KWAZULU-NATAL PROVINCE
EDUCATION
REPUBLIC OF SOUTH AFRICA

NATIONAL SENIOR CERTIFICATE

GRADE 12

GEOGRAPHY P2

MARKING GUIDELINES

SEPTEMBER 2021

PREPARATORY EXAMINATION

MARKS: 150

This marking guidelines consists of 12 pages.

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QUESTION 1: RURAL AND URBAN SETTLEMENTS

1.1

1.1.1 E✓

1.1.2 G✓

1.1.3 C✓

1.1.4 F✓

1.1.5 A✓

1.1.6 D✓

1.1.7 B✓ (7 x 1) (7)

1.2

1.2.1 transition ✓

1.2.2 Urbanisation ✓

1.2.3 conurbation ✓

1.2.4 higher ✓

1.2.5 low ✓

1.2.6 social ✓

1.2.7 Urban morphology ✓

1.2.8 easier ✓ (8 x 1) (8)

1.3

1.3.1 (a) 15%✓ (1 x 1) (1)

(b) Migrants were able to find jobs ✓✓ (1 x 2) (2)

1.3.2 Migrants may not be able to find jobs due to lack of skills and experience ✓✓
Migrants may end up in informal settlements due to lack of housing ✓✓
Migrants will live in overcrowded conditions due to high rent value ✓✓
Migrants may not be able to pay for services ✓✓
Migrants may engage in protest actions because of poor service delivery ✓✓
Migrants may display anti-social behaviour because of lack of service delivery ✓✓
Migrants may invade land due to lack of housing ✓✓
Migrants will end up committing crimes to survive (accept examples) ✓✓
Migrants will experience poverty due to unemployment ✓✓
Unequal access to basic services due to unemployment ✓✓ (2 x 2) (4)
[Any TWO]

1.3.3 Land reform would return land to people which would encourage them to stay in rural areas/It would return land to people hence encouraging people to return to farming ✓✓
It would prevent people from being forcebly removed from their ancestoral land ✓✓
It encourages subsistence/commercial farming thus creating food security ✓✓
People will have land to produce own food and reduce poverty ✓✓
It would create more jobs in rural areas as more people will practice farming ✓✓
It will improve work conditions and salaries because farmers will have full ownership✓✓
Increased income will increase buying power ✓✓
It will allow communities to generate income and improve infrastructure/ services in rural areas ✓✓
It will encourage landownership and secure land tenure to prevent eviction ✓✓
It will improve the standard of living as people will be able to make profit from the land✓✓ (4 x 2) (8)
[Any FOUR]

1.4

1.4.1 Tall buildings ✓
Roads/railways converge (at CBD) ✓
Highly accessible ✓
High building density ✓ (1 x 1) (1)
[Any ONE]

1.4.2 CBD has a higher land value than the urban-rural fringe ✓✓ (1 x 2) (2)

1.4.3 Close to main road/accesibility ✓✓
Close to residential area /close to customers/ convenience ✓✓
Enough space for parking/expansion ✓✓
Less congested ✓✓
Cheaper land on outskirts ✓✓ (2 x 2) (4)
[Any TWO]

1.4.4 Smoke/dust will cause air pollution ✓✓
The river will get polluted/affect the acquatic life/upset the ecosystem ✓✓
Affect the biodiversity of the area ✓✓
Vegetation will have to be removed for excavation ✓✓
Processing of the cement and excavation will cause noise pollution ✓✓
Excavation will cause land pollution/despoliation/destruction of land ✓✓ (2 x 2) (4)
[Any TWO]

1.4.5 It will reduce the air pollution/carbon footprint ✓✓
Provide clean air/provide oxgygen suppy ✓✓
Cooling of the atmosphere/reduce global warming ✓✓
Prevents urban sprawl ✓✓
Aesthetic purposes ✓✓
Encourage bird and animal life ✓✓
Provide recreation and relaxation ✓✓
[Any TWO] (2 x 2) (4)

1.5

1.5.1 When the transport network cannot cope effectively with the amount of Vehicles/A high volume of vehicles using a specific road at a specific time of the day ✓✓ (1 x 2) (2)
(Concept)

1.5.2 (a) 17:00 – 18:00/5 – 6 pm/in the afternoon ✓ (1 x 1) (1)

(b) Afternoon - People finishing work at the same time ✓✓
Business closing at the same time ✓✓ (2 x 2) (4)

1.5.3 Frustration of spending additional time in the congestion/high stress levels ✓✓
Wear and tear on the car increases repairs/petrol consumption ✓✓
Arrive late to work and stand a chance of being fired ✓✓
Poor employer/employee relationship ✓✓
Missing important appointments ✓✓
Anger and road rage/conflicts among motorists/cause impatience✓✓
Speeding to save time will result in accidents ✓✓
Not obeying traffic rules in order to save time ✓✓
[Any TWO] (2 x 2) (4)

1.5.4 Limit the number of cars entering the city by creating eTolls✓✓
Encourage the use of park and ride system ✓✓
Improve/upgrade the public transport system ✓✓
Encourage the use of lift clubs/car pooling✓✓
Encourage flexi times start in businesses ✓✓
Create separate lanes for bus and taxi to enter the CBD✓✓
Introduce cycle lanes to encourage people to use bycles for shorter distances✓✓
Decentralisation of commercial and industrial activities to limit the number of people entering the city✓✓

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Encourage the use of alternate forms of transport (taxis/buses/trains)✓✓
(Can give examples)
[Any TWO] (2 x 2) (4)

[60]

ECONOMIC GEOGRAPHY OF SOUTH AFRICA

QUESTION 2

2.1
2.1.1 C✓

2.1.2 G✓

2.1.3 F✓

2.1.4 B✓

2.1.5 A✓

2.1.6 D✓

2.1.7 E✓

2.1.8 H✓ (8 x 1) (8)

2.2
2.2.1 Raw material orientated industries✓

2.2.2 Industrial decentralisation✓

2.2.3 Market orientated industries✓

2.2.4 Footloose industries✓

2.2.5 Industrial centalisation✓

2.2.6 Bridge industries✓

2.2.7 Spatial development initiative✓ (7 x 1) (7)

2.3 FOOD SECURITY IN SOUTH AFRICA

2.3.1 Drought ✓ (1 x 1) (1)

2.3.2 Food prices increased✓ (1 x 1) (1)

2.3.3 55.4% ✓ (1 x 1) (1)

2.3.4 Poverty – you cannot afford to buy healthy food or buy things you need to farm with✓✓
Climate change increases natural disasters e.g. droughts which destroy crops✓✓
Limited arable (fertile) land on which to farm✓✓
Increase in food prices✓✓
Subsistence farming through poor farming techniques can damage arable land✓✓
[Any TWO]
(2 x 2) (4)

2.3.5 Introduction of national food security strategy✓✓
Encourage farmers to use modern methods of farming to increase output✓✓
Growing mixture of crops or practising mixed farming✓✓
Use of genetically modified crops✓✓
Government to provide incentives and subsidies to farmers✓✓
More research on how to improve food production for local conditions✓✓
Construction of dams in dry areas to encourage cultivation✓✓
To enable more people to have access to land for farming/land reform policies✓✓
Improving trade relations to have access to cheaper foods✓✓
Consolidation of farms to increase productivity✓✓
Agricultural officers to assist with improving food production✓✓
Encourage land ownership✓✓
Promote food gardens. ✓✓
Effective storage of surplus food produced. ✓✓
Support small-scale farmers. ✓✓
Improve availability of water supplies e.g. water storage facilities for drought situations. ✓✓
Reduce fertile soil damage and erosion e.g. by encouraging better farming techniques. ✓✓
Effective implementation of land reform policies e.g. arable land being transferred to more farmers, increasing farming products✓✓ (4 x 2) (8)
[Any FOUR]

2.4. INFORMAL SECTOR

2.4.1 Informal sector is whereby someone makes a living through an unregistered business, (and don't pay income tax.) ✓✓ (1 x 2) (2)
[Concept]

2.4.2 9.2% ✓ (1 x 1) (1)

2.4.3 They don't pay tax ✓✓
Form due to unemployment and poverty✓ ✓
Low costs are incurred to start an informal business✓✓
Labour intensive with little technology✓
Operations are small scale✓✓
Generally family ownership✓✓
Workers are self employed ✓✓
Engages workers that are unskilled and semi skilled ✓✓
Retrenchments from formal sector✓✓
High number number of females are downplayed by formal sector for employment✓✓
Formal businesses sub-contracted the informal businesses✓✓
Immigrants not being able to find employment✓✓
The informal sector is seen as a easy way to make money✓✓ (2 x 2) (4)
[Any TWO]

2.4.4 Lack of education e.g. entrepreneurial skill limit the improvement of their businesses✓✓
They don't receive much support from the local governments✓✓
Limited access to finance from banks etc✓✓
Limited access to infrastructure and services e.g trading facilities✓✓
Lack of storage facilities✓✓
Low and irregular income✓✓
Vulnerable to crime ✓✓
Exposed to harsh weather conditions✓✓
Constantly being harassed by the local authorities/police✓✓
It takes too long to issue trading permits✓✓ (2 x 2) (4)
[Any TWO]

2.4.5 Trading permits are required in order to:
Regulate the business✓✓
Allocate the businesses specific areas for trading✓✓
Encourage partnership between private sector and the informal trader✓✓
Provide infrastructure (hawker stall/carts) in areas zoned for informal trading✓✓
Assist small businesses to play an active role in providing training✓✓
Provide easier access to bank loans✓✓
Secure insurance covers✓✓
Provide storage facilities✓✓
Contribute to the income of the city by paying taxes✓✓
Provide ablution facilities✓✓
Ensure clean/hygienic facilities✓✓
Statistical analysis for planning✓✓
Prevention of harassment by city officials/ law enforcement officials ✓✓ (2 x 2) (4)

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2.5 **SALDANHA BAY IDZ**

2.5.1 Western Cape✓ (1 x 1) (1)

2.5.2 **Manufacturing**: Zinc smelting✓specialised manufacturing✓fabrication✓ manufacturing of components✓
[Any ONE]

Tertiary: Warehousing facilities repair✓maintenance and equipment servicing✓ (2 x 1) (2)
[Any ONE]

2.5.3 Availability and distribution of products will be easier and quicker due to improved road and rail infrastructure✓✓
The electricity supply will be constant without any interruptions and will not hamper production✓✓
Port upgrades will increase import and export efficiency✓✓ (2 x 2) (4)
[Any TWO]

2.5.4 Create jobs in the West Coast region✓✓
Earning potential increases✓✓
Poverty reduced e.g. through employment✓✓
Accessibility to services/facilities e.g. education, health✓✓
Improvement in standard of living✓✓
Local people will be equipped with skills✓✓
Improvement of infrastructure such as roads, electricity, etc.✓✓
Many companies will engage in social responsibility programmes e.g. learnership and bursaries✓✓
(Any TWO) (2 x 2) (4)

2.5.5 Marine and land ecosystems will be destroyed due to increased toxic waste✓✓
Marine and land biodiversity will be destroyed due to increased toxic waste✓✓
Groundwater will be contaminated and will negatively influence the water quality in the area✓✓
Air pollution and possible acid rain will increase because of increased burning processes✓✓
Acid rain will reduce soil fertility ✓✓
Effluent may cause catchment area despoliation ✓✓ (2 x 2) (4**)**
[Any TWO]

[60]

The questions below are based on the GENERAL INFORMATION OF RUSTENBURG (FUGURE 3), 1:50 000 topographic map (2527CA RUSTENBURG WEST) as well as the orthophoto map (2527 CA 15 TLHABANE) as part of the mapped area

3.1 MAPWORK TECHNIQUES AND CALCULATIONS

3.1.1

(a) Various options are provided as possible answers to the following question. Choose the answer and write only the letter (A–D)

The length of the area demarcated in red on the topographic map is … km.

A 4.65 ✓ (1 x 1) (1)

(b) With the aid of your answer to QUESTION 3.1.1 (a), calculate the area of the orthophoto map, in km, as demarcated in red on the topographic map.

Formula: Area = Length (L) x Breadth (B)

Length: 9.3cm x 0.5 = 4.65km (range : 9.2 cm - 9.4 cm)

Breadth : 7.9cm ✓x 0.5 = 3.95 ✓ km (range : 7.8 cm – 8.0 cm)

Area = 4.65 x 3.95
= 18.37 km^2 ✓

Range for answer (17.94 km^2 - 18.8 km^2) (3 x 1) (3)

(c) By how many times is the scale of the orthophoto map larger than the topographic map?

5 times ✓ (1 x 1) (1)

3.1.2 Refer to the spot height 1216 in block **I3** and trigonometrical station **257** in block **I5** on the topographic map.

(a) Various options are provided as possible answers to the following question. Choose the answer and write only the letter (A–D)

The difference in height (vertical interval) between spot height 1216 and trigonometrical station 257 is … metres.

C 423,9 ✓ (1 x 1) (1)

(b) With the aid of your answer to QUESTION 3.1.2 (a) Calculate the average gradient between spot height 1216 and trigonometrical station 257.

Formula: $\frac{\textbf{Vertical Interval}}{\textbf{HorizontalEquivalent}}$

VI $= 423,9$

HE $= 5,7\checkmark \times 500m = 2\ 850\ \checkmark m \quad (5,7 \times 0,5 \times 1000 = 2\ 850m)$

Range: $(5,6 - 5,8)$

$G = \frac{423,9}{2\ 850}\ \checkmark$ **(Correct substitution)**

$= \frac{1}{6,72}$

$= 1: 6,72\checkmark$ **(Range: 1:6.6 – 1:6.84)**

(4x1) (4)
[10]

3.2 APPLICATION AND INTERPRETATION

3.2.1 Refer to the settlement at point **V** in block **J**1.

(a) The settlement pattern found at point **V** is (nucleated/dispersed).

dispersed ✓ (1 x 1) (1)

(b) Explain ONE disadvantage for a farm worker living in the settlement identified in QUESTION 3.2.1(a).

Lack of social life due to it being fairly isolated✓✓
Easy target for criminals because of isolation✓✓
Need large amounts of capital to be sustained✓✓
Basic services such as schooling are far away✓✓ (1 x 2) (2)
[Any ONE]

3.2.2 Refer to blocks **D8** to **D10** and **E8** to **E10** on the topographic map.
(a) State TWO physical factors that favour farming in this area.

North facing/north east facing slopes✓
Sheltered slopes✓
Level ground/The land is flat/slope is gentle ✓
Water available from rivers ✓
Fertile soil✓ (2 x 1) (2)
[Any TWO]

(b) Explain how infrastructure promotes farming in this area.

Transport network makes area accessible✓✓
Easy to transport crops/accessibility of market✓✓
Infrastructure to import raw materials e.g. fertilizers, seeds, equipment✓✓
Power lines indicate that farming could utilize electricity✓✓
Reservoirs/dams/storage dams/wind pumps to provide irrigation✓✓
Farm buildings✓✓
Houses and homesteads for farm workers✓✓ (1 x 2) (2)
[Any ONE]
[Candidates may use examples of specific infrastructure]

3.2.3 The residential area Rustenburg North on the orthophoto is a high income residential area. Give ONE piece of evidence from the orthophoto map to support this statement.

large plots/ houses✓
Low bulding density ✓
Far from CBD✓
Near the golf course/ recreation✓
Accessible- linked to a main road and other services for easy access (must qualify) ✓
not accessible - fewer entrances into the residential area (must qualify) ✓
green belt✓
away from mining activities✓ (1 x 1) (1)
[Any ONE]

3.2.4 Refer to land-use zone **1** on the orthophoto map.
(a) Various options are provided as possible answers to the following question. Choose the answer and write only the letter (A–D)
The land-use zone **1** is a/an … zone.

D industrial ✓ (1 x 1) (1)

(b) State ONE factor that has influenced the location of this land-use zone.

Open space/expansion✓
Close to bulk transport routes✓
Access to the market✓
Located on flat land✓
Away from built-up areas✓
Close to labour✓
Access to cheaper land ✓
[Any ONE] (1 x 1) (1)

c) Suggest ONE problem that the residents of the settlement next to land-use zone **1** are likely to experience.
Air pollution from mining activities decreases the quality of air✓✓
Noise from mining activities disturbes residents✓✓

Odours/bad smells caused by chemicals used in the mines affects the health of people✓ ✓
Constant passing by of large trucks causes disturbance✓✓
Acid rain damages the property of residents✓✓
Traffic congestion caused mining activities delays motorists✓✓
[Any ONE] (1 x 2)(2)

[12]

3.3 GEOGRAPHICAL INFORMATION SYSTEMS (GIS)

3.3.1 Data manipulation refers to data that has been processed and converted into useful information. A primary source data is manipulated to create a secondary source data.

(a) Is the orthophoto map an example of a primary or secondary source?

Secondary ✓ (1 x 1) (1)

(b) Give a reason for your answer to QUESTION 3.3.1 (a).

Information such as contour lines/names have been added on to make the photo into an orthophoto map ✓✓ (1 x 2) (2)

3.3.2 Define the concept *data layering.*

When different kinds of information are place one top of the other to see the overall picture ✓✓ (1 x 2) (2)
[Concept]

3.3.3 Give an example of a land use in block **A5.**
Mining ✓
Farming ✓ (1 x 1) (1)
[Any ONE]

3.3.4 Discuss the importance of data layering in a GIS.

Each layer is used to display and work with a specific set of information ✓✓
Information can be updated at any time✓✓
Different sets of data can be compared. ✓✓
Intergrated picture of landscape. ✓✓
Relationships between different sets of data can be established. ✓✓
Analyse different sets of information. ✓✓
Comparisons can assist with future developments. ✓✓
Helps with querying. ✓✓ (1 x 2) (2)
[Any ONE]

[8]

TOTAL FOR SECTION B: [30]

GRAND TOTAL: 150

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