KWAZULU-NATAL PROVINCE
EDUCATION
REPUBLIC OF SOUTH AFRICA

NATIONAL SENIOR CERTIFICATE

GRADE 12

GEOGRAPHY

JUNE EXAMINATION

2025

MARKS: 150

TIME: 3 hours

N.B. This question paper consists of 17 pages.

INSTRUCTIONS

1. The paper consists of TWO sections.

   SECTION A

   QUESTION 1: CLIMATE AND WEATHER AND GEOMORPHOLOGY

   QUESTION 2: RURAL AND URBAN SETTLEMENT

   SECTION B

   QUESTION 3: GEOGRAPHICAL SKILLS AND TECHNIQUES

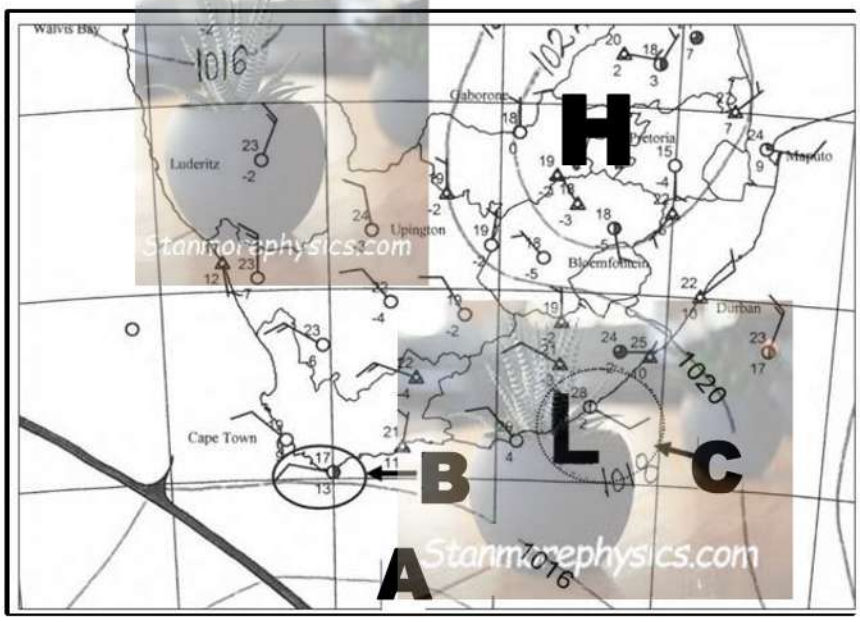
2. Answer **ALL** questions.

SECTION A: CLIMATE AND WEATHER AND GEOMORPHOLOGY

RURAL AND URBAN SETTLEMENT

QUESTION 1: CLIMATE AND WEATHER

1.1 The questions below refer to the synoptic weather map. Various options are provided as possible answers to the questions. Choose the answer and write only the letter (A–D) next to the question numbers (1.1.1 to 1.1.7) in the ANSWER BOOK, e.g. 1.1.8 D.



[Adapted from www.weathersa.co.za]

1.1.1 The isobaric reading at line **A** is … hPa.

A 1016
B 1018
C 1014
D 1012

1.1.2 The air temperature at weather station **B** is … ºC.

A 17
B 13
C -17
D -13

1.1.3 Which pressure cell is influencing the weather over Bloemfontein, as indicated by the isobars?

A Coastal low-pressure cell
B Kalahari High-pressure cell
C Cut-off low-pressure cell
D Thermal low pressure cell

1.1.4 The impact of the cold front in Cape Town for the next 24 hours would be…

A stable conditions with high temperatures
B rainfall and windy conditions as the cold front passes over
C warm and sunny weather caused by the warm front
D dry weather with clear skies

1.1.5 The low-pressure cell at **C** is known as a …low

A thermal
B continental
C coastal
D cut-off

1.1.6 Which of the following conditions is associated with the low-pressure cell labelled **C**?

A hot, dry winds moving onshore
B moist air moving from the ocean, bringing possible rainfall
C stable atmospheric conditions with minimal cloud cover
D warm, descending air preventing cloud formation

1.1.7 The cloud cover at the weather station labelled **B** is…

A $\frac{4}{8}$

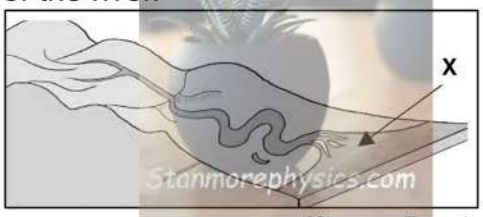
B $\frac{1}{8}$

C $\frac{2}{8}$

D $\frac{6}{8}$

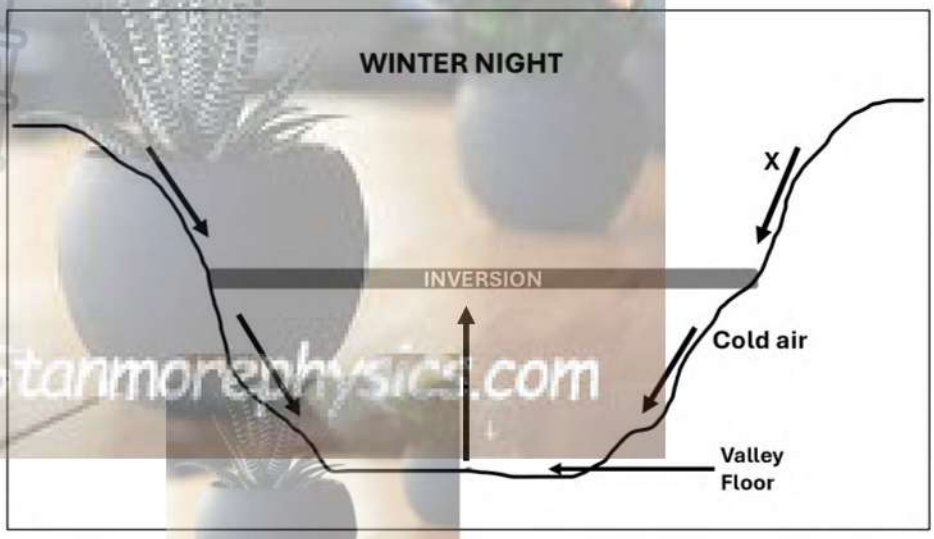
(7x 1) (7)

1.2 The questions below refer to drainage systems in South Africa. Complete the statements in COLUMN A with the options in COLUMN B. Write only Y or Z next to the question numbers (1.2.1 to 1.2.8) in the ANSWER BOOK, e.g. 1.2.9 Y.

	Column A	Column B
1.2.1	The high ground around a drainage basin that separates one drainage basin from another is called the …	**Y** interfluve **Z** watershed
1.2.2	The … is the point where two rivers join.	**Y** confluence **Z** tributaries
1.2.3	Label **X** in the diagram below refers to the … of the river.  [Source: Examiner's own sketch]	**Y** mouth **Z** source
1.2.4	Water flowing over the land due to heavy rainfall is known as ...	**Y** base flow **Z** surface runoff
1.2.5	Water found beneath the Earth's surface is known as …	**Y** ground water **Z** channel flow
1.2.6	The … is the upper level of the saturated rock beneath Earth's surface.	**Y** ground water **Z** water table
1.2.7	The…river forms when silt is deposited on the river bed building up islands of alluvium.	**Y** braided **Z** ungraded
1.2.8	The…flow is generally associated with a smooth concave riverbed where water moves slowly in layers.	**Y** laminar **Z** turbulent

(8 x 1) (8)

1.3 Refer to the figure below which shows a valley climate.



[Source: Examiner's own image]

1.3.1 Define the concept *temperature inversion.* (1 x 2) (2)

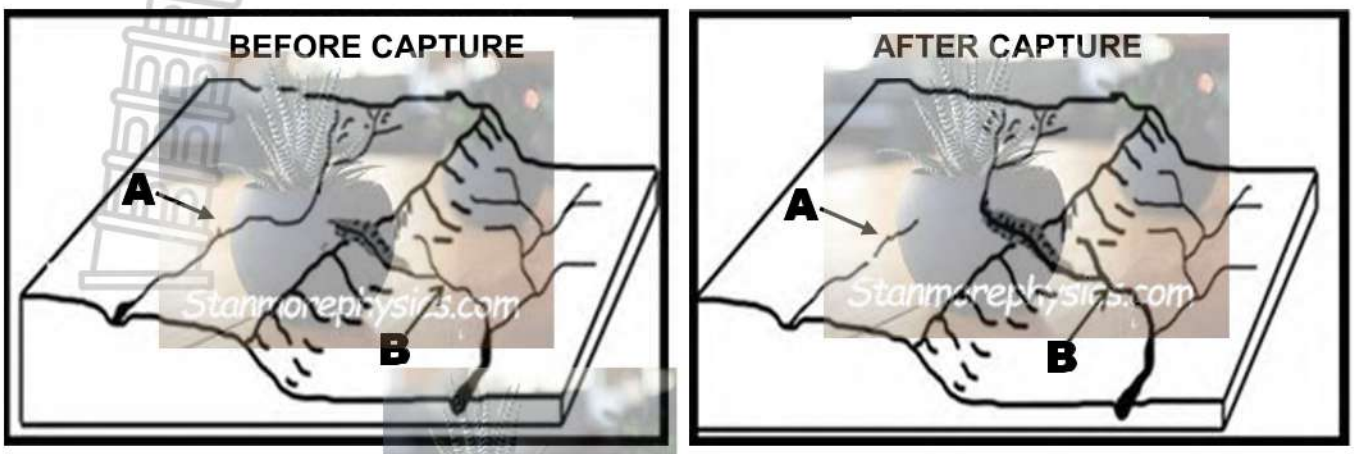
1.3.2 Is the wind at **X** an anabatic or a katabatic wind? (1 x 1) (1)

1.3.3 Explain TWO conditions that contribute to the formation of temperature inversion in a valley during winter night. (2 x 2) (4)

1.3.4 Suggest how temperature influences the formation of frost pockets on the valley floor in winter. (1 x 2) (2)

1.3.5 Evaluate the negative economic impact of frost pockets on farmers on the valley floor in winter? (3 x 2) (6)

1.4 Refer to the sketches below showing river capture.



[Source: Adapted from NSC November 2022 Exams]

1.4.1 Define the concept *river capture.* (1 x 2) (2)

1.4.2 Which river (**A** or **B**) would be considered as the captor stream. (1 x 1) (1)

1.4.3 Explain how the process of river capture causes the watershed to change its position. (2 x 2) (4)

1.4.4 In a paragraph of approximately EIGHT lines, discuss the impact of river capture on the farming community along river **A** after capture. (4 x 2) (8)

1.5 The extract below is on river management.

> For years, the residents of Heron Street in Kharwastan have had to endure the gut-wrenching stench of the Umhlatuzana River, which has accumulated pollution and chemical waste- allegedly from factories surrounding the stream.
>
> Mahommed Reshard Ismail, a resident of the area for the past 38 years, claims that the waste from factories and informal settlements have been polluting the Umhlatuzana River, creating a chronic health hazard.

[Source: https://risingsunnewspapers.co.za/184413/chemical-and-feculent-waste-flow-into-umhlatuzana-river/]

1.5.1 What is *river management*? (1 x 2) (2)

1.5.2 Identify the type of pollution affecting the Umhlatuzana River in the extract. (1 x 1) (1)

1.5.3 Discuss how the pollution mentioned in QUESTION 1.5.2 might impact both the environment and the health of the local community? (3 x 2) (6)

1.5.4 Suggest THREE measures that can be put in place by the local municipality of Umhlatuzana River to manage the river system at risk. (3 x 2) (6)

[60]

QUESTION 2: RURAL AND URBAN SETTLEMENTS

2.1 Various options are provided as possible answers to the following questions. Choose the answer and write only the letter (A – D) next to the question numbers (2.1.1 to 2.1.8) in the ANSWER BOOK, e.g. 2.1.9 B

2.1.1 The location of the settlement in relation to the surrounding features is known as…

A site.

B proximity.

C location.

D situation.

2.1.2 Which of the following is NOT a site factor for a rural settlement?

A dense population.

B water supply.

C flat land.

D fertile soil.

Refer to the figure below on the shape of the settlement to answer QUESTIONS 2.1.3 and 2.1.4

2.1.3 The shape of this settlement is …

A linear.

B isolated.

C circular.

D dispersed.

2.1.4 This settlement is influenced by access to the…

A roads.
B lake.
C pasture.
D firewood.

2.1.5 The main factor used to classify settlements is the…

A function.
B pattern.
C shape.
D site.

2.1.6 The largest rural settlement is called…

A hamlet.
B town.
C village.
D farmstead.

2.1.7 The movement of people from rural to urban areas is called…

A counter-urbanisation.
B nucleated settlement.
C rural-urban migration.
D rural depopulation.

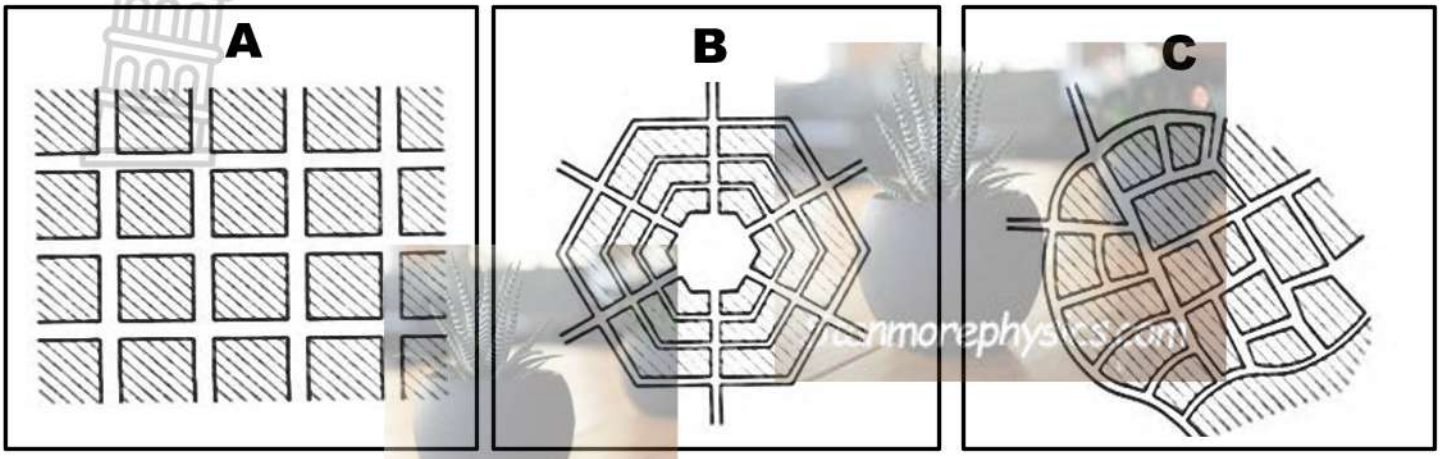
2.1.8 The social advantages of the nucleated rural settlements are…

(i) initiate own ideas.
(ii) safety.
(iii) easy to share ideas.
(iv) owning small parcels of land.

A (i) and (ii)
B (ii) and (iii)
C (ii) and (iv)
D (iii) and (iv)

(8 x 1) (8)

2.2 The figure below shows street patterns. Match the descriptions with street patterns A, B or C. choose the answer and write only the letter **A, B** or **C** next to the question numbers (2.2.1 to 2.2.7) in the ANSWER BOOK, e.g. 2.2.8 C. You may choose the same letter more than once.



[Source adapted from https://www.graemecollege.co.za/media/1200/gr-12-settlement-geography-part-6-summaries-urban-settlements.pdf]

2.2.1 Associated with the new urban developments.

2.2.2 Many intersections result to traffic congestion.

2.2.3 It suits the uneven topography.

2.2.4 All roads converge on a central point.

2.2.5 It results to the free-flow of traffic.

2.2.6 It is found in the oldest part of urban areas.

2.2.7 Associated with ancient cities with ring roads as a feature.

(7 x 1) (7)

2.3 Refer to the sources below on land reform.

'Elite capture': how land reform favours the rich and powerful

By Staff Reporter

20 April 2020 | 1:26 pm

Land reform should aim to address poverty and create livelihood opportunities for those at the lower end of the historically disadvantaged spectrum. This isn't happening, according to the Institute for Poverty, Land and Agrarian Studies. Instead, land allocation and access to resources are skewed in favour of well-off beneficiaries.

President Cyril Ramaphosa assents to (approve) Expropriation Bill

23 Jan 2025

President Cyril Ramaphosa has signed into law the Expropriation Bill which repeals the pre-democratic Expropriation Act of 1975 and sets out how organs of State may expropriate land in the public interest for varied reasons.
Section 25 of the Constitution recognises expropriation as an essential mechanism for the state to acquire someone's property for a public purpose or in the public interest, subject to just and equitable compensation being paid.

The Bill repeals the Expropriation Act and provide a common framework in line with the Constitution to guide the processes and procedures for expropriation of property by organs of state.

This law will assist all organs of State - local, provincial and national authorities - to expropriate land in the public interest for varied reasons.

Media enquiries: Vincent Magwenya Spokesperson to the President

Source: Adapted from https://www.gov.za/news/media-statements/president-cyril-ramaphosa-assents-expropriation-bill-23-jan-2025

2.3.1 What is *land reform*? (1 x 2) (2)

2.3.2 According to the extract, what was wrong with the previous land reform act? (1 x 1) (1)

2.3.3 Refer to the extract above and explain how was the old expropriation bill repealed (changed)? (1 x 2) (2)

2.3.4 Why the new expropriation bill faced opposition from the previously advantaged land-owners? (2 x 2) (4)

2.3.5 Discuss factors that caused the previous process of land reform to advance too slowly? (3 x 2) (6)

2.4 Refer to the photographs below showing urban decay in Johannesburg.

[Source Adapted from https://www.iol.co.za/saturday-star/news/look-from-joburg-with-love-acclaimed-dentist-captures-the-essence-of-the-beloved-city-of-gold-64af470d-4d1f-4866-aa4c-b1d5862c5af9]

2.4.1 Define the concept *urban decay*. (1 x 2) (2)

2.4.2 Mention evidence from the photographs indicating that urban decay has taken place. (1 x 1) (1)

2.4.3 Refer to the photographs above and identify possible causes of urban decay. (2 x 2) (4)

2.4.4 Suggest measures that could be implemented by Johannesburg Municipality to renew the city. (2 x 2) (4)

2.4.5 Explain how urban renewal will negatively affect people living in the City of Johannesburg. (2 x 2) (4)

2.5 Refer to the newspaper article on informal settlements below and answer the questions that follow.

It will take eThekwini over 90 years to fix informal settlements, says metro

9 May 2023 | By Nombulelo Damba-HendrikNews | Durban

It will take the eThekwini Municipality almost a century to deal with the backlog of problems at informal settlements across the metro, given the current fiscal allocations. This is according to the head of communications at the municipality, Lindiwe Khuzwayo.

Families at Foreman Road informal settlement in Durban have been asking the City to electrify their shacks and improve sanitation.

Some shacks are built on wetlands, so the ground is always damp. Residents say they protested in 2018 to demand electricity, among other services. They said the municipality sent a contractor to install electricity, but only a few shacks received formal electricity. Most shacks at Foreman Road still rely on illegal connections.

Source: Adapted from: https://www.dailymaverick.co.za/article/2023-05-09-90-years-thats-how-long-it-will-take-ethekwini-to-fix-informal-settlements-says-metro/

2.5.1 What is an *informal settlement*? (1 x 2) (2)

2.5.2 Quote evidence from the article which suggest that some informal settlement are built on sensitive land. (1 x 1) (1)

2.5.3 Mention at least TWO services that the above community are complaining about. (2 x 1) (2)

2.5.4 How does the building material of informal settlements above increase vulnerability (more risk) to fires? (1 x 2) (2)

2.5.5 In a paragraph of approximately EIGHT lines, suggest measures that can be implemented by local municipality to reduce the challenges associated with the growth of informal settlements. (4 x 2) (8)

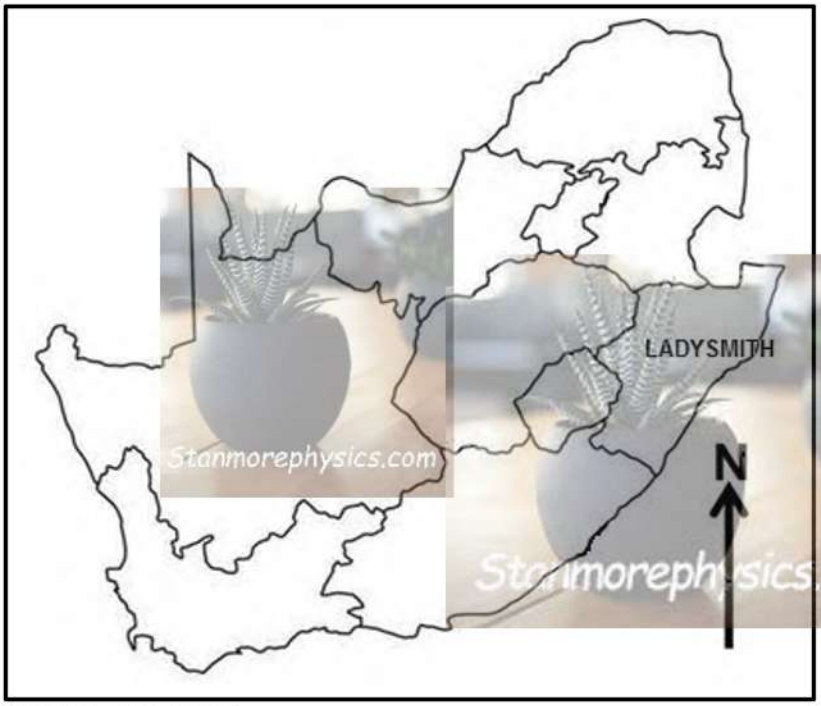
[60]

TOTAL SECTION A: 120

SECTION B

QUESTION 3: GEOGRAPHICAL SKILLS AND TECHNIQUES

GENERAL INFORMATION ON LADYSMITH



Coordinates: 28°33'S; 29°46'E

Ladysmith is a city in the Uthukela District of Kwa Zulu-Natal. It is situated along the Klip River. The climate is warm and temperate with the highest rainfall recorded in summer. The average annual temperature is 17,3 °C. The average annual precipitation is approximately 1 057mm. This climate provides ideal conditions for agricultural raw materials.

[Source Adapted from: https://en.wikipedia.org/wiki/LADYSMITH]

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

ENGLISH	AFRIKAANS
Furrow	Voor
Aerodrome	Vleigveld
Klip River	Kliprivier
Sewage works	Rioolwerke
Weir	Studam

3.1 MAP SKILLS AND CALCULATIONS

3.1.1 In which province is Ladysmith? (1 x 1) (1)

3.1.2 What is the map code south-east of 2829DB?

2829BC	**2829BD**	**2830AC**
2829DA	**Ladysmith 2829DB**	**2830CA**
2829DC	**2829DD**	**2830CC**

A 2829DC
B 2829DD
C 2830CC
D 2830CA (1 x 1) (1)

3.1.3 The coordinates of the weir at **I** in block **A3** is…

A 28º31'24"S; 29º47'25"E
B 29º47'25"E; 28º31'24"S
C 28º31'24"E; 29º47'25"S
D 29º47'25"S; 28º31'24"E (1 x 1) (1)

3.1.4 Determine the true bearing from trigonometrical station 324 (block **E2**) to trigonometrical station 313 (block **C1**). (1 x 1) (1)

3.1.5 Use the topographical map and the information below to calculate the magnetic declination for the year 2025. (5 x 1) (5)

Difference in years: _____

Mean annual change: _____

Total change: _____

Magnetic declination: _____

_____

3.1.6 What is the purpose of calculating the magnetic declination? (1 x 1) (1)

3.2 MAP INTERPRETATION

3.2.1 The contour interval of the orthophoto map is…

A 5 meters

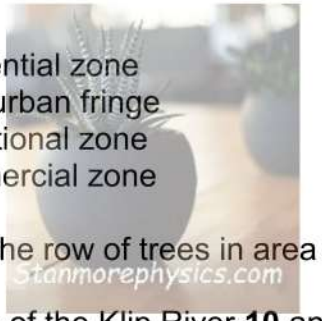
B 0.5 meters

C 20 meters

D 0.2 meters (1 x 1) (1)

3.2.2 The land use zone for the excavation at **J** on the topographical map is…

A residential zone
B rural-urban fringe
C transitional zone
D commercial zone (1 x 1) (1)



3.2.3 Account for the row of trees in area labelled **12**. (1 x 2) (2)

Refer to the section of the Klip River **10** and **11** on the orthophoto map.

3.2.4 Which bank (**10** or **11**) is more likely to be eroded in times of flood? (1 x 1) (1)

3.2.5 Why is this part of the river bank (answer to QUESTION 3.2.4 above) not cultivated? (1 x 2) (2)

Refer to the street pattern in block **E 4/5** on the orthophoto map.

3.2.6 Identify the street pattern in block **E 4/5** on the orthophoto map. (1 x 1) (1)

3.2.7 Explain TWO advantages of this street pattern. (2 x 2) (4)

3.3 Geographic Information Systems

3.3.1 Is the orthophoto map an example of (vector / raster) data? (1 x 1) (1)

3.3.2 Provide a reason to support your answer to QUESTION 3.3.1 above. (1 x 2) (2)

The industrial building in block **B4** of the topographical map is shown by the images below captured by a remote sensing device.

(Source: www.earth.google.com/web/search/Lady+smith/)

3.3.3 Define the concept *remote sensing*? (1 x 2) (2)

3.3.4 Name ONE factor in the remote sensing process that will affect the resolution of an image. (1 x 1) (1)

3.3.5 Why does image **A** have a higher resolution than image **B**? (1 x 2) (2)

TOTAL SECTION B: 30

GRAND TOTAL: 150

FINAL

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NATIONAL SENIOR CERTIFICATE

GRADE 12

GEOGRAPHY

JUNE 2025 EXAMINATION

MARKING GUIDELINES

MARKS: 146

N.B. This marking guideline consists of 8 pages.

QUESTION 1 : CLIMATE AND WEATHER

1.1.1 D (1012)

1.1.2 A (17)

1.1.3 B (Kalahari High Pressure cell)

1.1.4 B (Rainfall and windy conditions as the cold front passes over)

1.1.5 C (Coastal)

1.1.6 B (Moist air moving from the ocean, bringing possible rainfall)

1.1.7 A $(\frac{4}{8})$ (7 x 1) (7)

1.2.1 Z (Water shed)

1.2.2 Y (Confluence)

1.2.3 Y (Mouth)

1.2.4 Z (Surface runoff)

1.2.5 Y (Ground water)

1.2.6 Z (Water table)

1.2.7 Y (Braided)

1.2.8 Y (Laminar) (8 x 1) (8)

1.3.1 Is an increase in the temperature as the height increases in a valley. [CONCEPT] (1 x 2) (2)

1.3.2 Katabatic wind (1 x 1) (1)

1.3.3 Clear, calm nights that allows heat to escape through terrestrial radiation.
Cold subsiding air displacing warm air from the valley floor. (2 x 2) (4)

1.3.4 Temperature drops below freezing point (0ºC) forming frost. (1 x 2) (2)

1.3.5 Crop damages / Shortage of food for livestock/Agricultural productivity would be reduced (Accept examples).
Delayed planting / harvesting
Soil and infrastructure damage [ACCEPT EXAMPLES]
Reduced crop quality / reduced market value
Loss of income / profit for farmers.
Increased costs for frost prevention methods.
Increase insurance cost
Reduced land value [ANY THREE] (3 x 2) (6)

1.4.1 When a more energetic river captures (steals) the headwaters of a less energetic
River [CONCEPT] (1 x 2) (2)

1.4.2 River B (1 x 1) (1)

1.4.3 Headward erosion (1) results in the lowering of the watershed through abstraction
Headward movement of the river (1) results in backward movement of the watershed / retreat backwards. (2 x 2) (4)

NB. PART MARKING: ONE MARK FOR A FACTOR
TWO FULL MARKS FOR A FACTOR AND A QUALIFIER

1.4.4 Loss of water for irrigation/domestic purposes
Loss/ damage of aquatic life
Poor crop harvesting
Loss of income
Poor soil quality
Horticulture negatively affected
Loss of livestock.
Decrease production
Loss of jobs
Loss of hydro-electric power
Results in rural-urban migration/rural depopulation
[ANY FOUR] (4 x 2) (8)

1.5.1 River management refers to the processes and strategies used to maintain, protect, and improve the health of rivers. [CONCEPT] (1 x 2) (2)

1.5.2 Water pollution (accept examples from the extract) (1 x 1) (1)

1.5.3 <u>Environment:</u>
The (chemical) waste in the river can harm aquatic life (plants and animals) by contaminating the water
It can also lead to the destruction of aquatic habitats
Loss of biodiversity.
Reduced oxygen levels in the water result in eutrophication (growth of algae)
Disrupting of the food chain (ecosystem).
Soil degradation / soil infertility

<u>Health of the local community</u>:
Diseases from chemical waste [ACCEPT EXAMPLES]
Skin diseases [ACCEPT EXAMPLES].
[ANY THREE - AT LEAST ONE ON BOTH THE ENVIRONMENT AND HEALTH OF THE LOCAL COMMUNITY] (3 x 2) (6)

1.5.4 The local municipality must pass by-laws (legislation) to control industrial waste disposal
Impose fines to control industrial waste disposal
Treatment of wastewater before it is released into the river.
Educate local communities on the importance of
keeping rivers clean, how to reduce pollution
Encourage active participation in clean-up efforts.
Develop proper waste disposal systems for informal settlements and businesses, ensuring that waste does not enter the river.
Buffering along the river.
Frequent testing of water quality.
[ANY THREE] (3 x 2) (6)
[60]

QUESTION 2: RURAL AND URBAN SETTLEMENTS

2.1.1 D (Situation)

2.1.2 A (Dense population)

2.1.3 C (Circular)

2.1.4 B (Lake)

2.1.5 A (Function)

2.1.6 C (Village)

2.1.7 C (Rural-urban migration)

2.1.8 B (ii) and (iii) (8 x 1) (8)

2.2.1 C

2.2.2 A

2.2.3 C

2.2.4 B

2.2.5 C

2.2.6 A

2.2.7 B (7 x 1) (7)

2.3.1 Policy to bring about equitable distribution and access to land for previously disadvantaged South Africans. [CONCEPT] (1 x 2) (2)

2.3.2 The previous land reform Act did not address poverty.
It did not create livelihood opportunities for those at the lower end of the historically disadvantaged spectrum
Land allocation and access to resources were skewed in favour of the well- off beneficiaries [ANY ONE] (1 x 1) (1)

2.3.3 To provide a common framework in the line with the Constitution to guide the processes and procedures for expropriation of property by all organs of state.
The law was repealed (changed) to allow three (all) organs of state (local, provincial and national authorities), to expropriate land in the public interest for valid reasons ANY ONE (1 x 2) (2)

2.3.4 QUESTION REMOVED (TECHNICAL ERROR)

2.3.5 Lack of knowledge regarding the land reform process
People are too poor to attend meetings
Lack of appropriate documentation
Willing buyer/ willing seller clause
Legal processes are costly
Constrained budget by government [ANY THREE] (3 x 2) (6)

2.4
2.4.1 When some buildings in the city becomes run-down/dilapidated and are not fixed/maintained. [CONCEPT] (1 x 2) (2)

2.4.2 Buildings are in poor conditions/ dilapidated buildings
Litter/pollution
Graffiti on the buildings
Roads in poor condition (ACCEPT EXAMPLES) (ANY ONE) (1 x 1) (1)

2.4.3 Landlords do not maintain buildings
Zone of expansion for CBD
Intention to change original function of buildings
Illegal occupation of buildings
Sub-letting
Poor service delivery
Overcrowding of properties [ANY TWO] (2 x 2) (4)

2.4.4 Building of low-cost housing
Demolish and rebuild the old buildings/Infrastructure development (accept examples)
Renovations of the dilapidated buildings (accept examples)
Relocate people to other areas (ANY TWO) (2 x 2) (4)

2.4.5 Displacement of local residence due to rising property values
Threat to local businesses due to high rentals
Loss of community identity or cultural heritage due to replacement of historic buildings/ landmarks
Marginalisation of vulnerable groups due to high property values
Promote economic inequality by benefitting the property developers only
Increased service delivery costs due renewal
(ANY TWO) (2 x 2) (4)

NB. PART MARKING: ONE MARK FOR A FACTOR
TWO FULL MARKS FOR A FACTOR AND A QUALIFIER

2.5.

2.5.1 Illegally built settlements due to lack of proper housing.
[CONCEPT] (1 x 2) (2)

2.5.2 Some shacks (informal settlements) are built on Wetlands (1 x 1) (1)

2.5.3 Provision of electricity.
Provision of sanitation.
Provision of better housing.
(ANY TWO) (2 x1) (2)

2.5.4 They use poor quality (makeshift/recyclable) material that is flammable.
[ACCEPT EXAMPLES] (1 x 1) (1)

2.5.5 Provide access to basic services (accept examples)
Legal ownership of the land
Provide building material
Employment opportunities/formal sector jobs
Provision of proper houses (low cost houses)
Emergency facilities provided (accept examples)
Monitoring and policing to improve safety and security
Proper planning /Rezoning
Improve infrastructure (accept examples)
Educational programmes (accept examples)
[ANY FOUR] (4 x 2) (8)

[56]

TOTAL SECTION A: 116

3.1 MAP SKILLS AND CALCULATIONS

3.1.1 Kwa Zulu – Natal (1 x 1) (1)

3.1.2 C (2830CC) (1 x 1) (1)

3.1.3 A (28º31'24" S, 29°47'25" E) (1 x 1) (1)

3.1.4 145º + 180º = 325º√ (Range: 144º +180º - 146º + 180º)
= 324º - 326º (1 x 1) (1)

3.1.5 Difference in years: 2025 – 2001= 24√
Mean annual change: 08' √ West
Total Change: 24 x 8' = 192' West of True North √
Magnetic declination for 2025: 21º 03' +√ 192'
= 24º 15' West of True North√ (5 x 1) (5)

3.1.6 To find the true north
For accurate direction
Navigators do not get lost
[ANY ONE] (1 x 1) (1)

3.2 MAP INTERPRETATION

3.2.1 A (5m) (1 x 1) (1)

3.2.2 B (rural-urban fringe) (1 x 1) (1)

3.2.3 Prevent pollution of Klipriver
Act as a buffer zone
Reduce flooding
ANY TWO (2 x 1) (2)

3.2.4 11 (outer bank/undercut slope) (1 x 1) (1)

3.2.5 Steep slope therefore prone to erosion
The slope is deep and cannot be cultivated / difficult to access water
Soil is infertile
The bank is too close to the road
[ANY ONE] (1 x 2) (2)

3.2.6 Grid-iron (1 x 1) (1)

3.2.7 Minimises travelling distance from one point to another
Facilitates shopping since shops are located on either sides of the street
Easy plan/to layout
Easy to extend
Yields rectangular building plots
Easy to find your way around (navigate)
[ANY TWO] (2 x 2) (4)

3.3 Geographic information systems

3.3.1 Raster (1 x 1) (1)

3.3.2 Made up of pixels or grids (1 x 2) (2)

3.3.3 Capturing data from a distance without physical contact.
[CONCEPT] (1 x 2) (2)

3.3.4 Atmospheric conditions
Number/size of pixels
Shadow
Distance between the sensor and the target
Angle at which image is captured
[ANY ONE] (1 x 1) (1)

3.3.5 More/smaller pixels/grid cells in image A
Less/larger pixels/grid cells in image B
Image A is clearer than image B
ANY ONE (1 x 2) (2)

TOTAL SECTION B: 30
GRAND TOTAL: 146

CONVERSION: $\frac{\text{LEARNER MARK}}{146} \times 150$