regulations
- No job security
- The industry is unregulated so the employer has no employee benefits
- There is a lack of opportunities for bulk purchases and collective bargaining
- There is limited access to loans, credit and capital
- There is limited access technology
- There is limited access to business training
- Crime and frequent theft of goods as storage is a problem (4 × 2=8)

3.7 **Importance of platinum mining to South Africa's economy**

- Creates jobs, supports families/Skill development
- Earns foreign exchange
- Stimulates multiplier effect which benefits entire economy/linked industries stimulated
- Tax revenue benefits government
- Contributes to GDP
- Attract foreign investment/business confidence/benefits SDI's

Factors that influence the supply of platinum

- Total supply from 2004 to 2013 has remained fairly constant (2013 – 5,8 M ounces) (Give credit for data taken from the graph)
- Labour issues, strike action, cost of labour increasing, protest action, e.g. (Marikana) has influenced the supply.
- Mechanisation results in Platinum productivity declining.
- Easy to reach Platinum in Merensky reef mined out, recycled Platinum is available.

Factors that influence the demand for platinum

- Demand has increased from 7 M (2009) ounces to 8,5 M ounces(2013)
- Demand of platinum dropped, recycling catalytic converters, mining houses retrenching/Global economy decline/trends
- Rand devaluing has made Pt more attractive to export, creating more of a demand. This can drive up the price.

Predict how platinum mining may change in the next 5 years

Value of the rand can influence the market. Positive for the mining sector in SA.(Fact File quote). Price is variable.

Protest action and labour unrest.

PT is a non-renewable resource and can be exhausted.

Beneficiation of the raw PT can add value and change the industry.

Health and safety in the industry needs to be addressed, mining accidents.

Xenophobia affecting labour supply

Electricity supply becoming inconsistent, decreasing productivity.

80%	Excellent	16 – 20
70%	V. Good	14 – 15
60%	Good	12 – 13
50%	Moderate	10 – 11
40%	Colourless	8 – 9
30%	Weak	6 – 7
20%	V. weak	4 – 5
< 20%	Hopless	0 – 3

Any relevant points.

(20)

100 marks

Total: 300 marks