

# **NATIONAL** SENIOR CERTIFICATE

**GRADE 10** 

**NOVEMBER 2020** 

# **GEOGRAPHY P1** (EXEMPLAR)

MARKS: 150

TIME: 3 hours



This question paper consists of 10 pages.

## INSTRUCTIONS AND INFORMATION

- 1. This question paper consists of THREE questions.
- 2. Answer ALL the questions in this question paper.
- Answer QUESTION 3 (MAPWORK) on the spaces provided in this question paper.

  Detach QUESTION 3 from the question paper and attach it to your ANSWER BOOK.
- 4 Use the following material: An extract from the topographical map 3424BB HUMANSDORP. Orthophoto map 3424 BB 1 HUMANSDORP.
- 5. All diagrams are included in the ADDENDUM.
- 6. Leave a line between subsections of questions answered.
- 7. Start EACH question on a NEW page.
- 8. Number the answers correctly according to the numbering system used in this question paper.
- 9. Number the answers in the centre of the line.
- 10. Do NOT write in the margins of the ANSWER BOOK.
- 11. Draw fully labelled diagrams when instructed to do so.
- 12. Answer in FULL SENTENCES, except where you have to state, name, identify or list.
- 13. Write neatly and legibly.



## **SECTION A: THE ATMOSPHERE**

## **QUESTION 1**

- 1.1 Various options are provided as possible answers to the following questions. Choose the correct answer and write only the letter (A–D) next to the question numbers (1.1.1–1.1.8) in the ANSWER BOOK, for example 1.1.9 D.
  - 1.1.1 A process whereby areas become more arid and drier like a desert, is ...
    - A drought.
    - B desertification.
    - C climate change.
    - D ozone depletion.
  - 1.1.2 The transfer of heat by vertical movement is ...
    - A convection.
    - B conduction.
    - C coriolis force.
    - D latent heat.
  - 1.1.3 Gases in the atmosphere that absorb long-wave radiation and contribute to global warming are known as the ...
    - A radiation gases.
    - B thermosphere.
    - C greenhouse effect.
    - D greenhouse gases.
  - 1.1.4 The layer of atmosphere closest to the earth's surface is the ...
    - A mesosphere.
    - B tropopause.
    - C stratosphere.
    - D troposphere.
  - 1.1.5 Chemicals used in some aerosol sprays, refrigerants, air conditioners and industrial cleaning materials are known as ...
    - A oxygen atoms.
    - B chlorine carbons.
    - C pollutants.
    - D chlorofluorocarbons.
  - 1.1.6 Moisture which falls from the atmosphere onto the earth's surface is ...
    - A thunderstorm.
    - B fog.
    - C precipitation.
    - D rainfall.

- 1.1.7 Ice which collects on plants and the ground surface is ...
  - A frost.
  - B dew.
  - C cirrus.
  - D stratus.
- 1.1.8 A map showing a summary of the weather conditions of a place is ...
  - A meteorology.
  - B weather forecast.
  - C a synoptic weather map.
  - D climatology.

 $(8 \times 1)$  (8)

1.2 Match the terms in COLUMN B with the descriptions in COLUMN A. Write only the correct letter (A–I) next to the corresponding question numbers (1.2.1–1.2.7) in your ANSWER BOOK, for example 1.2.8 K.

	COLUMN A	COLUMN B		
1.2.1	Large, dense, towering clouds that cause thunderstorms	Α	insolation	
1.2.2	The permanent gas that makes up 21% of the atmosphere and is necessary for respiration		terrestrial radiation	
1.2.3	A molecule of three oxygen atoms which absorb ultraviolet rays	С	tropopause	
1.2.4	Incoming solar radiation	D	cumulonimbus clouds	
1.2.5	The heat energy that the earth radiates	Е	scattering	
1.2.6	The upper layer of the troposphere	F	ozone	
1.2.7	Radiation bounces off particles of dust in the atmosphere	G	reflection	
		Н	oxygen	

 $(7 \times 1) (7)$ 

1.3 Refer to FIGURE 1.3 showing the effects of global warming.

1.3.1 Define the term *global warming*.

 $(1 \times 1)$  (1)

1.3.2 Identify TWO effects of global warming in FIGURE 1.3.

 $(2 \times 1)$  (2)

1.3.3 List any TWO gases that contribute to global warming

(2 x 1)

1.3.4 Explain TWO factors that caused the effects identified in QUESTION 1.3.2.

 $(2 \times 2)$  (4)

(2)

1.3.5 Discuss THREE sustainable strategies (ways) to reduce global warming.

(3 x 2) (6)

1.4	1.4 Refer to FIGURE 1.4 showing convectional rainfall and answer the following questions.				
	1,4,1	Con	vectional rainfall is common in (summer/winter).	(1 x 1)	(1)
	1.4.2		type of rainfall is common in the (Western Cape/ Gautengince of South Africa.	g) (1 x 1)	(1)
É	1.4.3	(a)	Name the type of cloud labelled <b>A</b> .	(1 x 1)	(1)
		(b)	Describe TWO weather conditions associated with the tyof cloud mentioned in QUESTION 1.4.3 (a).	/pe (2 x 1)	(2)
	1.4.4	Men	ition TWO benefits of convectional rainfall to livestock farm	ners. (2 x 1)	(2)
	1.4.5		paragraph of approximately EIGHT lines, discuss the negacts of thunderstorms on people and the environment.	gative (4 x 2)	(8)
1.5 Refer to FIGURE 1.5 showing a synoptic weather map and answer questions that follow.					
	1.5.1		es drawn on synoptic weather maps showing places of equesure are (isobars/isohyets).	ual (1 x 1)	(1)
	1.5.2	Iden	tify the following types of pressure at:		
		(a)	A	(1 x 1)	(1)
		(b)	В	(1 x 1)	(1)
	1.5.3	Wha	at is the pressure reading in Cape Town?	(1 x 2)	(2)
	1.5.4	(a)	Is this weather map representative of summer or winter?	(1 x 1)	(1)
		(b)	Give a reason for your answer in QUESTION 1.5.4 (a).	(1 x 2)	(2)
	1.5.5		cribe the weather of Port Elizabeth by copying and comple below:	eting the	
			emperature		
			d direction		
			d speed		
			cipitation ud cover		
		Cioc	du covei	(5 x 1)	(5)
	1.5.6	Dra\ map	w the symbol of thunderstorm represented on a synoptic v o.	veather (1 x 2)	(2) <b>[60]</b>

# **QUESTION 2: GEOMORPHOLOGY**

Α

В

С D Dyke Sill

Batholith

Laccolith

2.1 Various options are provided as possible answers to the following questions.

		correct answer and write only the letter (A–D) next to the question 1.1–2.1.8) in the ANSWER BOOK, for example 2.1.9 D.
2.1.1		study of the earth's physical features and the processes that ned them is
	A B C D	meteorology. climatology. geomorphology. demography.
2.1.2		ushroom–shaped structure which forms when magma forces the lying areas upwards is a
	A B C D	laccolith. batholith. mesa. butte.
2.1.3		theory that the continents were once one landmass but they ed apart over time, is called
	A B C D	maritime drift. continental geomorphology. maritime continental. continental drift.
2.1.4	The	single landmass that existed over millions of years ago is
	A B C D	Australia. Pangaea. Laurasia Africa.
2.1.5	The	outer layer of the earth that consists of solid rocks is/are the
	A B C D	crust. magma. crystals. inner core.
2.1.6	is	s the largest of all igneous intrusions.

	2.1.7	Whice rock	ch of the following are landforms associated with extrusive s?	igneous	
		A B C D	Mesa, butte and conical hill Batholith and laccolith Dyke and mesa Sill and conical hill		
	2.1.8		cycle of rock formation, erosion of rocks, deposition of seformation of new rocks is known as the	ediments	
		A B C D	metamorphic cycle. hydrological cycle. geological cycle. rock cycle.	(8 x 1)	(8)
2.2	Refer to	o FIG	URE 2.2 which shows the structure of an earthquake.		
	2.2.1	The	vibration of the earth's crust is called (earthquake/folding)	). (1 x 1)	(1)
	2.2.2		el the igneous intrusions indicated by letters <b>A</b> , <b>B, C</b> and <b>I</b> s, epicentre, seismic waves and fault line.	<b>)</b> as (4 x 1)	(4)
	2.2.3		earthquake of over 8,0 magnitude on the Richter Scale inc s destruction/more destruction).	licates (1 x 1)	(1)
	2.2.4		eismograph/barometer) is an instrument that measures th nitude of seismic waves.	e (1 x 1)	(1)
2.3	Refer to	o FIG	URE 2.3 showing types of folds and faults.		
	2.3.1	Diffe	erentiate between <i>folding</i> and <i>faulting.</i>	(2 x 1)	(2)
	2.3.2	Write	e down the correct term for each of the following types of	folds.	
		(a)	An upfold	(1 x 1)	(1)
		(b)	A downfold	(1 x 1)	(1)
	2.3.3	Nam	ne the types of faults in the following labels.		
		(a)	x	(1 x 1)	(1)
		(b)	Y	(1 x 1)	(1)
	2.3.4		type of force that resulted in landform ${f X}$ is (compressional ional) force.	l/ (1 x 1)	(1)
	2.3.5	the f	ting resulted in the formation of lakes such as Lake Victor formation of Mount Kilimanjaro. In a paragraph of approxin HT lines, discuss the importance of Lake Victoria and Mou	mately	
			nanjaro to the people of East Africa.	(4 x 2)	(8)

- 2.4 Refer to FIGURE 2.4 detailing different collections of igneous rocks and answer the questions that follow.
  - 2.4.1 Define the term *igneous rock*.  $(1 \times 1)$ (1)
  - Name any THREE types of igneous rocks from FIGURE 2.4. 2.4.2  $(3 \times 1)$ (3)
  - Igneous rocks form from magma. What is magma? 2.4.3  $(1 \times 1)$ (1)
  - 2.4.4 Explain how igneous rocks are formed.  $(2 \times 2)$ (4)
  - Discuss THREE uses of igneous rocks. 2.4.5  $(3 \times 2)$ (6)
- Study the extract in FIGURE 2.5 about tsunamis and answer the questions 2.5 that follow.
  - 2.5.1 State the percentages of the population that lost their lives in:
    - 2004 (a)  $(1 \times 1)$ (1)
    - (b) 2011  $(1 \times 1)$ (1)
  - 2.5.2 List ONE early warning system Japan set up to minimise the impact of tsunamis.  $(1 \times 1)$ (1)
  - Discuss the impact of tsunamis on the people living along the coast 2.5.3 of Indian Ocean.  $(3 \times 2)$ (6)
  - 2.5.4 How would you advise coastal communities to prepare in advance so that they cope during and after a tsunami?  $(3 \times 2)$ (6) [60]

**TOTAL SECTION A:** 60



(1)

### **SECTION B: MAPWORK**

The following questions are based on the 1:50 000 topographical map 3424 BB HUMANSDORP as well as the orthophoto map 3424 BB 1 HUMANSDORP of a part of the mapped area.

## **QUESTION 3**

# 3.1 MAPWORK CALCULATIONS AND TECHNIQUES

- 3.1.1 Choose the correct word/phrase between brackets.
  - (a) The contour interval of the orthophoto map is (20 metres/5 metres).

    (1 x 1) (1)
  - (b) The 1: 50 000 scale of the topographic map is 5 times (larger/smaller) than the 1: 10 000 scale of the orthophoto map.

    (1 x 1)
  - (c) The feature found at grid location 34°04′55″S/24°45′ 57″E is a (dam/trigonometrical beacon). (1 x 1) (1)
- 3.1.2 Refer to the feature numbered **1** on the orthophoto map.

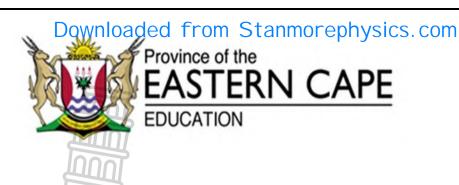
Calculate in km<sup>2</sup>, the area of the feature numbered **1** on the orthophoto map. Show ALL calculations. Marks will be awarded according to your calculations. (4 x 1)

- 3.1.3 Refer to block **A5** on the topographic map.
  - (a) Calculate the difference in height between spot height 209 and trigonometrical beacon number 139. (2 x 1)
  - (b) Is the slope steep or gentle between the two points named in QUESTION 3.1.3 (a)? (1 x 1)

## 3.2 MAP AND PHOTO APPLICATION AND INTERPRETATION

- 3.2.1 Refer to both the topographical and orthophoto map.
  - (a) Identify the human-made feature found between points marked 3 and 4. (1 x 1)
  - (b) Name the river that joins the ocean in block **I6**. (1 x 1) (1)
  - (c) What is the source of the water found in block **B2?** (1 x 1) (1)
- 3.2.2 Study the temperature graph of Jeffreys Bay, FIGURE 3.2.2 together with block **C/D11** on the topographic map.
  - (a) State the month with the minimum temperature.  $(1 \times 1)$  (1)
  - (b) In which month was the lowest monthly temperature range recorded? (1 x 2)

	3.2.3	3.2.3 Describe how excavation in block <b>B6</b> can be harmful to the environment and human activity (2 x 2)						
	3.2.3		eason why the peop ıms in block <b>C3</b> as a			(2)		
3.3	GIS							
T	3.3.1	Write the acronym GIS in full. (1 x 1)						
	3.3.2 Is the orthophoto map an example of a vertical or an oblique photograph? (1 x 1)							
	3.3.3 Refer to block <b>C3</b> on the topographic map. Classify the following features under <b>node</b> (point), <b>linear</b> (line) and <b>polygon</b> (area).							
	Draw the table below in your ANSWER BOOK and mark with an <b>X</b> in the space that corresponds with the feature in block <b>C3</b> .							
		FEATURE	NODE	LINEAR	POLYGON			
		Cultivated land						
		Reservoir						
		Main road						
					(3 x 1)	(3)		
	3.3.4	Study the diagr block <b>D2</b> .	am in FIGURE 3.3.3	that shows data la	yers together with			
		(a) In GIS data	layers are called		(1 x 1)	(1)		
		(b) Explain the	importance of using	GIS in today's fast	t-changing world. (1 x 2)	(2) <b>[30]</b>		
					OTAL SECTION B: GRAND TOTAL:	30 150		



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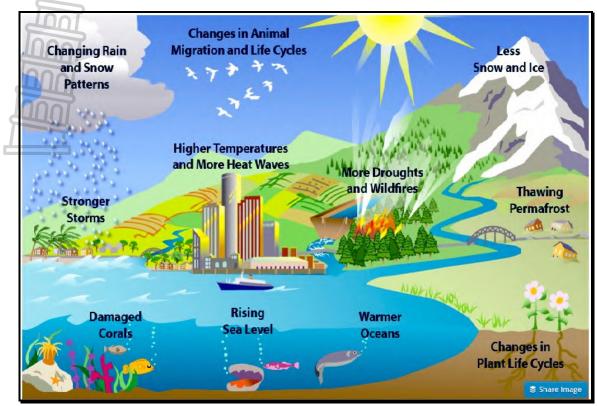
**NOVEMBER 2020** 

GEOGRAPHY P1 ADDENDUM (EXEMPLAR)



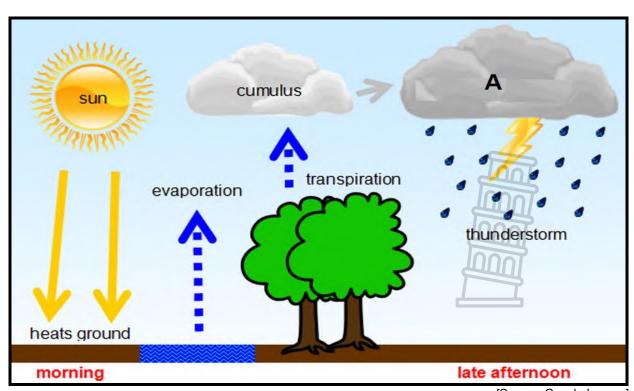
This addendum consists of 7 pages.

FIGURE 1.3: EFFECTS OF GLOBAL WARMING



[Source: Google image]

FIGURE 1.4: CONVECTIONAL RAINFALL



[Source: Google Images]

FIGURE 1.5: SYNOPTIC WEATHER MAP

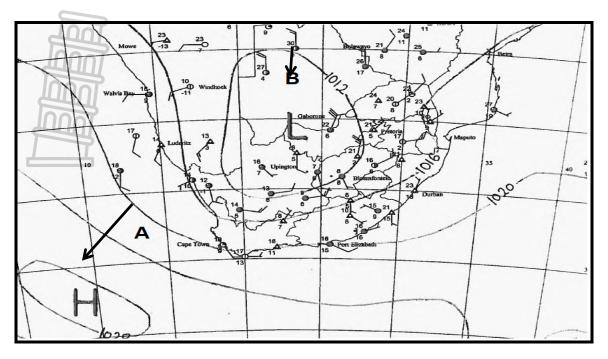
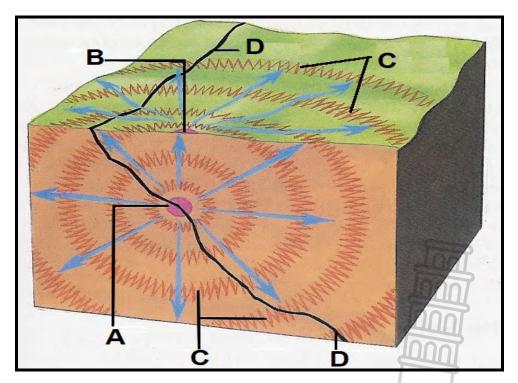
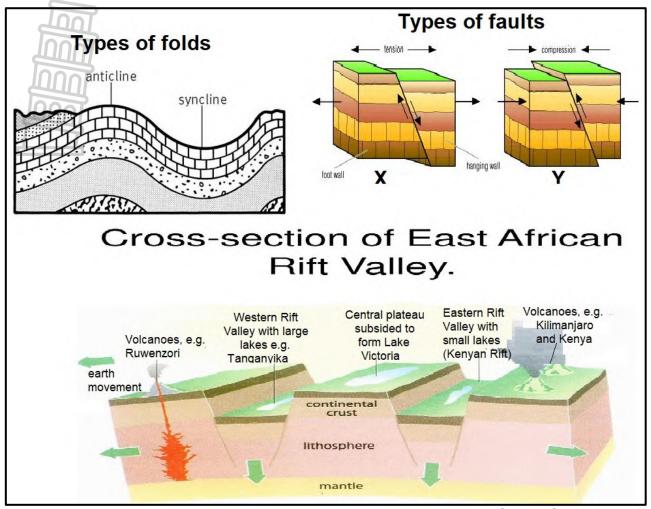


FIGURE 2.2: STRUCTURE OF AN EARTHQUAKE



[Source: Google Images]

FIGURE 2.3: FOLDING AND FAULTING



[Source: Google Images]

FIGURE 2.4: TYPES OF IGNEOUS ROCKS

1	2	3	4	
ANDESITE	BASALT	DIORITE	DOLERITE	GABBRO 10
	The state of the		P.S.	
GRANITE BLACK	GRANITE PHORPHERY	GRANITE RED	GRANITE WHITE	KIMBERLITE
11	12	13	14	15

[Source: Google Images]

# FIGURE 2.5: TSUNAMI WARNING AND MITIGATION FOR THE INDIAN OCEAN REGION



On 26th December 2004, the Indian Ocean was struck by a massive tsunami which killed 230 000 people and caused widespread destruction. Although we cannot prevent tsunamis, early warning of their approach combined with physical defences and well-practised evacuation procedures can save many lives.

Tsunamis can cause flooding and destructions to coastal areas of the world. This can be minimised if there are proper early warning systems in place. For instance, the 2011 Tohoku tsunami severely tested Japan's highly advanced warning system including seawalls and evacuation plans. Tragically 18 000 people lost their lives, totaling 4% of the population located in the coastal area. In comparison, the 2004 Indian Ocean Tsunami resulted in over 20% fatalities in the coastal area. While any fatalities are shocking, it is clear that the destruction in Japan was manageable.

[Source: https://www.preventionweb.net/files/workspace/7935\_casestudy1.pdf}



## FIGURE 3: GENERAL INFORMATION ON HUMANSDORP

Humansdorp is a small town, including the surrounding district, in the Eastern Cape of South Africa, with a population of around 29 000 according to the census of 2011. It is part of the Kouga Local Municipality of the Sarah Baartman District. The town is the centre of the district's light industry and farming. Humansdorp was founded in 1849 and was named after Johannes Jurie Human and Matthys Gerhardus Human. The town's residential streets are lined with trees that were planted before the First World War by the then mayor, Ambrose Saffery. The Apple Express passes through Humansdorp.



FIGURE 3.2.2: TEMPERATURE GRAPH OF JEFFREY'S BAY

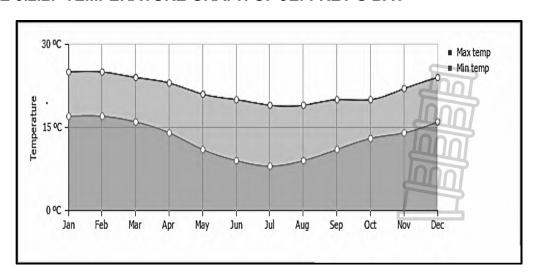
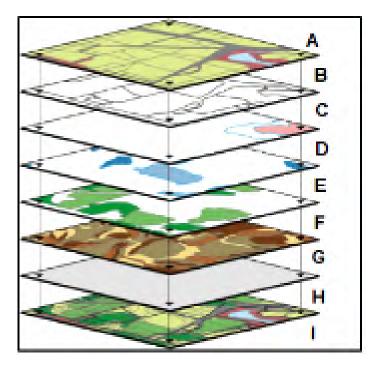


FIGURE 3.3.4: DATA LAYERS





A	Topographic base	
В	Pathway	
С	C Zoning	
D	Floodplains	
E	E Wetlands	
F	Land cover	
G	Soils	
Н	Survey control	
I	Composite overlay	



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# NATIONAL SENIOR CERTIFICATE

**GRADE 10** 

# **NOVEMBER 2020**

# GEOGRAPHY P1 MARKING GUIDELINE (EXEMPLAR)

**MARKS: 150** 



This marking guideline consists of 8 pages.

# SECTION A: CLIMATE, WEATHER AND GEOMORPHOLOGY

## **QUESTION 1**

1.1 1.1.1 A (drought)

> 1.1.2 A (convection)

1.1.3 D (greenhouse gases)

1.1.4 D (troposphere)

1.1.5 D (chlorofluorocarbons)

1.1.6 C (precipitation)

1.1.7 A (frost)

1.1.8 C (synoptic weather map)  $(8 \times 1)$ (8)

1.2 1.2.1 D (Cumulonimbus cloud)

> 1.2.2 H (Oxygen)

1.2.3 F (Ozone)

1.2.4 A (Insolation)

1.2.5 B (Terrestrial radiation)

1.2.6 C (Tropopause)

1.2.7 E (Scattering)  $(7 \times 1)$ (7)

1.3 1.3.1 Global warming is the increase in the average temperature of the earth's atmosphere.

> (Concept)  $(1 \times 1)$ (1)

1.3.2 Changing rain and snow patterns

Changes in animal migration and life cycles

Less snow and ice

Higher temperatures and more heat waves

Stronger storms

More droughts and wildfires

Thawing permafrost

Damaged corals

Rising sea levels

Warmer ocean

(Any 2 x 1) (2)

(2)

1.3.3 Methane

Carbon dioxide

Nitrous oxide

Ozone

Chlorofluorocarbon (Any 2 x 1)

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	1.3.4	Power stations and factories burn fossil fuels Deforestation Livestock especially cattle Aerosols release CFCs and harlocarbons into the atr Waste dumps release methane into the atmosphere Increasing rice production causes the release more re-	·	(4)
	1.3.5	Reduce the overall emissions of greenhouse gases Use solar energy Reduce the emission of methane Promote sustainable forms of agriculture Heavy fines Reduce population numbers Plant more trees to absorb Use public transport Public education	(Any 3 x 2)	(6)
1.4	1.4.1	Summer	(1 x 1)	(1)
	1.4.2	Gauteng	(1 x 1)	(1)
	1.4.3	(a) Cumulonimbus	(1 x 1)	(1)
		(b) Lightning Hailstones Heavy rainfall Thunderstorms Cloudy	(Any 2 x 1)	(2)
	1.4.4	Thunderstorm is accompanied by rainfall There will be enough water for crops and animals There will be enough water for domestic use	(Any 2 x 1)	(2)
	1.4.5	Heavy rainfalls can cause flash floods which may destruction of infrastructure and houses The impact thunderstorms have on people can be e.g. electrocution, shock and even deaths Thunder can destroy the environment It can hurt/scare animals It can burn vegetation		(8)
1.5	1.5.1	Isobar	(1 x 1)	(1)
	1.5.2	(a) A - High Pressure	(1 x 1)	(1)
		(b) B - Low Pressure	(1 x 1)	(1)
	1.5.3	1 020 hPa	(1 x 2)	(2)
	1.5.4	(a) Summer	(1 x 1)	(1)
		(b) Low pressure in the interior High pressure further away from land	(1 x 2)	(2)

 $(1 \times 1)$ 

(1)

1.5.5 Air temperature 16° C Wind direction South West Wind speed 10 knots Precipitation . None Cloud cover Overcast  $(5 \times 1)$ (5) 1.5.6  $(1 \times 2)$ (2) [60]

				[]
QUI	ESTION	2		
2.1	2.1.1	C (geomorphology)		
	2.1.2	A (Laccolith)		
	2.1.3	D (continental drift)		
	2.1.4	B (Pangaea)		
	2.1.5	A (Crust)		
	2.1.6	B (Batholith)		
	2.1.7	A (Mesa, butte and conical hill)		
	2.1.8	A (rock cycle)	(8 x 1)	(8)
2.2	2.2.1	Earthquake	(1 x 1)	(1)
	2.2.2	A – Focus B – Epicentre C – Seismic waves D – Fault line	(4 x 1)	(4)
	2.2.3	more destruction	(1 x 1)	(1)
	2.2.4	Seismograph	(1 x 1)	(1)
2.3	2.3.1	Folding is the bending of rocks into folds due to strocompressional forces from the sides while faulting is which forms in rocks as a result of continuous tension	s a crack	
		compression forces.	(2 x 1)	(2)
	2.3.2	(a) An upfold – anticline	(1 x 1)	(1)
		(b) A downfold – syncline	(1 x 1)	(1)
	2.3.3	(a) X – normal fault	(1 x 1)	(1)
		(b) Y – reverse fault	(1 x 1)	(1)

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2.3.4

Tensional force

# 2.3.5 Importance of Lake Victoria



Provides water for domestic and agricultural purposes Employment and job creation through fishing Food supply, given by the per capita fish quantities as well as the contribution of fish to animal protein at the national level Tourist attraction

## Importance of Mount Kilimanjaro

Generates revenue for the park and the local people

It alleviates poverty

Creation of employment opportunities

It enhances infrastructure to keep up with rising park prices and tourist expectations

# (Any four. Must refer to both Lake Victoria and Mount Kilimanjaro)

 $(4 \times 2)$  (8)

(1)

- 2.4 2.4.1 Rocks which form when magma cools (1 x 1)
  - 2.4.2 Basalt

Dolrite

Granite  $(3 \times 1)$  (3)

2.4.3 Magma – Molten rock  $(1 \times 1)$  (1)

2.4.4 It forms when the release of pressure causes magma to travel up the line of weakness

The magma then solidifies either under or over the earth surface

This becomes intrusive or extrusive igneous rocks (Any 2 x 2) (4)

## 2.4.5 Uses of Igneous rocks

Contains valuable metals such as copper, gold, iron, and manganese

Mining activities can take place to generate income

Serves as building materials

Can be used to make tombstones

(Any 3 x 2) (6)

2.5 2.5.1 (a) 4%

(1 x 1) (1)

(b) 20%

 $(1 \times 1)$  (1)

2.5.2 Physical defenses

Well-practised evacuation procedures

(Any 1 x 1) (1)

2.5.3 Damage to infrastructure

Loss of lives

Injury to people

Buildings destroyed

Destroys farmlands

Destroys the natural environment

Objects swallowed by earth

(Any 3 x 2) (6)

Provide them with shelter

Provide them with food

Doctors and social workers must be sent there to treat those who

were injured

Firefighters must be sent to Nepal

Give them money to start their lives

Provide them with clean water

(6)[60]

**TOTAL SECTION A:** 120

(Any 3 x 2)



(2)

### **SECTION B**

# **QUESTION 3**

# 3.1 MAPWORK CALCULATIONS AND TECHNIQUES

3.1.1 (a) 5 metres (1 x 1) (1)

(b) 5 times smaller (1 x 1) (1)

(c) Dam  $(1 \times 1)$  (1)

3.1.2 Area = length (L) x breadth (B)

= 1.2 cm x 0.8 cm

 $= (1.2 \text{ cm} / 10) \times (0.8 / 10)$ 

= 0.12 km x 0.08 km

 $= 0,0096 \text{ km}^2 \tag{4 x 1}$ 

3.1.3 (a) Difference in height = 209 m - 207.3 m= 1.7 m (2 x 1)

(b) Gentle (1 x 1) (1)

## 3.2 MAP AND PHOTO APPLICATION AND INTERPRETATION

3.2.1 (a) Road/ Railway (1 x 1) (1)

(b) Kromriver  $(1 \times 1)$  (1)

(c) Reservoir (1 x 1) (1)

3.2.2 (a) July (1)

(b) October (1 x 2) (2)

3.2.3 - The landscape loses shape

- It leads to land degradation /desertification

- Top soil/fertile soil with nutrients is lost

- Land loses importance for cultivation

- Plant and animal species lost by clearing vegetation

- It facilitates soil erosion

 $(Any TWO) (2 \times 2) (4)$ 

3.2.4 - Dam water can overspread causing flood into the settlement

- They are located on a lower ground
- Mosquitos in summer cause malaria (disease)
- Unclean water especially in dry seasons cause cholera

(Any ONE)  $(1 \times 2)$ (2)

Geographical Information System 3.3.1  $(1 \times 1)$ (1)

3.3.2 Oblique photograph  $(1 \times 1)$ (1)

3.3.3	FEATURE	NODE	LINEAR	POLYGON
	Cultivated land			X
	Reservoir	x		
	Main road		x	

 $(3 \times 1)$ (3)

(1)

3.3.4 (a) Data layering  $(1 \times 1)$ 

(b) - Computers are faster

- More information is coming into the world

- GIS can be used in daily lives (Any ONE)  $(1 \times 2)$ (2)[30]

> **TOTAL SECTION B:** 30 **GRAND TOTAL:** 150

