Province of the
EASTERN CAPE
EDUCATION

NATIONAL SENIOR CERTIFICATE

GRADE 12

SEPTEMBER 2023

GEOGRAPHY P2

MARKS: 150

TIME: 3 hours



Font size 18

This question paper consists of 29 pages.

INSTRUCTIONS AND INFORMATION

1. The question paper consists of TWO SECTIONS.

   SECTION A:
   QUESTION 1: Rural and Urban Settlements (60)
   QUESTION 2: Economic Geography of South Africa (60)

   SECTION B:
   QUESTION 3: Geographical skills and techniques (30)

2. Answer all THREE questions.

3. ALL diagrams are included in the QUESTION PAPER.

4. Leave a line between the subsections of questions answered.

5. Start EACH question at the top of a NEW page.

6. Number the questions correctly according to the numbering system used in this question paper.

7. Do NOT write in the margins of the ANSWER BOOK.

8. Draw fully labelled diagrams when instructed to do so.

9. Answer in FULL SENTENCES, except when you have to state, name, identify or list.

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10. Units of measurement MUST be indicated in your final answer, for example
    1 020 hPa, 14°C and 45 m.

11. You may use a non-programmable calculator.

12. You may use a magnifying glass.

13. Write neatly and legibly.

SPECIFIC INSTRUCTIONS AND INFORMATION FOR SECTION B

14. A 1 : 50 000 topographic map 3319 AD CERES and a 1 : 10 000 orthophoto map 3319 AD 12 CERES are provided.

15. The area demarcated in RED on the topographic map represents the area covered by the orthophoto map.

16. Marks will be allocated for the steps in the calculations.

17. You must hand in the topographic and the orthophoto map to the invigilator at the end of this examination session.

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SECTION A: RURAL AND URBAN SETTLEMENTS AND THE ECONOMIC GEOGRAPHY OF SOUTH AFRICA

QUESTION 1: RURAL AND URBAN SETTLEMENTS

1.1 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 (1.1.1 to 1.1.8) in the ANSWER BOOK, for example 1.1.9 D.

1.1.1 … is a physical factor that influences the site of a settlement.

A Slope aspect
B Industrial development
C Access to services
D Proximity to roads

1.1.2 A/An … settlement is located close to a source of water in a water scarce area.

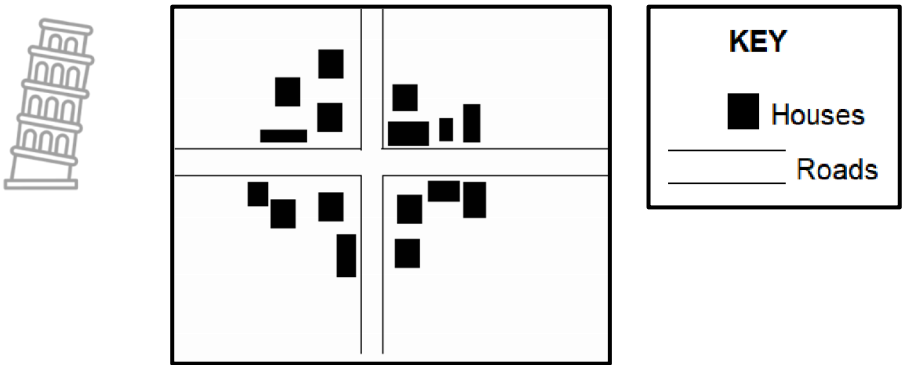
A dry-point
B isolated
C dispersed
D wet-point

1.1.3 The location of a settlement in relation to its surrounding environment is referred to as …

A site.
B pattern.
C distribution.
D situation.

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Refer to the sketch below to answer QUESTIONS 1.1.4 to 1.1.6.



[Source: Examiner's own sketch]

1.1.4 The pattern of the rural settlement is nucleated because the houses are …

A closely spaced.
B far apart.
C isolated.
D widely dispersed.

1.1.5 The following are advantages of the nucleated settlement pattern:

(i) making own decisions
(ii) lack of privacy
(iii) increased security
(iv) shared machinery

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

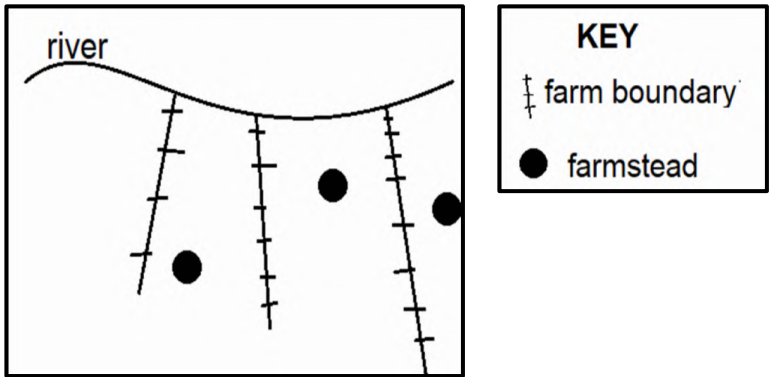
1.1.6 The shape of the settlement is …

A linear.
B crossroad.
C T-shape.
D round.

1.1.7 The largest and most complex rural settlement is called a/an …

A village.
B isolated farmstead.
C hamlet.
D central place.

1.1.8 The settlement in the sketch below can be classified as …



[Source: Examiner's own sketch]

A multi-functional and rural.
B uni-functional and urban.
C uni-functional and rural.
D multi-functional and urban.

(8 x 1) (8)

1.2 Match a term/concept from COLUMN B with a statement in COLUMN A. Write only **X** or **Y** next to question numbers (1.2.1 to 1.2.7) in the ANSWER BOOK, for example 1.2.8 **Y**.

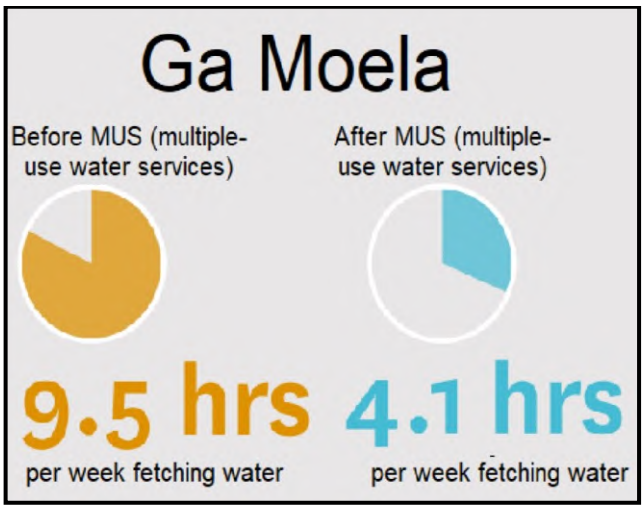
	COLUMN A		COLUMN B
1.2.1	The ranking of urban settlements based on the number of functions	**X** **Y**	urban hierarchy urban sprawl
1.2.2	More specialised goods will be found in a … city	**X** **Y**	smaller larger
1.2.3	The maximum distance a consumer is willing to travel to purchase goods and services	**X** **Y**	range of goods sphere of influence
1.2.4	Have a large range and a large threshold population	**X** **Y**	low-order centres high-order centres
1.2.5	An urban area providing goods and services to the surrounding rural population	**X** **Y**	central city central place
1.2.6	Threshold population is the … number of customers a business needs to be profitable	**X** **Y**	maximum minimum
1.2.7	Area from where urban settlements draw their customers	**X** **Y**	sphere of influence high-order centre

(7 x 1) (7)

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1.3 Refer to the extract below on water as a social justice issue in rural areas.

EMPOWERING RURAL COMMUNITIES WITH MULTIPLE-USE WATER SERVICES



The multiple-use water services (MUS) approach has proven reliable in providing life-changing water access to rural communities in strengthening water security that supports more diverse livelihoods.

In Ga Moela (Limpopo Province), a rural settlement made up of approximately 18 scattered households, new water services were designed to meet the multiple water needs of the community's households. These rural inhabitants have experienced a 56% increase in water quantity and a more reliable supply.

Prior to the introduction of MUS, the main water sources were 20 shallow hand-dug wells only 0,5–1 metres deep. The water was dirty and shared with animals. The dispersed nature of the households meant that almost all homes relied on water that was carried from sources in buckets or wheelbarrows.

[Adapted from https://www.iwmi.cgiar.org/success-stories]

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1.3.1 How many hours were saved per week fetching water after MUS was introduced? (1 x 1) (1)

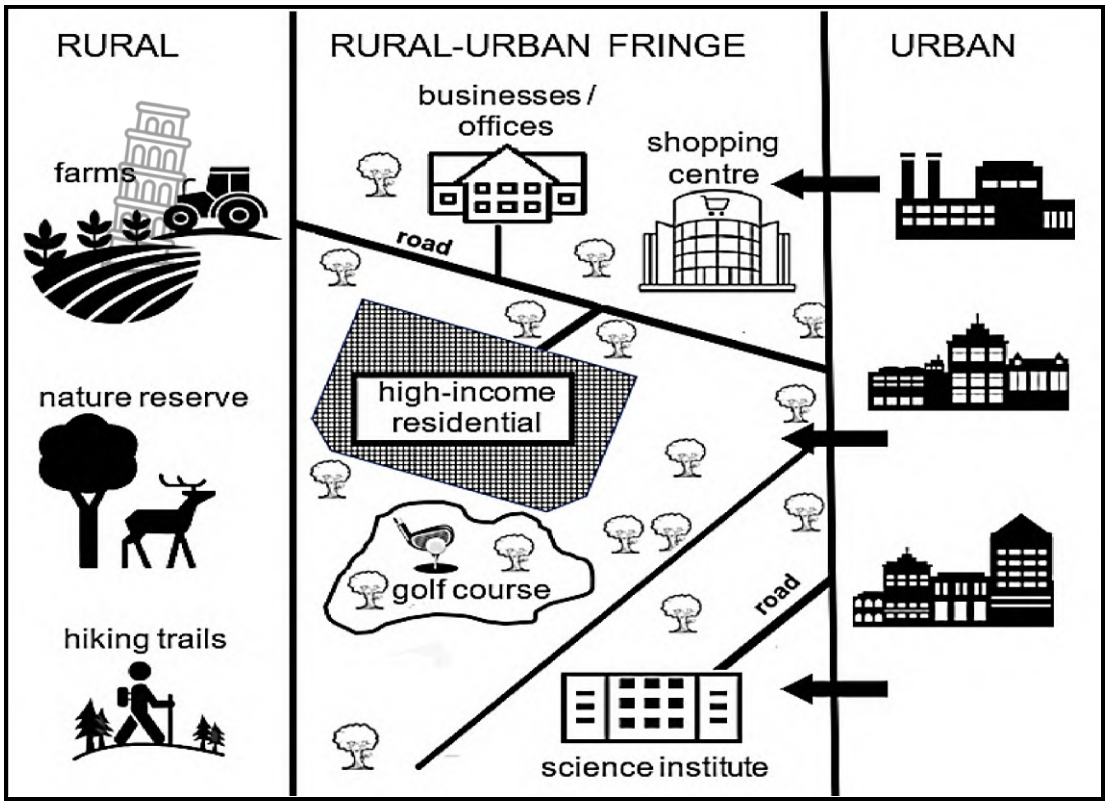
1.3.2 Identify TWO pieces of evidence from the extract that community members faced problems before MUS was introduced. (2 x 1) (2)

1.3.3 Give TWO reasons for the poor water infrastructure often found in South African rural areas. (2 x 2) (4)

1.3.4 In a paragraph of approximately EIGHT lines, explain how access to reliable water in rural communities will reduce poverty. (4 x 2) (8)



1.4 Refer to the sketch below showing a land-use zone.



[Adapted from http://brettonwoodhighschool.co.za/wp-content/uploads/2020/05/GRADE-12 WEEK-4-LESSON-7-8.pdf]

1.4.1 What is the *rural-urban fringe*? (1 x 2) (2)

1.4.2 From the sketch, state ONE economic activity that is found in the rural-urban fringe. (1 x 1) (1)

1.4.3 Why does an increase in the number of people in urban areas contribute to urban expansion into the rural-urban fringe? (1 x 2) (2)

1.4.4 Give TWO social reasons for high-income residential developments in the rural-urban fringe. (2 x 2) (4)

1.4.5 Suggest THREE negative economic impacts that development in the rural-urban fringe will have on the rural community. (3 x 2) (6)

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1.5 Refer to the extract below on informal settlements.

THE CITY'S 'PROBLEM BUILDINGS'



A walk through three adjacent (next to each other) houses on Wright Street in Woodstock (Cape Town) gives a clear indication why city officials are clamping down on so-called problem buildings.

When the city's problem building Unit joined the police in a raid on Wright Street in Woodstock, there were 110 adults and 28 children under the age of 16 on the site at 10 Wright Street. While these houses accommodate unemployed and poor families, they are falling apart from their ceilings to floors. There are dangerous illegal electricity connections, inadequate sanitation and water infrastructure which present health and safety risks to the residents.

An official explains that this residential address is on the list of problem buildings that the city is dealing with. The owners absconded (left) several years ago and since then, the properties have been invaded by illegal occupiers who have taken over the houses and also put up numerous backyard shacks.

An application for a demolition order is currently underway. In addition, the city authorities are hopeful that inner city renewal strategies will be viable solutions for urban challenges such as the houses on Wright Street.



[Adapted from www.news24.com/news24/110-found-living-at-problem-building]

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1.5.1 According to the extract, why do many people live in 'problem buildings'? (1 x 1) (1)

1.5.2 Quote evidence of urban blight (urban decay) from the extract. (2 x 1) (2)

1.5.3 Explain TWO possible causes of urban blight (urban decay) in Wright Street. (2 x 2) (4)

1.5.4 Describe TWO possible negative social impacts associated with urban blight (urban decay). (2 x 2) (4)

1.5.5 Why will 'inner-city renewal strategies' mentioned in the extract, not likely benefit the current residents of Wright Street?(2 x 2) (4)

[60]

QUESTION 2: ECONOMIC GEOGRAPHY OF SOUTH AFRICA

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 2.1.7) in the ANSWER BOOK, for example 2.1.8 D.

2.1.1 A physical factor that hinders industrial development in South Africa is …

A labour unrest.
B unreliable electricity supply.
C shortage of skilled labour.
D erratic rainfall.

2.1.2 Construction and manufacturing form part of the economy's ... sector.

A primary
B secondary
C tertiary
D quaternary

2.1.3 The … of a country refers to the total value of goods and services produced by the permanent inhabitants of the country.

A gross domestic product
B gross geographical product
C gross national product
D gross value-added product

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2.1.4 … industries are service-orientated and not tied to any specific location.

A Raw- material orientated
B Break-of-bulk
C Market orientated
D Footloose

2.1.5 Heavy industries are characterised by …

(i) proximity to bulk transport facilities.
(ii) being ubiquitous.
(iii) high levels of noise and air pollution.
(iv) being market orientated.

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

2.1.6 A social factor that favours the location of the Gauteng (PWV) core industrial region.

A Flat land
B Abundant water
C Dense population
D Cheap power

2.1.7 A … is when the value of exports is greater than the value of imports.

A balance of trade
B negative trade balance
C favourable trade balance
D trade deficit (7 x 1) (7)

2.2 Refer to photographs **A** and **B** below depicting small-scale and large-scale maize farming. Match the descriptions below with photograph **A** or **B.** Write only the letter (**A** or **B**) next to the question numbers (2.2.1 to 2.2.8) in the ANSWER BOOK, for example 2.2.9 A.

A



B



2.2.1 Contributes significantly to the country's GDP

2.2.2 Labour-intensive maize farming

2.2.3 Produces a lower yield of maize per hectare

2.2.4 Maize farming that is capital-intensive

2.2.5 Farming that requires large pieces of land

2.2.6 Is considered large-scale farming

2.2.7 Contributes to food security for individual households

2.2.8 Stimulates the secondary economic sector by providing industries with raw materials (8 x 1) (8)



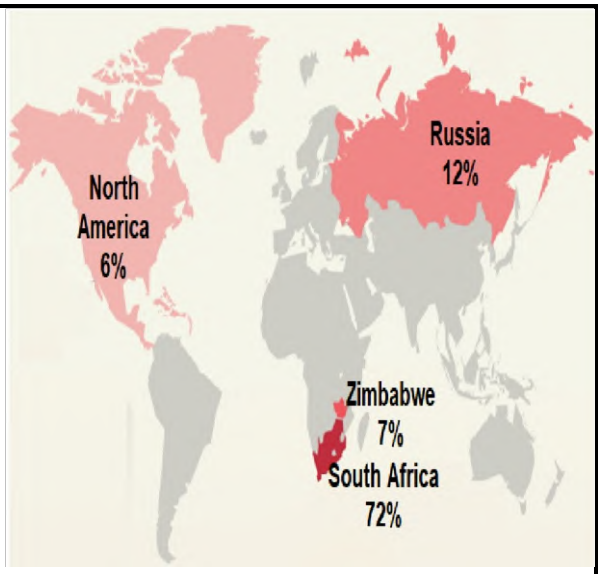
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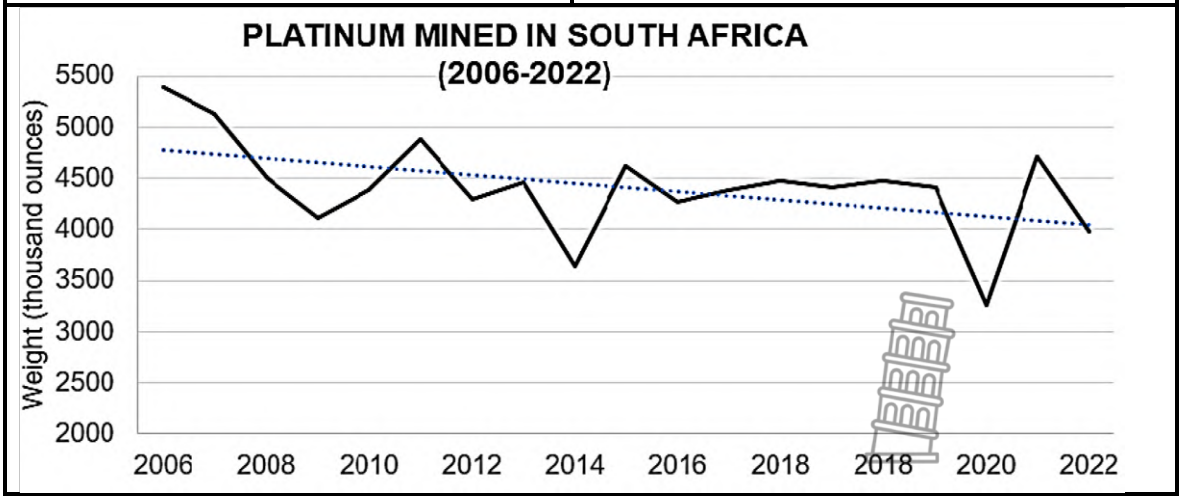
2.3 Refer to the infographic below on platinum mining in South Africa.

Platinum is one of the rarest metals in the world and is in high demand because of its wide range of uses.

South Africa has more than 80% of the world's platinum reserves with platinum being the primary revenue driver for mines in the country.

However, the South African platinum mining industry is not secure and the country's ability to supply platinum is being hindered by a number of factors.





[Adapted from https://auctusmetals.com/south-african-platinum-mine-supply-in-decline]

2.3.1 According to the infographic, what percentage of global platinum is supplied by South Africa? (1 x 1) (1)

2.3.2 Quote from the infographic ONE physical factor that promotes platinum mining in South Africa. (1 x 1) (1)

2.3.3 According to the graph, state the trend in South Africa's platinum production from 2006 to 2022. (1 x 1) (1)

2.3.4 How has South Africa's dominant global position of platinum supply contributed to the country's infrastructural development? (2 x 2) (4)

2.3.5 In a paragraph of approximately EIGHT lines, explain how the economic factors hindering platinum mining in South Africa impact negatively on the country's GDP. (4 x 2) (8)

2.4 Refer to the infographic below on the Port Elizabeth-Uitenhage core industrial region and the Coega Industrial Development Zone (IDZ).

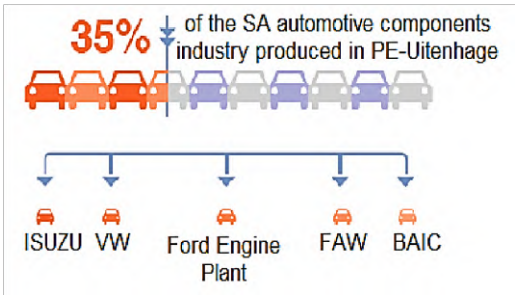
Port-Elizabeth- Uitenhage Industrial Region contributes:



2.63% to South Africa's GDP

3.91% to the GDP of the Eastern Cape

Automotive capital of South Africa:



COEGA Industrial Development Zone:

- Largest IDZ in Southern Africa
- Located in the Nelson Mandela Bay Metro
- Focused on social and economic development
- Infrastructural benefits

[Source: https://www.investmentmonitor.ai/sponsored/plug-and-play- model-in-south-african free-zone-helps-investors-access-opportunities/]

2.4.1 What percentage did the Port Elizabeth-Uitenhage core industrial region contribute to South Africa's GDP? (1 x 1) (1)

2.4.2 Quote evidence from the infographic why the Port Elizabeth-Uitenhage core industrial region is the referred to as the automotive capital of South Africa. (1 x 1) (1)

2.4.3 Identify ONE company in the automotive industry that operates within the Port Elizabeth-Uitenhage core industrial region. (1 x 1) (1)

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2.4.4 How does the automotive industry increase development of other industries in the Port Elizabeth-Uitenhage region? (1 x 2) (2)

2.4.5 Why does the region's infrastructure make it an attractive investment destination for the foreign manufacturing sector? (2 x 2) (4)

2.4.6 Explain how the Coega IDZ contributes positively to both social and economic development in the Eastern Cape Province. (3 x 2) (6)



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2.5 Refer to the extract based on the informal sector.

THE IMPORTANCE OF THE SOUTH AFRICAN INFORMAL SECTOR



According to Statistics South Africa, there are over 2 million South Africans working in the informal sector comprising 16,4% of South Africa's total employment. While data and information about the informal sector is limited, it is estimated that this growing sector contributes approximately 6% of the GDP.

South Africa's informal economy is characterised by traders such as spaza (tuck shops) shops, sidewalk hawkers and vendors. It is often referred to as the 'hidden economy'. However, despite the sector's size and significance in reducing poverty by providing people with access to food and jobs, the power of the informal sector remains largely underestimated.

It is important to note that, the informal sector is not only used by the 'desperate' as a temporary survival strategy until they can access the formal sector, but in fact a booming market that is rich in opportunities.

It is for this reason that policymakers must acknowledge the role of informal activities in reducing poverty, providing employment and offering economic opportunities. Therefore, sustainable measures must be put in place to strengthen this underestimated sector.



[Adapted from https: https://www.farmersweekly.co.za/opinion/by-invitation/how-important-is- the-informal-sector-in-urban-food-security]

2.5.1 What percentage of South Africa's employment is made up by the informal sector? (1 x 1) (1)

2.5.2 Give an example of an informal activity mentioned in the extract. (1 x 1) (1)

2.5.3 According to the extract, identify TWO ways in which the informal economy assists the poor. (2 x 1) (2)

2.5.4 (a) Account for the informal sector being regarded as the 'hidden economy'. (1 x 1) (1)

(b) Explain why it is difficult for policymakers to design plans to help the informal sector. (1 x 2) (2)

2.5.5 Suggest sustainable strategies that could be implemented to strengthen the informal sector. (2 x 2) (4)

2.5.6 How will the South African economy benefit from a strengthened informal sector? (2 x 2) (4)

[60]

SECTION B

QUESTION 3: GEOGRAPHICAL SKILLS AND TECHNIQUES

GENERAL INFORMATION ON CERES



Coordinates: 33° 24’ 2” S : 19°17’ 42” E

Ceres is situated 150 km north-east of Cape Town in the province of the Western Cape and experiences a typical Mediterranean climate. Named after the Roman goddess of agriculture, Ceres is situated in a valley which is extremely fertile and is a major producer of South Africa’s deciduous fruit. There are a number of established agri-processing industries found in the surrounding area.

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

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

ENGLISH	AFRIKAANS
Canal	Kanaal
Furrow	Voor
Weir	Studam

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3.1 MAPSKILLS AND CALCULATIONS

Refer to the topographical and orthophoto map.

3.1.1 Ceres lies in a … direction from of Cape Town.

A north-easterly
B south-westerly
C north-westerly
D south-easterly (1 x 1) (1)

3.1.2 The 19 in the map code for CERES 3319 AD represents …

A 19° south of the equator.
B 19’ south of the equator.
C 19° east of the Greenwich meridian.
D 19’ east of the Greenwich meridian.
(1 x 1) (1)

3.1.3 The feature located at 33° 21’ 21” S; 19° 17’ 9” E is a …

A hiking trail.
B spot height.
C water tower.
D trigonometrical station. (1 x 1) (1)

3.1.4 Name the arterial route which runs through the town of Ceres. (1 x 1) (1)

3.1.5 Refer to **F** and **G** on the topographical map.

(a) The distance along the road from **F** to **G** is 1,15 km.
Convert this distance to metres (m).

(1 x 1) (1)

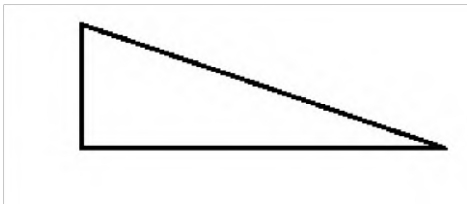
(b) Use the answer to QUESTION 3.1.5(a) and calculate the average gradient between **F** and **G** on the topographical map.

Formula:

$$\textbf{Average gradient} = \frac{\textbf{Vertical interval (VI)}}{\textbf{Horizontal equivalent (HE)}}$$

(3 x 1) (3)

(c) Use the answer from QUESTION 3.1.5(b) to indicate the vertical height and the horizontal distance on the sketch below.



(2 x 1) (2)

3.2 MAP INTERPRETATION

3.2.1 Ceres has a Mediterranean climate because of its …



A low summer rainfall.
B high summer rainfall.
C low winter rainfall.
D high winter rainfall. (1 x 1) (1)

3.2.2 The main agricultural product associated with Ceres is …

A livestock.
B fruit.
C maize.
D poultry. (1 x 1) (1)

3.2.3 State TWO physical factors that positively influence agriculture in the Ceres area. (2 x 1) (2)

3.2.4 How has the agricultural sector favoured industrial development in Ceres? (1 x 2) (2)



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Refer to the industrial area labelled **1** in blocks **B5** and **C5** on the orthophoto map and the photograph of the same area below to answer QUESTIONS 3.2.5 to 3.2.8.



[Source: https://ceresfruitjuice.com/za/environment/ceres-fruit-juices]

3.2.5 The industrial area located at **1** on the orthophoto map is (market orientated / raw-material orientated). (1 x 1) (1)

3.2.6 Give ONE reason for your answer to QUESTION 3.2.5. (1 x 2) (2)

3.2.7 Identify ONE type of transport infrastructure that is situated close to the industrial area **1**. (1 x 1) (1)

3.2.8 Explain why it was necessary to locate these industries near the type of transport infrastructure identified in QUESTION 3.2.7. (1 x 2) (2)

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3.3 GEOGRAPHICAL INFORMATION SYSTEMS (GIS)

Refer to the topographical map.

3.3.1 Is the topographical map an example of raster or vector data? (1 x 1) (1)

3.3.2 Give a reason for your answer to QUESTION 3.3.1. (1 x 2) (2)

Refer to the satellite images **A** and **B** of the Ceres valley.

IMAGE A **IMAGE B**



[Source: https://omdena.com/blog/super-resolution]

3.3.3 Define the term *resolution.* (1 x 2) (2)

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

3.3.5 Name ONE factor that can affect the resolution of an image. (1 x 1) (1)

3.3.6 Give ONE advantage of using a higher resolution satellite image. (1 x 1) (1)

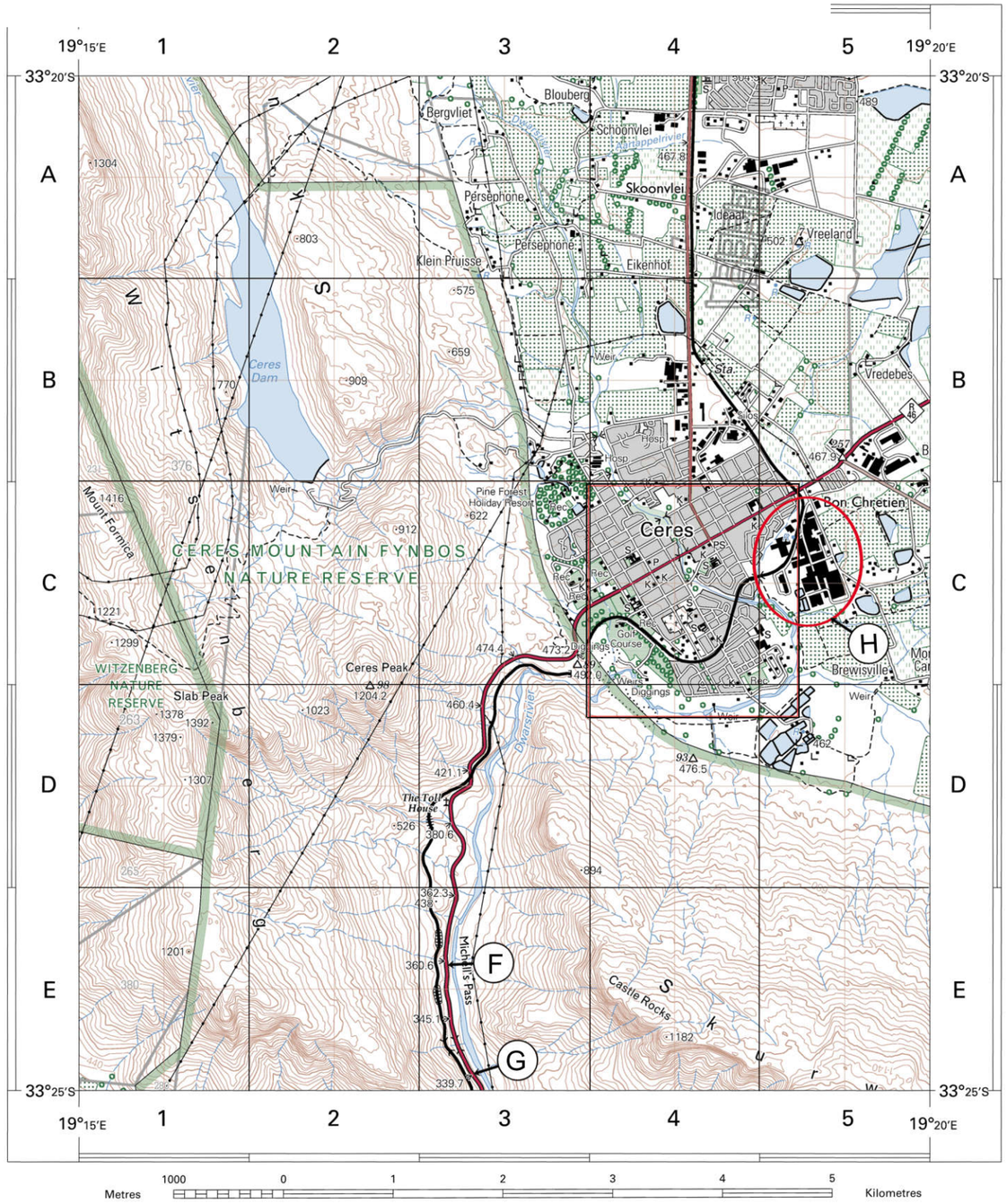
[30]

TOTAL: 150

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EXTRACT FROM 3319AD CERES

1:50 000



Mean magnetic declination 24°38′ West of True North (October 2014).
Mean annual change 5′ westwards (Oct. 2014 - Sept. 2015).

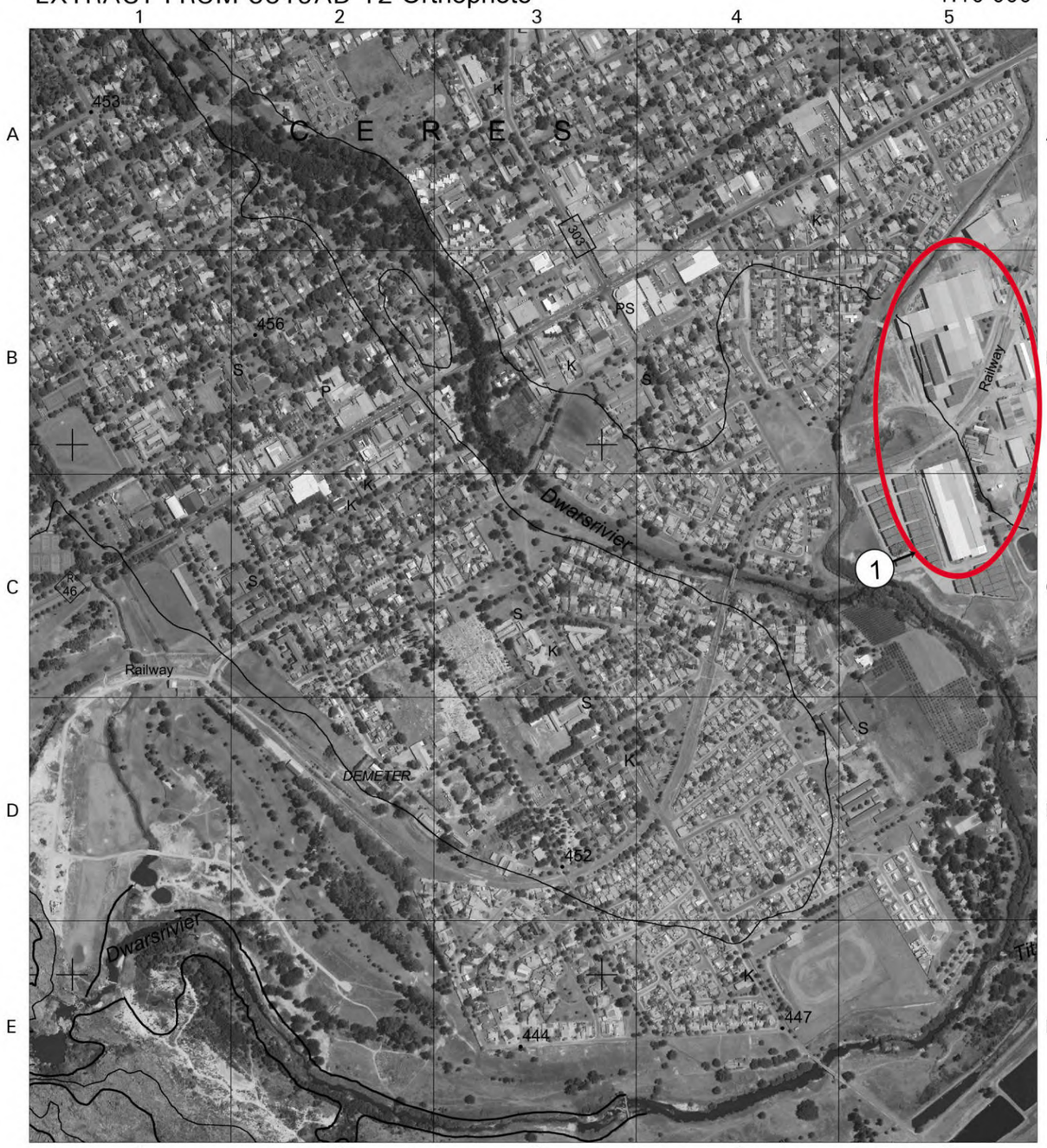
CONTOUR INTERVAL 20 METRES

REFERENCE

- National Freeway; National Route
- Arterial Route
- Main Road
- Secondary Road; Bench Mark
- Other Road; Bridge
- Track and Hiking Trail
- Railway; Station or Siding
- Other Railway; Tunnel
- Embankment; Cutting
- Power Line
- Built-up Area (High, Low Density)
- Buildings; Ruin
- Post Office; Police Station; Store
- Place of Worship; School; Hotel
- International Boundary and Beacon
- Provincial Boundary
- Protected Area
- Perennial River
- Perennial Water
- Non-perennial River
- Non-Perennial Water
- Dry Water Course
- Dry Pan
- Marsh and Vlei
- Pipeline (above ground)
- Water Tower; Reservoir; Water Point
- Coastal Rocks
- Prominent Rock Outcrop
- Fence; Wall
- Windpump; Monument
- Communication Tower
- Mine Dump; Excavation
- Trigonometrical Station; Marine Beacon
- Lighthouse and Marine Light
- Cemetery; Grave
- Erosion; Sand
- Woodland
- Cultivated Land
- Orchard or Vineyard
- Recreation Ground
- Row of Trees
- Original Farms

EXTRACT FROM 3319AD 12 Orthophoto

1:10 000



1:10000 KONTOERTUSSENRUIMTE 5 METER

VERKLARING

- Nasionale Deurpad; Nasionale Roete
- Hoofverkeersroete
- Hoofpad
- Sekondêre Pad; Hoogtemerk
- Ander Pad; Brug
- Dowwe Pad en Voetslaanpad
- Spoorweg; Stasie of Sylyn
- Ander Spoorweg; Tonnel
- Opvulling; Deurgrawing
- Kraglyn
- Beboude Gebied (Hoë, Lae Digtheid)
- Geboue; Murasie
- Poskantoor; Polisiestasie; Winkel
- Plek van Aanbidding; Skool; Hotel
- Internasionale Grens en Baken
- Provinsiale Grens
- Bewarings Gebied
- Standhoudende Rivier
- Standhoudende Water
- Nie-standhoudende Rivier
- Nie-standhoudende Water
- Droë Loop
- Droë Pan
- Moeras en Vlei
- Pyplyn (bo die grond)
- Watertoring; Reservoir; Waterpunt
- Kuslynrotse
- Prominente Klipbank
- Draadheining; Muur
- Windpomp; Monument
- Kommunikasietoring
- Mynhoop; Uitgrawing
- Peilbaken; Seevaartbaken
- Vuurtoring en Seevaartlig
- Begraafplaas; Graf
- Erosie; Sand
- Beboste Gebied
- Bewerkte Land
- Boord of Wingerd
- Ontspanningsterrein
- Rye Bome
- Oorspronklike Plase