LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF
EDUCATION

SEKHUKHUNE
SOUTH DISTRICT

GRADE 11

GEOGRAPHY
Pre-Midyear exam
20 May 2026

Marks : 150
Duration : 3 Hours

This question paper consists of 17 pages including the cover page.

Copyright reserved

INSTRUCTIONS AND INFORMATION

1. This question paper consists of TWO SECTIONS:
   SECTION A:
   QUESTION 1: The Atmosphere (60)
   QUESTION 2: Geomorphology (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 subsections of questions answered.

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

6. Number the answers 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.

10. Units of measurement MUST be indicated in your final answer, e.g. 1 010 hPa, 9 °C and 25 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 topographical map (EXTRACT from 3126DD Queenstown) and 1 **:** 10 000 (EXTRACT from Queenstown ortho-rectified image) an orthophoto map of a part of the mapped area are provided.

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

16. Show ALL calculations. Marks will be allocated for this.

Copyright reserved

SECTION A: CLIMATE AND WEATHER AND GEOMORPHOLOGY

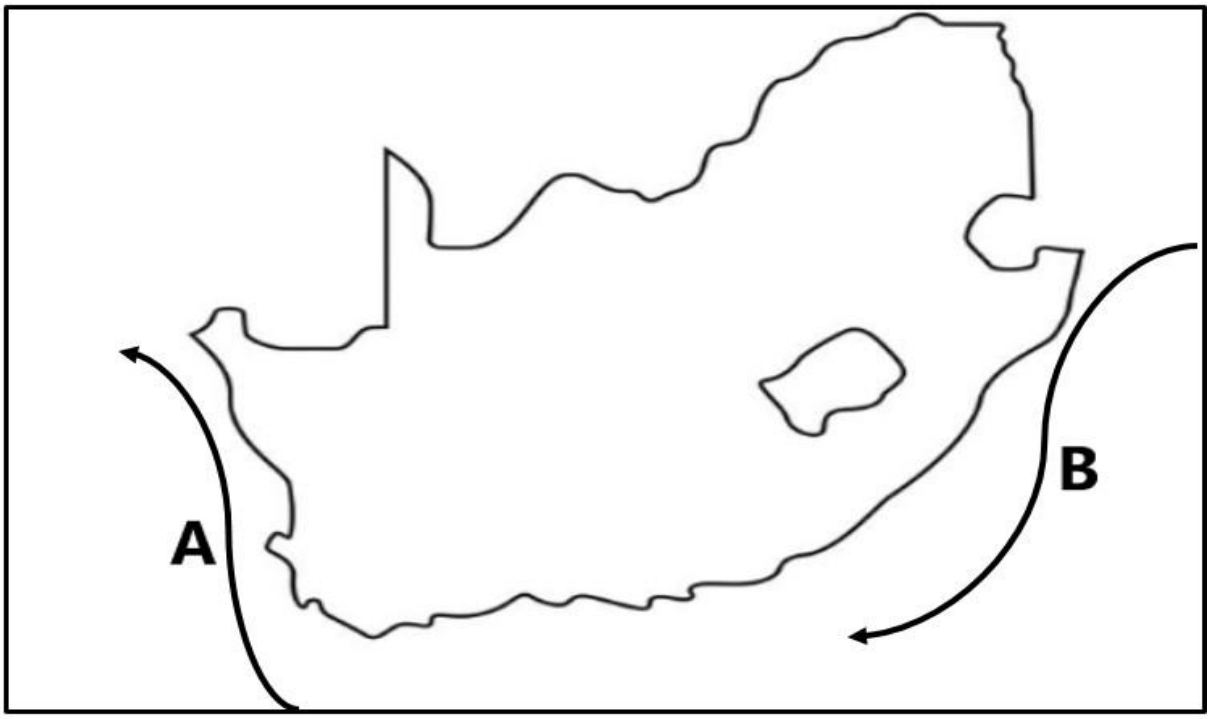
QUESTION 1: THE ATMOSPHERE

1.1 Complete the statements in COLUMN A with the options in COLUMN B. Write only **Y** or **Z** next to the question numbers (1.1.1 to 1.1.8) in the ANSWER BOOK, example 1.1.9 Z.

COLUMN A		COLUMN B	
1.1.1	Incoming solar energy reaching a given area	**Y** **Z**	terrestrial radiation insolation
1.1.2	The manner in which heat is evened out between the polar areas and the equator	**Y** **Z**	albedo energy balance
1.1.3	The earth turns around its imaginary axis once every 24 hours.	**Y** **Z**	rotation revolution
1.1.4	The time of the year when midday sun is directly overhead at one of the tropics	**Y** **Z**	equinox solstice
1.1.5	Circular pattern on a global scale	**Y** **Z**	primary circulation global air circulation
1.1.6	Difference in air pressure causing air to move from high pressure to low pressure	**Y** **Z**	pressure gradient Coriolis force
1.1.7	Zones of high pressure and low pressure areas found at different latitudes	**Y** **Z**	pressure belts polar front
1.1.8	The cell of air circulation that occurs between 30º – 60º North and South	**Y** **Z**	Ferrell cell polar cell

(8 x 1) (8)

1.2 Refer to the sketch below and answer the questions that follow. Choose the answer and write only the letters (A–D) next to the question numbers (1.2.1 to 1.2.7) in the ANSWER BOOK, for example 1.2.8 C.



[Source: Examiner's own sketch]

1.2.1 … are large movements of water that occur in all the oceans of the world.

A Ocean currents
B Tides
C Streams
D Waves

1.2.2 The ocean on the West Coast of South Africa is called the …
A Atlantic Ocean.
B Indian Ocean.
C Pacific Ocean.
D Benguela Ocean.

1.2.3 The exchange of heat between the ocean and the atmosphere mainly occurs through…

A ocean salanity.
B wind and evaporation.
C sea floor spreading.
D tidal action.

1.2.4 The … is the ocean current that flows along **B**.

A Canary Current
B Mozambique Current
C Benguela Current
D Kuroshio Current

1.2.5 The ocean currents play a combined role in redistributing heat energy by …

A increasing temperature.
B decreasing temperature.
C moderating temperatures.
D increasing rainfall.

1.2.6 The cold Benguela Current transfers … air from the poles to the … zone.

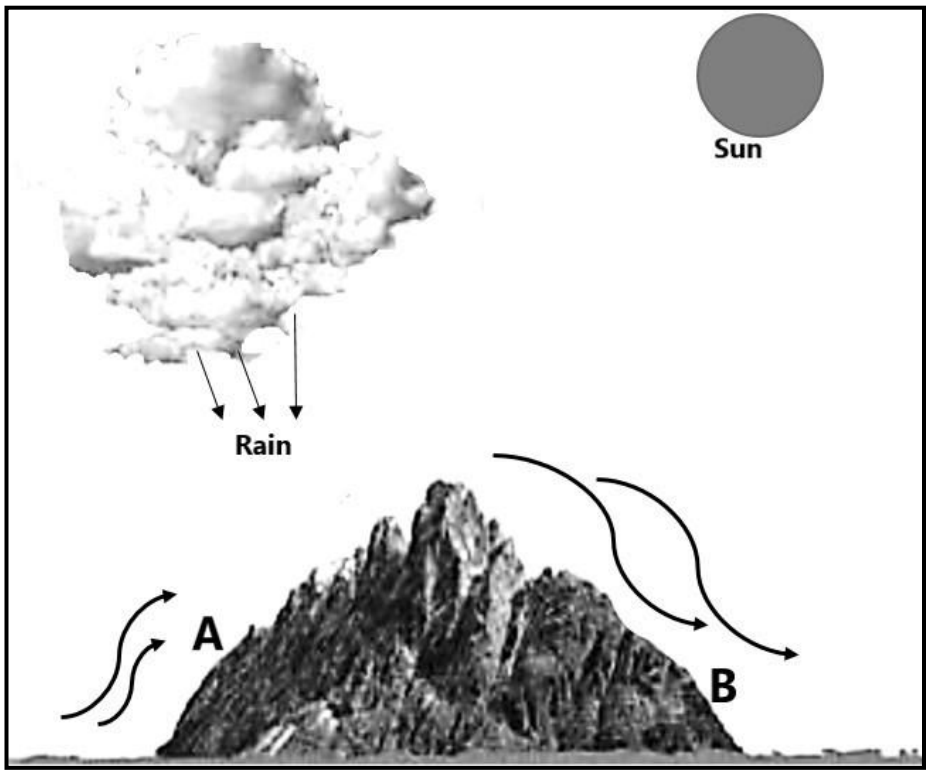
A warm; coastal
B cold; temperate
C warm; desert
D cold; coastal

1.2.7 Warm ocean currents move from the … to the …

A poles; equator.
B west; poles.
C equator; poles.
D east; equator. (7 x 1) (7)

Copyright reserved

1.3 Refer to the sketch below and answer the questions that follow.



[Source: Examiner's own sketch]

1.3.1 Does the wet adiabatic lapse rate occur at **A** or **B**? (1 x 1) (1)

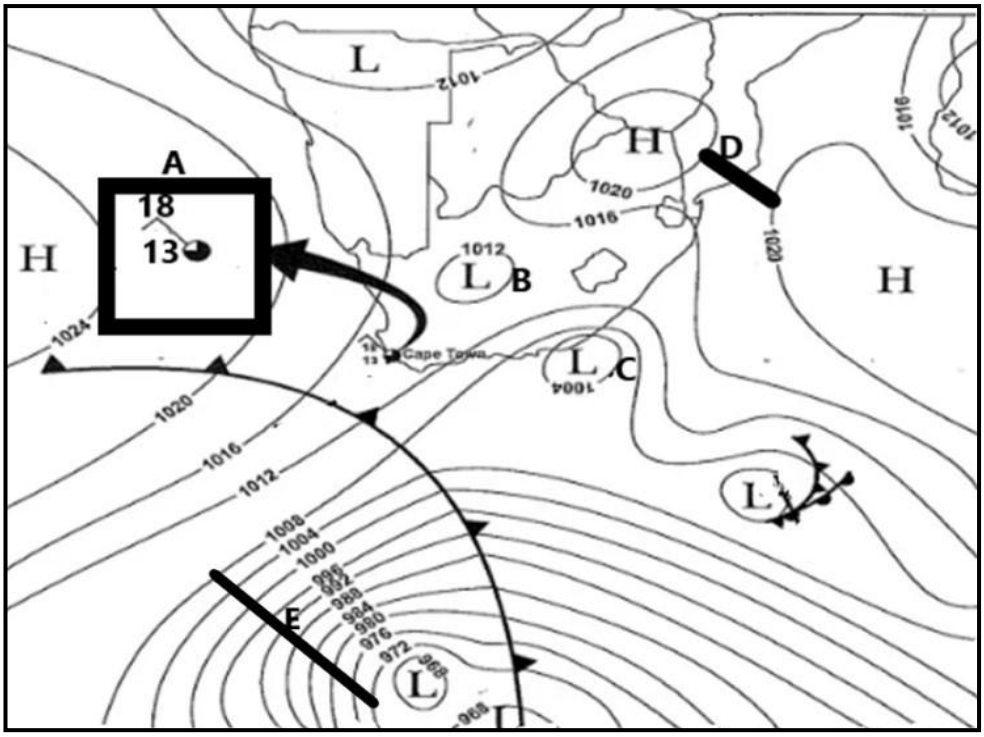
1.3.2 Classify any TWO natural disasters that Föhn winds and other similar kinds of winds can cause. (2 x 1) (2)

1.3.3 Why is the Föhn wind an example of a regional wind? (1 x 2) (2)

1.3.4 Explain why no rain occurs on the leeward side of the mountain. (1 x 2) (2)

1.3.5 Suggest measures to reduce fires caused by Föhn winds. (4 x 2) (8)

1.4 Refer to the synoptic weather map of Southern Africa.



1.4.1 Determine the pressure reading at **B**. (1 x 1) (1)

1.4.2 Provide the term given to area **D** on the map. (1 x 1) (1)

1.4.3 Give evidence from the synoptic weather map to prove that feature **C** is a low-pressure cell. (2 x 1) (2)

1.4.4 The synoptic weather map represents winter. Provide evidence from the map. (2 x 2) (4)

1.4.5 Determine the weather conditions experienced at **A** by focusing on:

(a) Cloud cover

(b) Wind direction

(c) Dew point temperature (3 x 1) (3)

1.4.6 Comment on the pressure gradient at **E** and the resultant wind speed. (2 x 2) (4)

1.5 Read the extract below on the effects of drought and desertification in Harry Gwala District Municipality.

DROUGHT AND DESERTIFICATION

Drought and desertification in the Harry Gwala District Municipality, KwaZuluNatal, impact communities through reduced water availability, diminished crop production and loss of agricultural land. This is leading to food insecurity and potential migration to urban areas. These events also cause increased runaway fires, high erosion and loss of species and habitat.

1.5.1 What is *desertification*? (1 x 2) (2)

1.5.2 Quote, from the extract, environmental impacts caused by the events of drought and desertification. (3 x 1) (3)

1.5.3 Outline the natural causes of desertification. (2 x 2) (4)

1.5.4 Recommend THREE management strategies to reduce desertification. (3 x 2) (6)

[60]

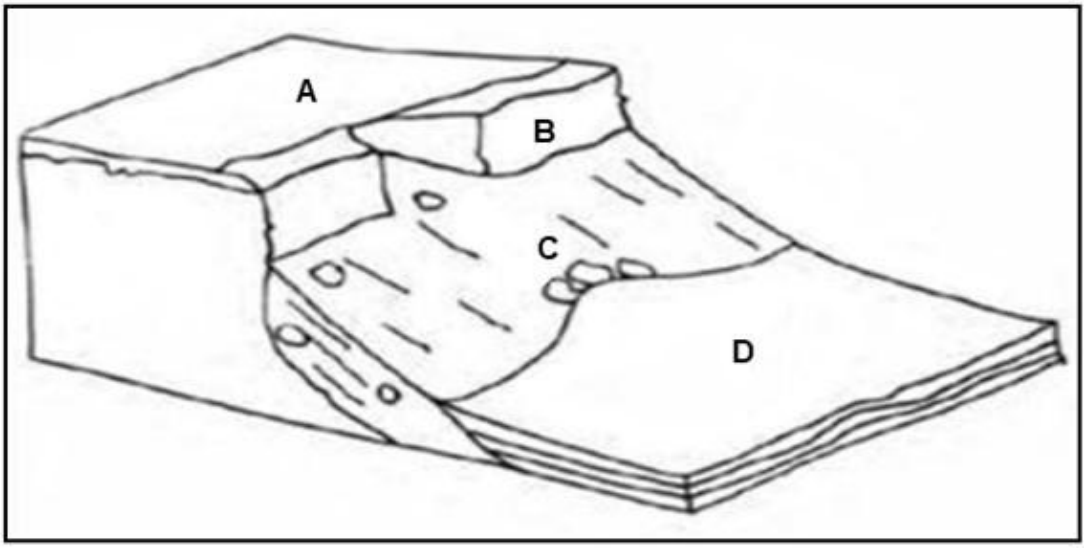
QUESTION 2: GEOMORPHOLOGY

2.1 Complete the statements in COLUMN A with the options in COLUMN B. Write only **Y** or **Z** next to the question numbers (2.1.1 to 2.1.8) in the ANSWER BOOK, for example 2.1.9 Z.

	COLUMN A		COLUMN B
2.1.1	Cuestas is found in topography associated with …	**Y** **Z**	horizontal layers inclined layers
2.1.2	The landform where the layers dip at 25º to 45º	**Y** **Z**	homoclinal ridge hogsback
2.1.3	Breaking down of rocks due to extreme temperatures	**Y** **Z**	mechanical weathering chemical weathering
2.1.4	Top soil becomes saturated and slides on the frozen ground beneath it	**Y** **Z**	solifluction soil creep
2.1.5	The scarp slope faces towards the centre of the dome and the dip slope faces towards the outwards	**Y** **Z**	cuesta basin cuesta dome
2.1.6	Mushroom shaped intrusion of magma	**Y** **Z**	laccolith lopolith
2.1.7	Vertical intrusion along sedimentary rocks	**Y** **Z**	dykes sills
2.1.8	The factor that distinguishes cuestas from homoclinal ridges is the …	**Y** **Z**	angle of the dip slope type of resistant rock

(8 x 1) (8)

2.2 Refer to the sketch below showing slope elements and answer the questions that follow. Write only the letter (A–D) next to the question numbers (2.2.1 to 2.2.7) in the ANSWER BOOK, for example 2.2.8 C.



[Source: lotusarise.com]

2.2.1 Weathered material from the cliff and crest accumulates here.

2.2.2 Also known as the free face.

2.2.3 Covered with sediments from the talus slope.

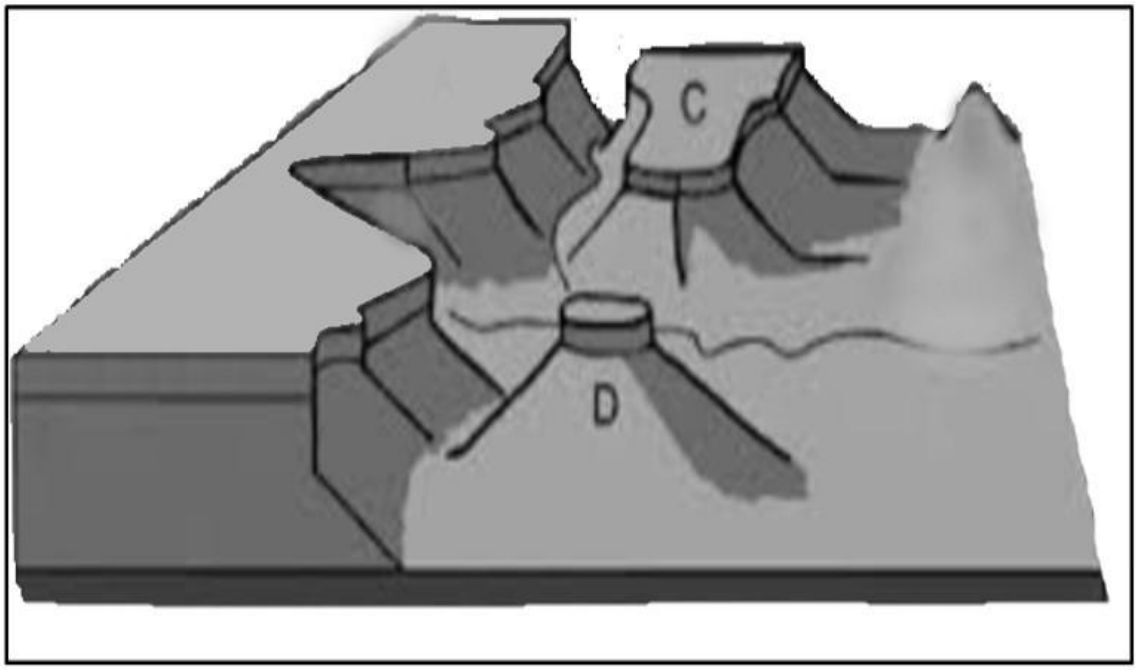
2.2.4 It has a convex slope.

2.2.5 The cliff retreats backward due to erosion.

2.2.6 The dominant geomorphological processes taking place here are weathering and soil creep.

2.2.7 Vegetation grows better on this slope. (7 x 1) (7)

2.3 Refer to the sketch below showing topography associated with horizontally layered rocks.



[Adapted from lotusarise.com]

2.3.1 The process that is responsible for the widening of the valleys is (scarp retreat / tectonic forces). (1 x 1) (1)

2.3.2 Comment on the general climate of this area. (1 x 2) (2)

2.3.3 Identify the landforms labelled **C** and **D**. (2 x 1) (2)

2.3.4 Distinguish between landforms **C** and **D**. (2 x 2) (4)

2.3.5 Briefly discuss the impact of the utilisation of this landscape by humans. (3 x 2) (6)

2.4 Refer to the sketch below showing tors.



[Source: internetgeography.net]

2.4.1 What are *tors*? (1 x 2) (2)

2.4.2 Mention ONE igneous intrusion from which tors develop. (1 x 1) (1)

2.4.3 Describe the characteristics of the rocks mentioned in QUESTION 2.4.2. (2 x 2) (4)

2.4.4 In a paragraph of approximately EIGHT lines, explain how tors develop. (4 x 2) (8)

2.5 Refer to the photograph and extract below showing mass movement.

HEAVY RAINS TRIGGER LANDSLIDES IN PORT ST. JOHNS, EC

FRIDAY 24 MARCH 2023 – 10:30 am



Heavy rainfall in Port St . Johns has recently triggered landslides and widespread flooding, causing significant damage to homes, roads and infrastructure. Mayor Nomvuzo Mlobile Cingo s says she 'is expecting disaster management teams to arrive in the next few hours'. Gift of the Givers has also volunteered to help those affected by floods.

[Adapted from www.enca.com]

2.5.1 What is *mass movement*? (1 x 2) (2)

2.5.2 According to the extract, mention the factor that has triggered mass movement. (1 x 1) (1)

2.5.3 Give evidence from the photograph, that landslides have taken place. (2 x 1) (2)

2.5.4 Explain the negative impact that these landslides have on people. (2 x 2) (4)

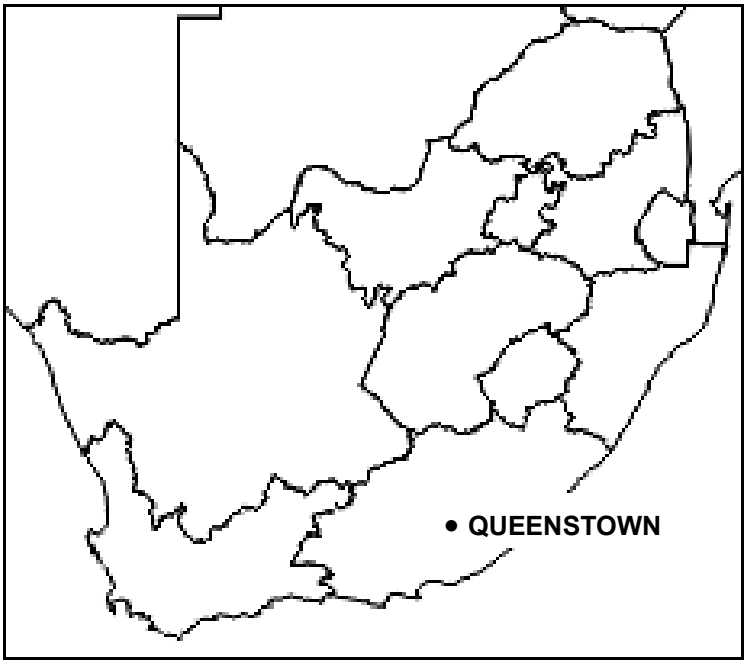
2.5.5 Suggest THREE strategies that can be put in place to minimise the impact of landslides. (3 x 2) (6)

[60]

TOTAL SECTION A: 120

QUESTION 3: GEOGRAPHICAL SKILLS AND TECHNIQUES

GENERAL INFORMATION ON QUEENSTOWN



Coordinates: 31°54'S 26°53'E

Queenstown is a town in the Eastern Cape in South Africa. It lies on the Komani River, which forms part of the Great Kei system of rivers. Queenstown has a refreshing climate and plentiful water supply from the surrounding rugged mountains. The water is collected in the Bonkolo Dam (the name has been changed from Bongolo Dam recently), set in the hills. This dam is used extensively for recreation and water sports. Close to Queenstown is a nature reserve (Lawrence de Lange Nature Reserve) with numerous antelope, white rhinoceros and spectacular flowering plants, together with panoramic views from the mountain summit. Queenstown has rich sandstone layers deposited by meandering rivers on the flood plain. Queenstown's layout reflects its original objective as a defensive stronghold for the frontier area and has a most unusual design. There is a central hexagonal area where canon or rifle fire could be directed down six thoroughfares radiating from the centre.

[Adapted from http://en.wikipedia.org/wiki/Queenstown, Eastern Cape]

3.1. Map-skills and techniques

3.1.1. The length (L) of area of orthophoto map on the topographic map in kilometres is_____

A. 4.2
B. 2100
C. 0.42
D. 2.1 (1x1) (1)

3.1.2. The breadth (B) of area of orthophoto map on the topographic map in metres is_____

A. 3.8
B. 1900
C. 380
D. 1.9 (1x1) (1)

3.1.3. Calculate the average gradient spot height 1558 and 1409 on orthophoto map. Distance between spot height 1558 and 1409 on the orthophoto map is 12.1 cm. (4x1) (4)

3.1.4. Calculate the magnetic declination 3126DD Queenstown topographic map for 2025. Use the information and steps given below:

Difference in years:_____ (1x1) (1)
Mean annual change: 10'westwards
Total change:_____ (1x1) (1)
Magnetic declination for 2026:_____
_____ (2x1) (2)
(10)

3.2. Map interpretation

3.2.1. Refer to I in block A2 on the topographic map.

(a) Identify the environmental problem indicated by Letter **I**. (1x1) (1)
(b) Explain ONE cause of the environmental problem mention in QUESTION 3.2.1 (a). (1x2) (2)

3.2.2. Refer to block D4 on the topographic map.

(a) Is the area receiving seasonal rainfall or rainfall throughout the year? (1x1) (1)
(b) Identify TWO feature to support your answer in QUESTION 3.2.2 (a) (2x1) (2)
(c) State the direction in which the river is flowing. (1x1) (1)
(d) Describe ONE visible reason for your answer to QUESTION 3.2.2 (c). (1x2) (2)

Copyright reserved

3.2.3. Refer to block C2 on the topographic map.

(a) Lack of vegetation on the block can result (mass movement/drought).(1x1) (1)

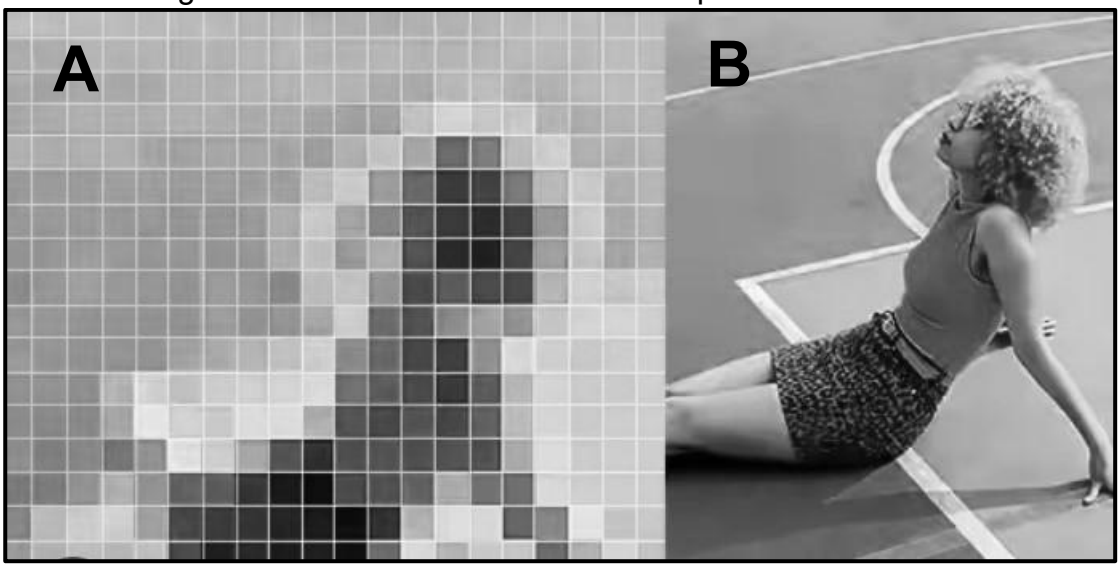
(b) Describe ONE reason why there are no infrastructure in the block. (1x2) (2)

3.3. Geographical information system

3.3.1. The topographic map is an example of_____ data.

A. raster
B. spatial
C. vector
D. attribute (1x1) (1)

Refer to image be on resolution and answer the questions that follows.

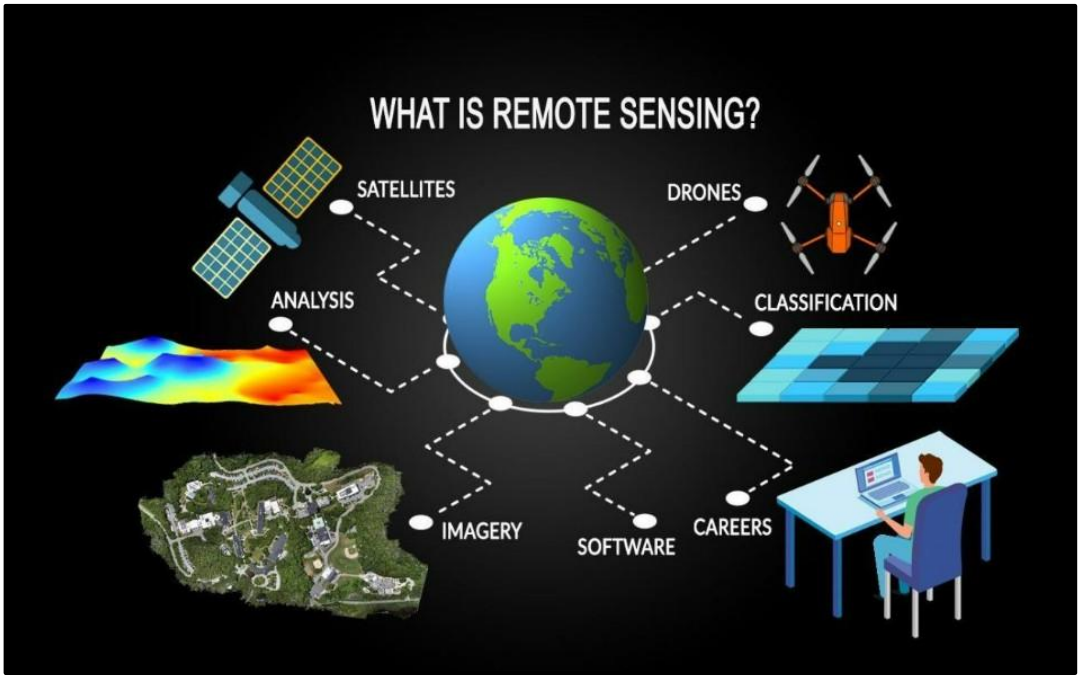


[source: Google images]

3.3.2. Define the term *resolution*. (1x2) (2)

3.3.3. Image **B** was taken by a camera with (more/less) megapixel. (1x1) (1)

3.3.4. Refer to the image below on Remote sensing.



(a) Identify TWO remote sensing devices from the image above that can collect data without being in contact with the surface. (2x1) (2)

(b) Explain ONE advantage of using remote sensing devices mentioned in QUESTION 3.3.4. (a) by the researchers. (1x2) (2)

(8)

TOTAL SECTION B: 30

GRAND TOTAL: 150

Copyright reserved