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GRADE 11

NOVEMBER 2018

GEOGRAPHY P1

MARKS: 225

TIME: 3 hours



This question paper consists of 15 pages.

INSTRUCTIONS AND INFORMATION

1. This question paper consists of FOUR questions.
2. Answer any THREE questions of 75 marks each.
3. All diagrams/sources are included in the ANNEXURE.
4. Number the answers correctly according to the numbering system used in this question paper.
5. Leave a line between subsections of questions answered.
6. Start EACH question on a NEW page.
7. Do NOT write in the margins of the ANSWER BOOK.
8. Illustrate your answers with labelled diagrams, when asked to do so.
9. Mark allocation is as follows: (2 x 1) (2) means that TWO facts are required for ONE mark each
(2 x 2) (4) means that TWO facts are required for TWO marks each
10. If words/action verbs like **Name, Identify, Provide, Classify** are used in a question, ONE-word answers are acceptable.
If words/action verbs like **Discuss, Define, Explain, Comment, Evaluate, Justify, Suggest** and **Substantiate** are used in a question, FULL sentences or phrases are required.
All paragraph questions must be answered in FULL sentences.
11. Write neatly and legibly.

SECTION A: THE ATMOSPHERE AND GEOMORPHOLOGY**QUESTION 1**

- 1.1 Choose the correct term in COLUMN B that matches the description in COLUMN A. Write the letter (A–H) next to the question number (1.1.1–1.1.8) in your ANSWER BOOK, for example 1.1.9 J.

COLUMN A		COLUMN B	
1.1.1	Winds that form in the mid-latitude / Ferrel Cell	A	Air pressure gradient
1.1.2	Vertical loss of heat	B	Adiabatic / lapse rate
1.1.3	Convergence zone of north-eastern and south-eastern trade winds	C	Air mass
1.1.4	The force which develops due to differences in air pressure	D	Earth's radiation
1.1.5	Very strong winds blowing 10 km above the earth's surface	E	ITCZ
1.1.6	Decrease in temperature caused by a change in air pressure	F	Westerlies
1.1.7	The zone where westerly winds and polar easterlies meet	G	Solar radiation
1.1.8	Large body of air with uniform properties	H	Jet stream
		I	Polar front

(8 x 1) (8)

- 1.2 Choose the correct term in brackets to make the statements in QUESTION 1.2.1–1.2.7 true. Write the correct word next to the question number, for example 1.2.8 ITCZ.

When 1.2.1 (**lava/magma**) is set under the earth's surface, an 1.2.2 (**intrusive/extrusive**) landform is formed. The 1.2.3 (**largest/smallest**) of this type of landform is the batholith. The 1.2.4 (**lopolith/laccolith**) is a bowl-shaped landform and is linked to the magma chamber through a 1.2.5 (**pipe/plate**). A granite dome, like the Paarl mountains, formed because of weathering of a 1.2.6 (**lopolith/laccolith**) or a 1.2.7 (**dyke/batholith**).

(7 x 1) (7)

- 1.3 Refer to FIGURE 1.3, illustrating the movement of the warm and cold ocean currents.
- 1.3.1 What is an *ocean current*? (1 x 1) (1)
- 1.3.2 Coriolis force is one reason for the development of ocean currents. Provide TWO other reasons. (2 x 1) (2)
- 1.3.3 How does Coriolis force influence the movement of ocean currents? (1 x 2) (2)
- 1.3.4 Explain how current **A** will influence the weather of the nearby eastern coastal regions of Africa. (2 x 2) (4)
- 1.3.5 Refer to the movement of the warm and cold currents.
- (a) What is the climatological importance of this movement of the warm and cold currents? (1 x 2) (2)
- (b) Explain how this circular movement of the warm and cold currents stays connected. (2 x 2) (4)
- 1.4 Study FIGURE 1.4, showing the development of a geostrophic wind.
- 1.4.1 Name the force that is caused by the rotation of the earth. (1 x 1) (1)
- 1.4.2 Why is the initial movement of air in a northerly direction? (1 x 1) (1)
- 1.4.3 Provide the wind direction at **A**. (1 x 1) (1)
- 1.4.4 In which hemisphere is this geostrophic wind developing? Provide a reason for your answer. (1 + 1) (2)
- 1.4.5 The wind at **B** is geostrophic. Substantiate this statement. (1 x 2) (2)
- 1.4.6 In a paragraph of approximately EIGHT lines, explain how the geostrophic wind develops. (4 x 2) (8)

1.5 Study the horizontally layered rocks in FIGURE 1.5.

- 1.5.1 Name the type of horizontally layered landscapes **A** and **B**. (1 x 1) (1)
- 1.5.2 What type of weathering (chemical or mechanical) dominates at landscape **A**? (1 x 1) (1)
- 1.5.3 Explain your choice in QUESTION 1.5.2, by referring to the information in the photo. (2 x 2) (4)
- 1.5.4 In which landscape will headward erosion dominate? Motivate your choice. (2 + 2) (4)
- 1.5.5 Explain the suitability (appropriateness) of landscapes **A** and **B** for farming. (2 x 2) (4)

1.6 FIGURE 1.6 is based on the development of tors over time.

- 1.6.1 What are *tors*? (1 x 1) (1)
- 1.6.2 Name the massive igneous rock from which tors develop. (1 x 1) (1)
- 1.6.3 Describe the appearance of the present-day core stones of the tors. (1 x 2) (2)
- 1.6.4 Why is it possible for the core stones to remain in place although they seem very loose? (2 x 2) (4)
- 1.6.5 Outline the development of tors in a paragraph of approximately EIGHT lines. (4 x 2) (8)

[75]

QUESTION 2

2.1 FIGURE 2.1 illustrates GLOBAL AIR CIRCULATION. Answer the following questions by providing the correct term/concept for the descriptive phrase (2.1.1–2.1.7) below, for example 2.1.8 Polar.

2.1.1 The area at **A** where maximum heating occurs.

2.1.2 The type of air pressure (high pressure or low pressure) that will be associated with descending air at **B**.

2.1.3 The pressure belt that can be found on the surface at **B**.

2.1.4 A weather system that forms at **C**, where the westerly winds and polar easterlies meet.

2.1.5 The type of air movement that usually occurs in the upper atmosphere at **A**.

2.1.6 The name of the cell at **E**.

2.1.7 Name the cell at **D**. (7 x 1) (7)

2.2 Choose the correct type of mass movement that matches the description below. A type of mass movement can be given more than once. Write ONLY the correct type of mass movement next to the question number (2.2.1–2.2.8).

Rockfalls; Landslides; Soil creep; Solifluction; Mudflow

2.2.1 When a mass of loose rock, soil and other debris moves down a slope as a single unit

2.2.2 It occurs as particles of soil and rock expand and contract

2.2.3 This type of mass movement generally occurs at the scarp slope

2.2.4 A rapid flow of mixture of rock or soil material and water

2.2.5 This is the quickest type of mass movement

2.2.6 The mass movement that is common in arid and semi-arid regions and covers large distances

2.2.7 It takes place where waterlogged soil moves slowly down frozen material

2.2.8 Evidence of this type of mass movement is bulging in the soil and tilted poles (8 x 1) (8)

2.3 Refer to the synoptic weather map FIGURE 2.3.

2.3.1 What is a *synoptic weather map*? (1 x 1) (1)

2.3.2 Provide the pressure in hectopascals at isobar **A**. (1 x 1) (1)

2.3.3 The season depicted by the synoptic weather map is summer. Provide TWO pieces of evidence from the synoptic weather map to substantiate this statement. (2 x 1) (2)

2.3.4 Name the high pressure cell **B**. (1 x 1) (1)

2.3.5 Explain how the ITCZ has influenced the position of high pressure cell **B**. (1 x 2) (2)

2.3.6 Refer to the weather stations encircled at **C**.

(a) What is the wind direction at these weather stations? (1 x 1) (1)

(b) Evaluate the influence of the low pressure, over the interior, on the wind direction of the weather stations. (1 x 2) (2)

2.3.7 Redraw the weather station of Upington (enlarged) and effect the following changes:

- i. The temperature increased with 4°C
 - ii. Cloud cover decreased with $\frac{2}{8}$
 - iii. Wind speed increased with 10 knots
 - iv. The wind changes to a westerly wind
- (4 x 1) (4)

2.4 FIGURE 2.4 depicts different types of drought.

2.4.1 Define the term *drought*. (1 x 1) (1)

2.4.2 Classify the types of drought at **A**, **B** and **C**. (3 x 1) (3)

2.4.3 Evaluate the relationship between the types of drought at **B** and **C**. (2 x 2) (4)

2.4.4 In a paragraph of approximately EIGHT lines, explain the social impact that drought will have on farming communities. (4 x 2) (8)

- 2.5 Refer to FIGURE 2.5, showing landforms that formed because of inclined/tilted strata.
- 2.5.1 Differentiate between the dip slope of a homoclinal ridge and a cuesta. (2 x 1) (2)
- 2.5.2 Did the landforms in the sketches of FIGURE 2.5, develop because of igneous or sedimentary rocks? (1 x 1) (1)
- 2.5.3 Name the tectonic process that may have caused these landforms to be tilted. (1 x 1) (1)
- 2.5.4 Refer to the dip slope and scarp slope in landforms **A** and **B**.
- (a) Describe the difference between the *dip slope* and *scarp slope*. (1 x 2) (2)
- (b) Comment on the fact that erosion is faster at the scarp slope than at the dip slope. (2 x 2) (4)
- 2.5.5 Why is it difficult to farm in tilted/inclined landscapes? (2 x 2) (4)
- 2.6 Study FIGURE 2.6, which represents slopes in a semi-arid region.
- 2.6.1 Classify slopes **A** and **B** according to their shape. (2 x 1) (2)
- 2.6.2 Explain why vegetation growth is nearly impossible at slope element **C**. (1 x 2) (2)
- 2.6.3 Refer to the slope retreat processes.
- (a) What is *slope retreat*? (1 x 1) (1)
- (b) Which ONE of the slope theories will occur in the area illustrated by the sketch? (1 x 1) (1)
- (c) Explain your choice in QUESTION 2.6.3 (b). (1 x 2) (2)
- 2.6.4 In a paragraph of approximately EIGHT lines, distinguish between the main characteristics of slope elements **C** and **D** respectively. (4 x 2) (8)
- [75]**

SECTION B: DEVELOPMENT AND RESOURCES**QUESTION 3**

3.1 Various options are provided as possible answers to the following questions. Choose the correct answer and write the letter (A–D) next to the question number (3.1.1–3.1.7) down, for example 3.1.8 D.

- 3.1.1 The use of resources and technology to improve the quality of life and standard of living in a country is called ...
- A sustainable development.
 - B development.
 - C infrastructure.
 - D responsible development.
- 3.1.2 ... is an example of one aspect of the HDI (Human Development Index).
- A Birth rate, mortality rate and infant death rate
 - B Level of Education and literacy rate
 - C Gross National Product and Gross Domestic Product
 - D Food and nutrition
- 3.1.3 The development model that was developed by Friedman in 1966, is the ...
- A Core and periphery model.
 - B Sustainable development model.
 - C Model of economic growth.
 - D HDI model.
- 3.1.4 ... economic activities contribute the least to the GDP in a developed country.
- A Tertiary
 - B Primary
 - C Secondary
 - D Quaternary
- 3.1.5 South Africa is a part of the ... trade bloc.
- A BRICS
 - B ASEAN
 - C OPEC
 - D NAFTA

3.1.6 Unlimited trade of goods and services between countries without the constraints of tariffs and quotas, is called ...

- A fair trade.
- B subsidy.
- C barriers to trade.
- D free trade.

3.1.7 A type of development aid where MEDCs only help people in distress is known as ...

- A conditional aid.
- B technical assistance.
- C bilateral aid.
- D humanitarian aid.

(7 x 1) (7)

3.2 Choose the correct term/phrase that matches the description below. Write the correct term/phrase next to the question number (3.2.1–3.2.8).

Acid rain; A-horizon; Natural resources; Biota; Humus; Thermal electricity; Hydro-electricity; Carbon walk; Greenhouse gases; Green economy; Sustainable development

3.2.1 Valuable materials/sources such as oil, coal and wood found in nature

3.2.2 The organic matter in soil which consists of the remains of plants and animals

3.2.3 Aims at reducing environmental damage

3.2.4 Energy produced by running water

3.2.5 To avoid the depletion of natural resources for use by future generations

3.2.6 The type of precipitation that occurs in environments with excessive air pollution

3.2.7 Gases that contain carbon dioxide and pollute the atmosphere

3.2.8 Living organisms like plants, animals, insects, etc. (8 x 1) (8)

3.3 FIGURE 3.3 illustrates the economic north/south divide.

3.3.1 Name the continents **A** and **B** illustrated in the cartoon. (2 x 1) (2)

3.3.2 Name ONE historical factor that may have caused the illustrated relationship between the continents. (1 x 1) (1)

3.3.3 Refer to the movement of commodities (raw materials and manufactured goods) between continents **A** and **B**.

(a) Which of the continents (**A** or **B**) in the cartoon is more developed? (1 x 1) (1)

(b) Explain TWO reasons for your answer to QUESTION 3.3.3 (a). (2 x 2) (4)

(c) Discuss how the illustrated movement of commodities will negatively influence continent **A**. (3 x 2) (6)

3.4 Refer to FIGURE 3.4 depicting the impact of globalisation.

3.4.1 What is *globalisation*? (1 x 1) (1)

3.4.2 Explain why the worker does not seem very happy to be 'helped' by the USA. (1 x 2) (2)

3.4.3 Why do you think China is portrayed (showed) as the smallest in the cartoon? (1 x 2) (2)

3.4.4 Refer to the characters representing multinationals and local governments.

(a) What are *multinationals*? (1 x 1) (1)

(b) Explain why multinationals and local governments seem to be very good friends. (1 x 2) (2)

3.4.5 In a paragraph of approximately EIGHT lines, comment on the social impact of globalisation on developing countries. (4 x 2) (8)

3.5 Read the extract in FIGURE 3.5, about the Swiss' vote against nuclear power.

3.5.1 Name the difference between *renewable* and *non-renewable energy sources*. (2 x 1) (2)

3.5.2 State ANY TWO renewable electricity provision resources mentioned in the CASE STUDY that can be used as an alternative to nuclear power. (2 x 1) (2)

3.5.3 The Swiss government wants nuclear power phased out. Give TWO reasons for this decision. (2 x 1) (2)

3.5.4 Discuss TWO negative effects of nuclear power that will support this decision of the Swiss government as mentioned in QUESTION 3.5.3. (2 x 2) (4)

3.5.5 If the Swiss government closes the five nuclear power stations, explain TWO negative impacts it could have on the Swiss economy. (2 x 2) (4)

3.6 Study the information in FIGURE 3.6 about soil as a non-renewable resource.

3.6.1 Name any ONE component of soil. (1 x 1) (1)

3.6.2 What is the biggest challenge facing soil as a resource by 2050? (1 x 1) (1)

3.6.3 Mention how this challenge (answer to QUESTION 3.6.2) will impact on soil resources. (2 x 1) (2)

3.6.4 From the information in FIGURE 3.6, provide TWO effects of moderate to highly degraded soil. (2 x 1) (2)

3.6.5 Refer to sustainable soil management.

(a) What is the ultimate positive effect of sustainable soil management? (1 x 2) (2)

(b) In a paragraph of approximately EIGHT lines, explain how 'keeping soil vegetated' and 'promoting crop rotation' as sustainable soil management processes, will help to save soil. (4 x 2) (8)

[75]

QUESTION 4

- 4.1 Choose the correct term in COLUMN B that matches the description in COLUMN A. Write the letter (A–I) next to the question number (4.1.1–4.1.8) in your ANSWER BOOK, for example 4.1.9 J.

COLUMN A	COLUMN B
4.1.1 Allowing more freedom of trade	A Terms of trade
4.1.2 The relationship between the prices a country sells its exports for and the prices it pays for its imports	B Balance of trade
4.1.3 Tax collected by government on goods coming into a country	C Protectionism
4.1.4 A financial summary of all payments made by a country to the rest of the world	D Liberation of trade
4.1.5 The relationship between the value of a country's exports and its imports	E Balance of payment
4.1.6 An official ban on trade or other commercial activity with a country	F Trade bloc
4.1.7 A control that restricts, restrains or supports trade to look after the interests of a country	G Embargo
4.1.8 The group of countries that have agreed to trade with one another	H Free trade
	I Tariff

(8 x 1) (8)

- 4.2 Choose the correct term/word in brackets that will make each of the following statements TRUE.

4.2.1 The factors caused by the work of plants, animals and humans are known as (biotic / abiotic) factors.

4.2.2 (Deforestation / Afforestation) is planting trees on land that was previously wooded but has been cleared.

4.2.3 To keep areas of the earth in their present condition, untouched by humans, is known as (conservation / preservation).

4.2.4 The (Kyoto Protocol / Montreal Protocol) signed in 2002 requires countries to reduce greenhouse gas emissions.

4.2.5 Wind power is (reliable / unreliable) throughout the year.

4.2.6 Hydro-electricity is a (conventional / non-conventional) source of energy.

4.2.7 The power utility (Eskom / Koeberg) produces most of the energy for the people of South Africa.

(7 x 1) (7)

4.3 Use the information in FIGURE 4.3 about gender equality.

- 4.3.1 What is *gender equality*? (1 x 1) (1)
- 4.3.2 Provide TWO pieces of evidence from the data which indicate that women are being financially disadvantaged. (2 x 1) (2)
- 4.3.3 Explain the impact of your answer to QUESTION 4.3.2 on female headed households. (2 x 2) (4)
- 4.3.4 In a paragraph of approximately EIGHT lines, outline the positive economic effects of the increase of women on the boards of companies. (4 x 2) (8)

4.4 Read the extract about export-led development in developing countries.

- 4.4.1 Define the term *export-led development*. (1 x 1) (1)
- 4.4.2 Name ONE incentive that government can give industries to produce an export-led commodity. (1 x 1) (1)
- 4.4.3 What is the main aim of implementing an export-led growth strategy, according to the article? (1 x 1) (1)
- 4.4.4 Beside the main aim of export-led growth, mentioned in QUESTION 4.4.3, explain TWO reasons why export-led growth is important for developing countries. (2 x 2) (4)
- 4.4.5 Evaluate how manufactured goods can be a disadvantage to developing countries. (2 x 2) (4)
- 4.4.6 Comment on the importance of earning foreign exchange from export-led commodities. (2 x 2) (4)

4.5 Study FIGURE 4.5, which illustrates ways in which the carbon footprint can be reduced.

- 4.5.1 What is a *carbon footprint*? (1 x 1) (1)
- 4.5.2 Name TWO sources of CO₂ emissions from the sketch. (2 x 1) (2)
- 4.5.3 Explain TWO ways in which households can reduce their electricity use and thus reduce their carbon footprint. (2 x 2) (4)

4.5.4 Refer to recycling as a way of reducing the carbon footprint.

(a) What is *recycling*? (1 x 1) (1)

(b) Comment on the fact that recycling saves resources and energy. (3 x 2) (6)

4.6 The statistics in FIGURE 4.6 show the electricity produced in South Africa from 2005 to 2014.

4.6.1 What is a *conventional energy source*? (1 x 1) (1)

4.6.2 Who produced the most energy in 2014 in South Africa? (1 x 1) (1)

4.6.3 How much gigawatt energy was produced in 2014? (1 x 1) (1)

4.6.4 Which years produced the least and most energy respectively? (2 x 1) (2)

4.6.5 State THREE conventional sources of energy that are used for the generation of energy. (3 x 1) (3)

4.6.6 Discuss, in a paragraph of EIGHT lines, the negative impact of conventional energy sources on the environment. (4 x 2) (8)

[75]

GRAND TOTAL: 225