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NORTH WEST PROVINCE

PROVINCIAL ASSESSMENT

GRADE 12

GEOGRAPHY PAPER 1

JUNE EXAMINATION 2018

QUESTION PAPER

MARKS: 225

TIME: 3 hours

This question paper consists of 15 pages and a 8-page annexure

Demo
NW/JUNE/ENGHL/ EMIS/6*******

INSTRUCTIONS

1. This question paper consists of THREE questions.
2. Answer ALL THREE questions of 75 marks each.
3. All diagrams are included in the ANNEXURE.
4. Start each NEW question AT THE TOP of a new page.
5. Number your answers EXACTLY as the questions have been numbered.
6. Write CLEARLY and LEGIBLY.
7. Where possible, illustrate your answers with labelled diagrams.
8. Mark allocation is as follows:

   (2x1) (2) means that TWO facts are required for ONE mark each.

   (2x2)(4) means that TWO facts are required for TWO marks each.

9. 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/account are used in a question, FULL sentences or phrases are required.

   ALL paragraph questions must be answered in FULL sentences.

SECTION A- CLIMATE, WEATHER AND GEOMORPHOLOGY

QUESTION 1

1.1. Choose the correct word(s) from those given in brackets to complete the terminology associated with valley climates.

1.1.1. (Slope aspect/ shadow zone) refers to an area that does not receive perpendicular sunlight.

1.1.2. Air movement within a valley may have little influence on (regional/local) climates.

1.1.3. Plants requiring more sunlight and less moisture grow best on (north/south) facing slopes in the Southern Hemisphere.

1.1.4. A (valley/ mountain) breeze blows towards the valley floor.

1.1.5. In mountainous areas where there are valleys with steep slopes, people tend to build their houses on (south facing/north facing) slopes in the northern hemisphere.

1.1.6. At night air on the slope of the valley, cools rapidly due to (radiant energy/terrestrial radiation).

1.1.7. If dew point is below freezing point, water vapour condenses directly into (fog/frost).

1.1.8. A warm layer with cold air below, causing an inversion is known as a (frost pocket/thermal belt).

(8x1) (8)

1.2. Choose a term from COLOUMN B that matches the description in COLUMN A. Write only the letter (A-I) next to the question Number (1.2.1.-1.2.7.).

COLUMN A	**COLUMN B**
1.2.1. Flows into a low-lying area.	A. Braided pattern
1.2.2. Forms on igneous rocks that have joints and cracks.	B. Centripetal pattern
1.2.3. Forms on inclined rock layers.	C. Dendritic pattern
1.2.4. River is older than the landscape	D. Superimposed Drainage
1.2.5. Landscape existed before the river system	E. Trellis pattern
1.2.6. Forms in mostly glacial regions.	F. Deranged pattern
1.2.7. Occurs on rocks with uniform resistance join river at acute angles.	G. Rectangular pattern
	H. Antecedent drainage

(7x1=7)

1.3. Study FIGURE 1.3. shows berg wind conditions.

1.3.1. Name high pressure cell **A**. (1x1) (1)

1.3.2. Explain what is understood by the term 'berg wind'. (1x1) (1)

1.3.3. In which season do berg winds generally occur? (1x1) (1)

1.3.4. With reference to the diagram, state TWO conditions under which berg winds originate. (2x2) (4)

1.3.5. Why are berg winds associated with veld fires in winter? (1x2) (2)

1.3.6. Discuss the impact the berg winds would have had on the farming and the environment weather in the area (3X2) (6)

(15)

1.4. Study FIGURE 1.4, synoptic weather map and answer the questions below.

1.4.1. Identify the low pressure cell labelled A. (1x1)(1)

1.4.2. Why are the surface winds that diverge out of cell B **are** dry and cold. (1x2) (2)

1.4.3. Which of the mid-latitude cyclones, labelled **C** and **D**, originated first? (1x1) (1)

1.4.4. Give ONE reason for your answer to QUESTION 1.4.4. (1x2) (2)

1.4.5. Give the term used to describe a series of mid-latitude cyclones passing over an area in quick succession. (1x1)(1)

1.4.6. What will happen to low-pressure cell A if mid-latitude cyclone C moves further eastwards. (1x1)(1)

1.4.7. The South-Western Cape receives the bulk of their rain during winter. The mid-latitude cyclones that cause the rain can sometimes generate devastating storms. The rain has a positive and sometimes a negative influence on the area. Write a paragraph (approximately 8 lines) on the positive and negative effects of such a storm on agriculture, water supply and the informal settlements in this area.

(4x2) (8)

(16)

1.5. Refer to FIGURE 1.5. showing the Tugela river drainage system and answer the following questions.

1.5.1. Determine the stream order at **X**. (1x1) (1)

1.5.2. a. Identify the drainage pattern found in block **A.** (1x1)(1)

b. Mention the underlying rock structure and rock type associated with the drainage pattern found in block **A**. (2x1) (2)

1.5.3. a. Does area **A** have a high or low drainage density? (1x1) (1)

b. Explain how permeability, gradient and vegetation could have influenced the drainage density as referred to in QUESTION 1.5.3(a). (3x2)(6)

1.5.4. Explain how erosion influences the width of the river valley in stages **A** and **B**. (2x2) (4)

(15)

1.6. Study FIGURE 1.6. that depicts the process of stream piracy/river capture.

1.6.1. Identify the geomorphological process indicated by the arrow in the original drainage in figure 1.6. (1x1) (1)

1.6.2. Study the area demarcated by the circle in the present drainage block in figure 2.5. Draw a simple sketch to show the different features of stream piracy that will be visible at in the circle. (3x1) (3)

1.6.3. Explain the possible influence or impact of this process on the Altamaha river east of the area demarcated by the circle. (2x1) (2)

1.6.4. In a paragraph of approximately EIGHT lines explain the impact of stream piracy on the economy in the Alapaha valley. (4x2) (8)

(14)

QUESTION 2

2.1. Refer to FIGURE 2.1. and give ONE word for each of the following descriptions. Only write down the word next to the question number 2.1.1.-2.1.8. in your answer sheet, e.g. 2.1.9. drainage.

2.1.1. The course of a river where most waterfalls occur

2.1.2. The type of flow indicated by A.

2.1.3. Name the river course at 2.

2.1.4. The smooth flow of the river in course 1.

2.1.5. Vertical erosion is very dominant in this course.

2.1.6. This type of flow is responsible for large scale erosion.

2.1.7. The river course where deposition is dominant.

2.1.8. The course of the river which has a wider V-shape (8x1) (8)

2.2 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 number

2.2.1 Where water plunges over a vertical cliff, it forms a….

A. rapid

B. levee

C. waterfall

D. gorge

2.2.2 Underground water that feeds into a river is known as….

A. base flow

B. run-off

C. infiltration

D. laminar flow

2.2.3 The arrangement of streams in a drainage basin is known as the….

A. stream profile

B. stream order

C. drainage pattern

D. stream density

2.2.4 The raised banks of a river due to continuous flooding and deposition

is a/an

A. alluvial fan
B. levee
C. meander scar
D. delta

2.2.5 Water flowing downslope over land is known as ….flow

A. turbulent

B. sheet

C. base

D. channel

2.2.6 A river that flows all year because the river bed cuts into the water table is

a/an….river

A. episodic
B. periodic
C. permanent
D. exotic

2.2.7 A…. drainage pattern develops in the valleys between parallel ridges or mountain

ranges

A. rectangular
B. rock- controlled
C. trellis
D. radial

(7x1) (7)

2.3. Study FIGURE 2.3. based on hurricanes.

2.3.1. Give evidence that suggests that the conditions shown in the satellite image occurred in the Northern Hemisphere. (1x1) (1)

2.3.2. What is the approximate height of the clouds in the eye. (1x1) (1)

2.3.3. Account for the lack of clouds in the eye. (1x2) (2)

2.3.4. What is the source of energy that drives this hurricane? (1x1) (1)

2.3.5. Describe the type of weather conditions that surround the eye. (2x2)(4)

2.3.6. Why tropical cyclone decays when it reaches the land? (1x2)(2)

2.3.7. Draw a simplified, labelled plan view sketch of the illustrated hurricane, clearly indicating the following:

a. Air movement around the eye (1x2) (2)

b. The dangerous semicircle (area where most damage will be caused when it reaches land) (1x2) (2) **(15)**

2.4. Refer to FIGURE 2.4. is a photograph showing a roof top garden in the city of Johannesburg.

2.4.1. What is a roof garden? (1x1) (1)

2.4.2. What types of materials have been used in the construction of the roof garden in this photograph. (3x1)(3)

2.4.3. State the term for the climatic feature that depicts the increased temperature in an urban area. (1x1)(1)

2.4.4. Explain the term *greenbelt development.* (1x1)(1)

2.4.5. Write a paragraph of approximately EIGHT lines suggest alternate ways in which sustainable solutions can be used to reduce the impact of urban heat within a city like Johannesburg. (4x2) (8)

(14)

2.5. Study the photo in FIGURE 2.5. based on a river system.

2.5.1. Define the term *river system.* (1x1) (1)

2.5.2. What purpose does the interfluves at **A** serve in this river system? (1x1) (1)

2.5.3. What evidence suggests that **B** is a dendritic drainage pattern? (1x2) (2)

2.5.4. State TWO characteristics of the underlying rocks in a area **B**. (2x2)(4)

2.5.5. Write a paragraph of approximately EIGHT lines, in which you explain why a meandering stream channel pattern is usually found in the lower course of a river system. (4x2) (8)

(16)

2.6. Study FIGURE 2.6, illustrates the concept of river rejuvenation.

2.6.1. Identify the feature of river rejuvenation evident in the illustration. (1x1) (1)

2.6.2. State THREE conditions under which river rejuvenation is likely to take place. (3x2) (6)

2.6.3. Explain how the feature answered QUESTION 2.6.1. is formed. (2x2)(4)

2.6.4. Explain why the landscape is not suitable for infrastructure development. (2x2)(4)

(15)

SECTION B – RURAL AND URBAN SETTLEMENTS

QUESTION 3

3.1. Indicate whether EACH of The statements below describes an URBAN or a RURAL settlement. Write only urban or rural next to the question numbers (3.1.1.-3.1.7.) in the answer sheet.

3.1.1. Unifunctional settlements.

3.1.2. Includes towns, cities, a metropolis and a megalopolis.

3.1.3. Includes farmsteads, hamlets and villages.

3.1.4. Displays a dispersed settlement pattern.

3.1.5. Characterised by primary economic activities.

3.1.6. Has a variety of functions such as shops, schools and places of worship.

3.1.7. Associated with secondary, tertiary and quaternary activities. (7x1)(7)

3.2. 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 number.(3.2.1.-.3.2.8. L)

3.2.1. The unplanned or uncontrolled spread of the built up urban environment is known as.....

a. the level of urbanisation

b. urban growth

c. urban sprawl

d. the rate of urbanisation

3.2.2. Which one of the following characterises the Central Place Theory?

a. the surrounding area will take the shape of a circle

b. developed by Burgess in 1933

c. the surrounding area would take the shape of a hexagon

d. developed by Hoyt in 1939

3.2.3. .....refers to the maximum distance that people are prepared to travel in order to obtain goods and services.

a. threshold population

b. range

c. sphere of influence

d. urban hierarchy

3.2.4. towns found at important roads, railways or rivers are referred to as .... towns.

a. specilaised

b. gap

c. central

d. junction

3.2.5. the upgrading and modernising of house or areas within the city zone is known as.....

a. facadism

b. rezoning

c. gentrification

d. urbanisation

3.2.6. the mutual attraction of similar functions in the city is known as.....

a. functional magnetism

b. functional prestige

c. functional convenience

d. functional range

3.2.7. .....is the reverse trend to urbanisation where people move back to rural areas.

a. new ruralism

b. counter urbanisation

c. sustainable settlements

d. new towns

3.2.8. Which ONE of the following does not characterise a radial concentric street pattern?

a. roads radiate outwards from a central point

b. pattern looks like's a spider web

c. occurs in planned urban areas

d. the roads intersect at right angles (8x1) (1)

3.3 Study FIGURE 3.3, which illustrates why people feel compelled to leave rural areas.

3.3.1. Why is a young person portrayed in this situation? (1x2) (2)

3.3.2. What area will this young person probably move to? (1x1) (1)

3.3.3. List TWO pull factors that attract the youngsters to move? (2x1)(2)

3.3.4. Give ONE reason for the decline in employment opportunities in the rural areas. (1x2)(2)

3.3.5. Explain why there is NO DECREASE in food production in South Africa in spite of the depopulation. (1x2)(2)

3.3.6. Suggest THREE ways which the government can introduce to curb this type of migration . (3x2) (6)

(15)

3.4. Refer to FIGURE 3.4, a cartoon on the 1913 Natives Land Act in South Africa.

3.4.1. Define the term land restitution. (1x1)(1)

3.4.2. What was the aim of the Natives Land Act, 1913 (Act 27 of 1913) (1x1) (1)

3.4.3. When was the 1913 Natives Land Act repealed? (1x1)(1)

3.4.4. Explain why land restitution is suitably linked to the snail. (2x2) (4)

3.4.5. Write a paragraph of approximately EIGHT lines, outlining some of the factors that have slowed down the process of land reform in South Africa. (4x2) (8)

(15)

3.5. Refer to FIGURE 3.5, is a cartoon representing the CBD

3.5.1. a. Explain the use of a sardine can in the cartoon to describe the density of buildings. (1x2)(2)

b. Give ONE characteristics that is evident about the buildings in the CBD from the cartoon. (1x1)(1)

3.5.2. Suggest at least TWO factors that influence the location of the CBD in the urban settlement. (2x2) (4)

3.5.3. In recent years the CBD has experienced an increase in commercial decentralisation. Explain what is meant by commercial decentralisation. (1x1) (1)

3.5.4. Give THREE CENTRIFUGAL/PUSH forces why commercial decentralisation is taking place. (3x2)(6)

(14)

3.6. The CBDs of most South African cities are characterised by a grid street pattern.

3.6.1. Draw a simple diagram to illustrate the grid street pattern. (2x1) (2)

3.6.2. Why do the CBDs of most South African cities have a grid street pattern. (1x2)(2)

3.6.3. State TWO advantages of a grid street pattern. (2x2) (4)

3.6.4. A grid street pattern in the CBD results in traffic congestion. In a paragraph of approximately EIGHT lines propose FOUR possible solutions to solve the problem of traffic congestion in the CBDs. (4x2) (8)

(16)

TOTAL : 225