basic education

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GEOGRAPHY P1

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GEOGRAPHY: Paper 1
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This question paper consists of 12 pages and an 11-page annexure.

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INSTRUCTIONS AND INFORMATION

1. The question paper consists of four questions.
2. Answer ANY THREE questions of 75 marks each.
3. All diagrams are included in the ANNEXURE.
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. Number the answers in the centre of the line.
7. ENCIRCLE the questions that you have answered on the front cover of the ANSWER BOOK.
8. Do NOT write in the margins of the ANSWER BOOK.
9. Illustrate your answers with labelled diagrams, where possible.
10. Write neatly and legibly.

SECTION A: CLIMATE, WEATHER AND GEOMORPHOLOGY

Answer at least ONE question from this section. If you answer ONE question from SECTION A you must answer TWO questions from SECTION B.

QUESTION 1

1.1 Study FIGURE 1.1 based on a cross-section of a tropical cyclone and answer the questions that follow.

1.1.1 Name cloud type **A**.

1.1.2 What is the name given to area **B** in the tropical cyclone?

1.1.3 Is the air pressure high or low in area **B**?

1.1.4 In which general direction do tropical cyclones travel in the Southern Hemisphere?

1.1.5 State the precipitation associated with cloud **A**.

1.1.6 Name the air movement in area **B**.

1.1.7 Is the air converging or diverging in area **C**?

1.1.8 What is the name given to the stage of development when a tropical cyclone moves inland? (8 x 1) (8)

1.2 Refer to the drainage basin in FIGURE 1.2 and answer the questions that follow.

1.2.1 Name the drainage pattern shown in the diagram.

1.2.2 At which angle do the tributaries join the main stream?

1.2.3 State whether this drainage pattern is associated with a surface that has a uniform or varied resistance to erosion.

1.2.4 Is the dominant process at **A** on the sketch erosion or deposition?

1.2.5 State the stream order at point **A**.

1.2.6 Is area **B** an interfluve or a watershed?

1.2.7 Is the discharge of the river greater at **A** or at **C**? (7 x 1) (7)

1.3 Study the sketch in FIGURE 1.3 showing a temperature inversion in a valley and answer the questions that follow.

1.3.1 Define the term *temperature inversion* indicated by **B** and **C**. (1 x 1) (1)

1.3.2 Name the wind at **A**. (1 x 1) (1)

1.3.3 Explain why the wind in QUESTION 1.3.2 commonly occurs at night in valleys. (1 x 2) (2)

1.3.4 Explain why radiation fog is likely to develop in the valley at night time. (2 x 2) (4)

1.3.5 In a paragraph of approximately EIGHT lines, evaluate the likely impact of the wind at **A** on farming and settlements on the valley floor. (4 x 2) (8)

1.4 FIGURE 1.4 shows berg wind conditions.

1.4.1 Name high pressure cell **A**. (1 x 1) (1)

1.4.2 In which season do berg winds generally occur? (1 x 1) (1)

1.4.3 With reference to the diagram, state TWO conditions under which berg winds originate. (2 x 2) (4)

1.4.4 Give ONE reason for the change in the temperature of berg winds as they blow from the interior (**A**) to the coast (**B**). (1 x 2) (2)

1.4.5 Refer to the weather station at **C** and give ONE reason for the clear skies. (1 x 2) (2)

1.4.6 Why are berg winds associated with veld fires in winter? (2 x 2) (4)

1.5 FIGURE 1.5 shows a longitudinal river profile.

1.5.1 Explain the term *longitudinal profile*. (1 x 1) (1)

1.5.2 Name a temporary base level of erosion evident on the sketch. (1 x 1) (1)

1.5.3 Draw a labelled free-hand sketch of a graded longitudinal profile. (1 x 3) (3)

1.5.4 State ONE characteristic of the river bed of a graded river. (1 x 2) (2)

1.5.5 In a paragraph of approximately EIGHT lines, explain the processes that the profile in FIGURE 1.5 must undergo to change from an ungraded to a graded profile. (4 x 2) (8)

1.6 Refer to FIGURE 1.6 showing a levee.

1.6.1 Identify the fluvial landform on which crops are grown. (1 x 1) (1)

1.6.2 Why is the landform in QUESTION 1.6.1 more likely to flood in the lower course? (2 x 2) (4)

1.6.3 Identify the natural feature **A** that protects crops from flooding. (1 x 2) (2)

1.6.4 Briefly describe the formation of the natural feature in QUESTION 1.6.3. (2 x 2) (4)

1.6.5 Discuss the negative impacts on the farmer, should the river break through feature **A**. (2 x 2) (4)

[75]

QUESTION 2

2.1 Refer to FIGURE 2.1 showing two coastal lows, **A** and **B**. Choose ONE term in brackets to make each of the following statements TRUE:

2.1.1 Air circulation in pressure cells **A** and **B** is (clockwise/ anticlockwise).

2.1.2 Air (converges/diverges) at pressure cells **A** and **B**.

2.1.3 Pressure cell **A** will have a (lower/higher) moisture content than pressure cell **B**.

2.1.4 Pressure cell **A** is associated with (fog/drizzle).

2.1.5 The air pressure at **B** will be (lower/higher) than at **A**.

2.1.6 Place **M** will soon be affected by weather system (**A**/**B**).

2.1.7 Place (**K**/**Q**) will experience berg winds. (7 x 1) (7)

2.2 Refer to FIGURE 2.2 showing river flow patterns. Indicate whether each of the following statements refer to turbulent or laminar flow in a river. You may use the same answer for more than one question.

2.2.1 Associated with a river bed that is level and even

2.2.2 Associated with an irregular and swirling flow

2.2.3 Effective in eroding and transporting sediment

2.2.4 Commonly occurs in the upper course of a river

2.2.5 Water flows in thin layers

2.2.6 Associated with a higher river velocity

2.2.7 Occurs where rapids are visible in the river's course

2.2.8 Has a larger stream load-carrying capacity (8 x 1) (8)

2.3 Study the synoptic weather map in FIGURE 2.3 and answer the questions that follow.

2.3.1 Give the term used to describe the linked mid-latitude cyclones on the synoptic weather map. (1 x 1) (1)

2.3.2 Refer to mid-latitude cyclone **A**.

(a) Draw a labelled cross-section of front **E**. (4 x 1) (4)

(b) Describe ONE weather change associated with the passing of front **E**. (1 x 2) (2)

2.3.3 Refer to the weather station at Windhoek (**B**). In a paragraph of approximately EIGHT lines, describe and give reasons for any TWO weather conditions recorded at the weather station. (4 x 2) (8)

2.4 Study FIGURE 2.4 which shows a heat island over a South African city.

2.4.1 What is the name given to the lines that show the temperature readings over the city? (1 x 1) (1)

2.4.2 What is the temperature difference between the CBD and the rural area? (1 x 2) (2)

2.4.3 How do high-rise buildings contribute to the CBD having a higher temperature? (1 x 2) (2)

2.4.4 Suggest TWO possible reasons why the temperature lines mentioned in QUESTION 2.4.1 are not circular. (2 x 2) (4)

2.4.5 Each statement below describes a typical urban microclimate. Give a reason why each of these conditions are experienced in an urban area.

(a) Relative humidity is lower above the city than above the surrounding rural area. (1 x 2) (2)

(b) The city has more days on which precipitation occurs than the surrounding rural area. (1 x 2) (2)

(c) Wind speed in the CBD is stronger than in the surrounding countryside. (1 x 2) (2)

2.5 Refer to FIGURE 2.5 and read the research article on improving water productivity.

2.5.1 Give the meaning of the term *water resource management*. (1 x 1) (1)

2.5.2 Name ONE settlement in the article that has a negative impact on the Upper Modder River. (1 x 1) (1)

2.5.3 State TWO ways in which humans are interfering with water productivity from the Upper Modder River. (2 x 1) (2)

2.5.4 Name TWO factors that cause the high water run-off. (2 x 2) (4)

2.5.5 In a paragraph of approximately EIGHT lines, explain how human interference along a river impacts on those that live further downstream. (4 x 2) (8)

2.6 FIGURE 2.6 illustrates the concept of river rejuvenation.

2.6.1 Define the term *river rejuvenation*. (1 x 1) (1)

2.6.2 Identify the feature of river rejuvenation evident in the illustration. (1 x 1) (1)

2.6.3 State TWO conditions under which river rejuvenation is likely to take place. (2 x 2) (4)

2.6.4 Explain how the feature in QUESTION 2.6.2 is formed. (2 x 2) (4)

2.6.5 Explain why the landscape in FIGURE 2.6 is not suitable for infrastructure development. (2 x 2) (4)

[75]

SECTION B: RURAL AND URBAN SETTLEMENTS AND SOUTH AFRICAN ECONOMIC GEOGRAPHY

Answer at least ONE question from this section. If you answer ONE question from SECTION B, you must answer TWO questions from SECTION A.

QUESTION 3

3.1 Refer to FIGURE 3.1 which shows two types of settlements (**A** and **B**). Match the settlement types **A** and **B** to the statements below.

3.1.1 This type of settlement is unifunctional

3.1.2 Associated with tertiary activities

3.1.3 The smallest of all the settlement types

3.1.4 These settlements are always nucleated

3.1.5 This settlement has a dispersed pattern

3.1.6 An overconcentration of activities

3.1.7 A metropolis is an example of this type of settlement

3.1.8 An example of a central place (8 x 1) (8)

3.2 Various options are given as possible answers to the following questions. Choose the answer and write only the letter (A–D) next to the question number (3.2.1–3.2.7).

3.2.1 In which ONE of the following economic sectors are raw materials extracted from nature?

A Primary
B Secondary
C Quaternary
D Tertiary

3.2.2 A term that describes the movement of industries out of core areas:

A Nationalisation
B Agglomeration
C Decentralisation
D Centralisation

3.2.3 Which ONE of the following core industrial areas is located inland?

A South Western Cape
B PWV
C Port Elizabeth-Uitenhage
D Durban-Pinetown

3.2.4 Factors that favour mining in South Africa:

A Geology, labour and investments
B Climate, distance and foreign dependency
C Soils, land ownership and trade
D Climate, soils and trade

3.2.5 Tertiary economic activities are also known as … industries.

A extractive
B service
C processing
D technological

3.2.6 Research can be classified as a … economic activity.

A primary
B secondary
C tertiary
D quaternary

3.2.7 A … is an example of a footloose industry.

A sawmill
B motor assembly plant
C steel industry
D dairy (7 x 1) (7)

3.3 FIGURE 3.3 shows a feature that has resulted from rapid urbanisation in South African cities.

3.3.1 Identify the feature shown in FIGURE 3.3. (1 x 1) (1)

3.3.2 Name TWO building materials used to construct the shelters/ houses in FIGURE 3.3. (2 x 1) (2)

3.3.3 Give TWO reasons why the building materials in QUESTION 3.3.2 were used. (2 x 2) (4)

3.3.4 Write a paragraph of approximately EIGHT lines to advise the local authorities on how to improve living conditions in these settlements. (4 x 2) (8)

3.4 Read the newspaper article in FIGURE 3.4 on the challenges that South African city planners face.

3.4.1 Which sector of the population has been most affected by the lack of planning? (1 x 1) (1)

3.4.2 Give TWO reasons why the sector of the population in QUESTION 3.4.1 has been most affected by the lack of planning in terms of transportation. (2 x 2) (4)

3.4.3 How will the increased travelling cost impact on household budgets? (2 x 2) (4)

3.4.4 Suggest THREE measures that urban planners can implement (put in place) to reduce traffic congestion between people's homes and places of work. (3 x 2) (6)

3.5 Refer to FIGURE 3.5 showing the contribution of agricultural products to South Africa's economy.

3.5.1 Did South Africa import or export more agricultural products in 2011/2012? (1 x 1) (1)

3.5.2 Under which economic sector does agricultural production fall? (1 x 1) (1)

3.5.3 By what percentage did South Africa's exports of agricultural products increase between 2010/2011 and 2011/2012? (1 x 1) (1)

3.5.4 State TWO benefits for the South African economy of a strong home market in terms of agricultural production. (2 x 2) (4)

3.5.5 Suggest TWO ways in which agricultural activities contribute to the development of infrastructure in South Africa. (2 x 2) (4)

3.5.6 Evaluate how unreliable rainfall contributes to food insecurity. (2 x 2) (4)

3.6 Read the extract in FIGURE 3.6 on spatial development initiatives (SDIs).

3.6.1 What is a *spatial development initiative (SDI)*? (1 x 1) (1)

3.6.2 Discuss the importance of SDIs for economic development in South Africa. (2 x 2) (4)

3.6.3 Give ONE reason why the infrastructure around the newly developed SDIs needed to be upgraded. (1 x 2) (2)

3.6.4 With reference to ONE SDI that you have studied, explain in a paragraph of approximately EIGHT lines how improved infrastructure supported tourism and how it has led to the upliftment of the local community. (4 x 2) (8)

[75]

QUESTION 4

4.1 Study FIGURE 4.1 which shows different settlement patterns.

4.1.1 What is the name given to settlement **A** which is located away from water because water is seen as a threat?

4.1.2 Name the settlement pattern at **B**.

4.1.3 Why is settlement **C** referred to as a nucleated settlement?

4.1.4 What evidence suggests that settlement **D** is a wet point settlement?

4.1.5 Give the name of settlement **E**.

4.1.6 Identify the factor that has influenced the shape of settlement **F**.

4.1.7 Describe the shape of settlement **G**. (7 x 1) (7)

4.2 Study FIGURE 4.2 which represents two different types of farming in South Africa.

4.2.1 Give ONE term that best describes the type of farming at **A**. (1 x 1) (1)

4.2.2 Give ONE term that best describes the type of farming at **B**. (1 x 1) (1)

4.2.3 Indicate whether EACH of the following statements refers to farming type **A** or farming type **B**. You may use the same answer for more than one question.

(a) Uses scientific farming methods
(b) Contributes most to the GDP
(c) Produces a variety of crops in small quantities
(d) Uses machinery
(e) Limited capital outlay
(f) Aimed at the export market (6 x 1) (6)

4.3 Refer to the newspaper extract in FIGURE 4.3 on urban problems and answer the questions that follow.

4.3.1 Give a phrase from the extract that explains the meaning of urban renewal. (1 x 1) (1)

4.3.2 With reference to the newspaper extract, explain why the inner city of Johannesburg has become overcrowded. (2 x 2) (4)

4.3.3 Suggest TWO reasons why the provision and the quality of services to the inner city of Johannesburg is steadily declining. (2 x 2) (4)

4.3.4 What do the 'green lungs' in the extract refer to? (1 x 2) (2)

4.3.5 Suggest TWO advantages of 'green lungs' in a city. (2 x 2) (4)

4.4 FIGURE 4.4 is a cartoon on rural-urban migration.

4.4.1 Define the term *rural-urban migration*. (1 x 1) (1)

4.4.2 Give TWO push factors that result in rural-urban migration. (2 x 2) (4)

4.4.3 Propose ONE way of preventing rural towns from becoming 'ghost towns'. (1 x 2) (2)

4.4.4 There is a view that quality housing and employment opportunities are pull factors to urban areas. In a paragraph of approximately EIGHT lines, critically evaluate the extent to which this is true. (4 x 2) (8)

4.5 South Africa's informal sector is growing at a rate of 7,7%, making it the fastest growing economic sector. This is closely linked to unemployment.

4.5.1 Define the concept *informal sector.* (1 x 1) (1)

4.5.2 State the percentage by which the informal sector is growing in South Africa. (1 x 1) (1)

4.5.3 Give ONE example of informal trading. (1 x 1) (1)

4.5.4 Give a possible reason why there has been such a rapid increase in the informal sector in South Africa recently. (1 x 2) (2)

4.5.5 Why are people in the informal sector reluctant to apply for trading permits? (1 x 2) (2)

4.5.6 In a paragraph of approximately EIGHT lines, prepare a response from the City Council to explain why it is necessary to have trading permits. (4 x 2) (8)

4.6 FIGURE 4.6 captures the instability at Lonmin's Marikana mine. The instability has had a negative impact on South Africa's GDP.

4.6.1 What initiated the Marikana strike? (1 x 1) (1)

4.6.2 State TWO safety hazards that the miners are exposed to. (2 x 1) (2)

4.6.3 Besides industrial activities, discuss why the instability at Lonmin's Marikana mine will impact negatively on the GDP. (3 x 2) (6)

4.6.4 How can the owners (Lonmin) of the Marikana mine improve working conditions at the mine? (3 x 2) (6)

[75]

TOTAL: 225