

S4 GEOGRAPHY TERM I MARKING GUIDE

SECTION A: ATTEMPT ALL QUESTIONS

(55marks)

1. **Define the following terms: (5marks)**
 - a) **Field work:** refers to all learning undertakings or activities that are done outside the classroom.
 - b) **Interviewing:** is the art of getting information through holding a dialogue with a respondent.
 - c) **Topographic maps:** These are maps whose purpose is to show or represent both physical and human features found in an area.
 - d) **Questionnaire:** is a set of logically set questions used by the researcher in the field to gather information.
 - e) **Land locked country:** I a country which has no access or does not touch to the sea or ocean. (Is surrounded in all sides by countries)
2. **State the types of sampling. (3marks)**
 - Random sampling
 - Systematic sampling
 - Stratified sampling
3. **Mention the field work procedures. (4marks)**
 - ❖ Pre-field preparation stage
 - ❖ Pilot study stage
 - ❖ Data collection stage
 - ❖ The follow-up stages
4. **List three methods of data presentation. (3marks)**
 - ✚ They can be written in an essay form.
 - ✚ They can be put in tables or graphs that are followed by descriptions of the content in prose.
 - ✚ They can be presented in form of maps especially when the findings involve distribution of various geographical aspects.
 - ✚ In case photographing was majorly used, an album containing various photos accompanied by notes can be used.
 - ✚ Samples collected as part of the findings can be presented by displaying. This may include soils, crops, vegetation and fish species among others.
 - ✚ Pie charts and flowcharts can be used to describe the data

- ✚ The information can then be presented to the rest of the class or to an audience in a verbal presentation

5. As geography learner, you are requested by your teacher to conduct a field study on urbanization in reference to a nearby town or trading center of your choice.

a) **State the study topic. (2marks)**

Field study on urbanization in reference to a nearby town or trading center.

b) **Name the objectives of the study. (4marks)**

To find out the physical location nearby urban area.

To find out the historical background of nearby trading center.

To identify the factors that favour the development of nearby urban areas or trading center.

To find out the challenges that face urban areas or trading center and their solutions.

To examine the role played by urbanization or trading in the economic development of the areas of study.

To identify the future prospects of urbanization or trading center.

c) **Explain two methods you would use to gather or collect the data (information) from the field. (2marks)**

✚ Observation

✚ Interview

✚ Photographing

✚ Video making/film making

✚ Questionnaires

6. a) **Outline elements of a good map. (5marks)**

❖ Title

❖ Scale

❖ Key/legend

❖ Compass direction

❖ Frame

b) **Write down the categories of maps. (3marks)**

✓ Small scale maps

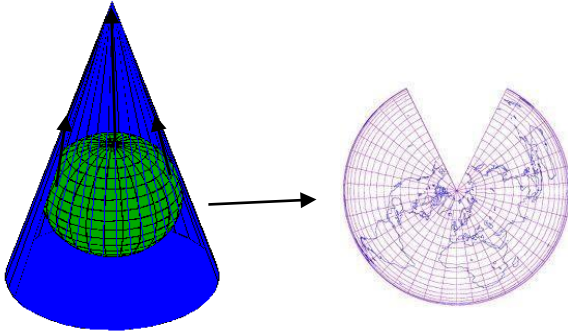
✓ Medium scale maps

✓ Large scale maps

7. **With clear illustrations describe the characteristics of three major classifications of map projections. (6marks)**

CONICAL PROJECTION

This is a method of projecting maps of parts of the Earth's spherical surface on a surrounding cone.



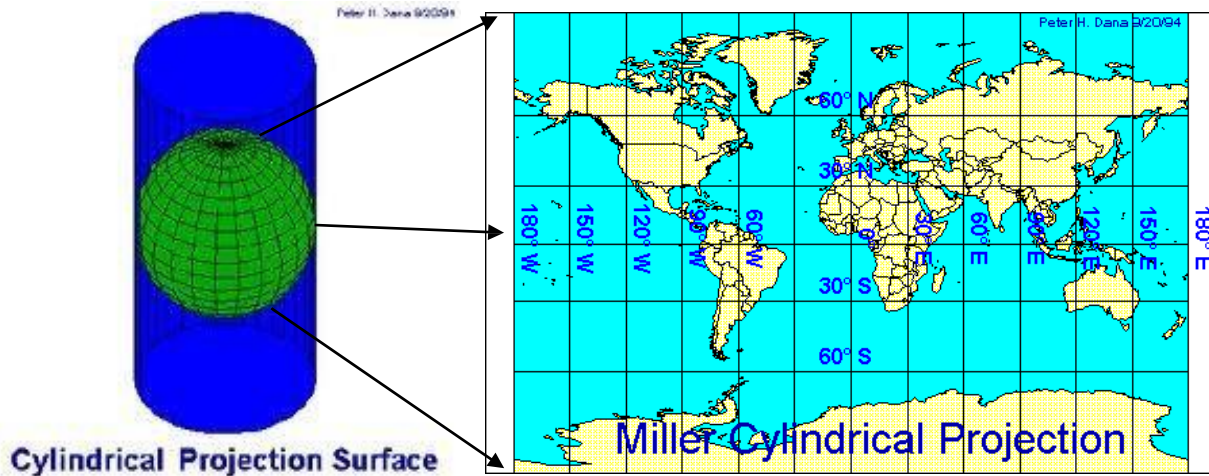
Conical Projection Surface

Characteristics of conical projections

- Lines of latitude and longitude intersect at 90° .
- Longitudes are straight lines.
- Latitudes are concentric circular arcs.
- The scale along the standard latitude(s) is true.
- It can have the properties of equidistance, conformality or equal ar

Cylindrical cartographic projection

This is a map projection in which the surface features of a globe are depicted as if projected onto a cylinder.



Characteristics of a cylindrical projection

- Lines of latitude and longitude are parallel and intersect at 90° .
- Longitudes are equidistant.
- It forms a rectangular map.
- The scale along the equator or standard latitudes is true.
- It can have properties of equidistance, conformality or equal area.
- The poles are represented as lines.
- This projection is favoured on maps that represent the tropical region or zones.

Azimuthal projection: is the one in which a globe such as the earth is assumed to rest on a flat surface onto which features are projected.

Characteristics

- It produces circular maps with a chosen point—the point on the globe that is tangent to the flat surface.
 - Its longitudes are straight lines
 - Lines of latitudes and longitudes meet at 90°
 - The poles are represented as a point
 - It represents the poles
 - The scale near the center is true
 - Latitudes are concentric circles
8. **According to their mode of formation, sedimentary rocks are classified into three categories. Name them. (4marks)**
- ❖ Chemically formed sedimentary rocks
 - ❖ Mechanically/physically formed sedimentary rocks
 - ❖ Biologically/organically formed sedimentary rocks

9. **a) Name the neighbouring countries of Rwanda. (4marks)**

To the north-Uganda
To the south-Burundi
To the east-Tanzania
To the west-Democratic Republic of Congo

b) Examine the benefits Rwanda enjoys because of her neighbours. (5marks)

- Free movement of goods

- Low tariff
- Low prices on commodities
- Cheap transport
- The exchange of goods and services easily

10. Write short notes on the following: (4marks)

a) Exogenic processes

Exogenic processes are processes that take place on the surface of the Earth. The forces that are responsible for the exogenic processes are commonly referred to as denudation forces.

They include the following: Weathering and Erosion

b) Endogenic processes

These are processes whose operation begins from the interior of the Earth. These internal processes include folding, faulting, vulcanicity, and warping.

c) Denudation processes: is the destruction, wastage and removal of part of the earth surface.

d) Differentiate weathering and erosion: weathering refers to the disintegration or break down and decay of rock at the surface of the earth insitu. While erosion is the removal or detachment of soil materials as well as its transportation from one place to another.

SECTION B: ATTEMPT ANY THREE QUESTIONS

(45marks)

11. a) Differentiate between soil conservation and soil management. (5marks)

Soil conservation refers to the prevention of soils from erosion, degradation or loss of fertility.

Soil management refers to all the measures put in place to ensure proper use of soils in a sustainable manner.

b) Assess the effects of soil erosion on the socio- development of Rwanda. (10marks)

Low soil productivity: Soils subjected to erosion lose all nutrients. This lowers their economic value. This is because they can hardly support crop production due to their infertility.

Low soil moisture: Areas affected by erosion experience loss of moisture. The removal of the top soils which would allow infiltration of the run-off exposes the sub soils which are associated with soil compaction. This further reduces the permeability, porosity, and biological activity of soils hence rendering them unproductive.

Destruction of crops: Wind erosion destroys young seedlings. This means that extra costs are incurred by the farmers through replanting. Sometimes, the sediments being transported are deposited in farms where they end up burying germinating seeds to deeper depths preventing them from reaching the surface.

Affects underground water: Soil erosion sometimes involves run-off which percolates and dissolves soluble minerals. Some of the minerals pollute the underground water. The removal of the upper layers of soils provides a smooth

surface upon which the run-off flows at high speeds having no chances of infiltrating into the soils. This reduces the chances of increasing the volume of underground water. Hence, the water table is lowered. In some places, springs and other underground water sources dry up.

Affects transport systems: Many roads in Rwanda especially up country and feeder roads are affected by gullies created by continuous surface run-off. This hinders the movement of goods and services and increases the government's expenditure due to frequent rehabilitations.

Flooding: Through soil erosion, sediments are deposited into lakes, rivers and streams. When there is too much deposition in a river or lake, its carrying capacity reduces and becomes shallow. As a result, water starts overflowing hence flooding the surrounding areas.

Silting: Closely related to the flooding, the silting problem comes along with increased expenses of dredging, resettling people and total disruption of the eco-system. For example, River Akagera is not suitable for large ships or motor boats because most of the parts are shallow and have too much sediments.

12. a) Distinguish between weather and climate. (5marks)

Climate refers to the average weather conditions of an area measured and recorded for a long period of time, usually over 35 years.

Weather refers to day-to-day conditions of the atmosphere measured and recorded for a short period of time.

b) Explain the factors that influence the climate of Rwanda. (10marks)

Altitude: Most of Rwanda is of a high altitude. The altitude of the country ranges from between 1000-4500m above sea level. This high altitude is caused by the mountainous terrain of the country. The high altitudes of the mountains and hills of the country greatly influence the climate of the country.

Latitude: The latitudinal location of Rwanda near the equator has an influence on its climatic conditions. The apparent movement of the sun over the equator comes along with heavy rainfall in favour of Rwanda. When the sun's position is overhead the Tropic of Cancer, Rwanda gets little or no rainfall. This creates dry conditions that are characterised by high temperatures.

Vegetation: The presence of vegetation has had a great impact on the climate of Rwanda. It has contributed a lot to the climatic variations presently witnessed. In areas where there are dense forests such as Nyungwe, Gishwati and Birunga, more rainfall is experienced than in the savanna grassland areas of the Eastern plateau.

Presence of water bodies: The absence of large water bodies in Rwanda has contributed a lot to the occurrence of the type of climate experienced in the country. Water bodies play a great role in the modification of climate where convectional rainfall is created through the hydrological cycle. However, Rwanda has very few water bodies. They therefore have very little influence on the climate of the country. This is because of their sizes and nature. This scenario limits the

supply of humidity into the atmosphere. There are some parts of the country where there are no water bodies at all. This has serious implications on the climate of the regions.

Influence of winds: The presence of both local and global winds has a direct influence on the climate of Rwanda. The dry south-east trade winds reach the eastern parts of the country when they are dry. These winds have played a great role in the creation of dry conditions in areas such as Bugesera, Kirehe, Ngoma, and Gisagara.

Human activities influence the climate of the country in many ways. Activities such as afforestation, reforestation and agro-forestry that aim at conserving and protecting forests, the environment and wetlands influence the climate of the country. The climate has greatly changed and is characterised by heavy rainfall and moderate temperatures. The Eastern Province especially in Bugesera where harsh climatic conditions of prolonged droughts were a common phenomenon is experiencing changes in climate.

On the other hand, the reclamation of wetlands and other marshy areas in favour of rice growing and a wide range of agricultural projects, has affected the climate of the country. Some areas which used to have a lot of rainfall receive lower amounts of rainfall. This is because of the lowered water tables that cause decreased rates of evapo-transpiration. The result of this is high temperatures and low rainfall. Examples of reclaimed wetlands are Nyabarongo and Rugezi wetlands.

13. **Examine the causes destruction of vegetation in Rwanda. (15marks)**

The harsh climatic conditions: In many parts of the country, climate has played a great role in the destruction of vegetation. In the Eastern Province, unreliable rainfall and prolonged drought has left little or no vegetation cover on the ground. The bare soils are exposed to agents of erosion leaving poor infertile soils. In areas with very heavy rainfall, floods are common occurrences. The flood water destroys vegetation by decomposing them or burying them in silt and mud. Strong winds break tall trees, eventually destroying them.

High population: The ever-increasing population has created pressure on the existing vegetation. Some parts of the forests are cleared, swamps are reclaimed and grasslands are cleared in search of more land for settlement and agriculture. Refugees from neighbouring countries such as Burundi have been resettled in areas that were once forested but have been cleared to create land for settlement.

Lumbering is the felling of trees for timber sales. The number of industries that use raw materials derived from forests are on the increase in Rwanda. Most of the materials are used in the construction sector. The materials include; timber and poles.

Urbanisation: The development and establishment of urban centres has

affected vegetation. This is because vegetation has to be cleared as the towns grow and expand towards the conserved areas. The ambitious master plans of various urban centres in the country have led to the destruction of vegetation in order to allow for space to expand the towns.

Improper farming methods: The rural population in Rwanda is still devoted to the use of traditional methods of cultivation. Some of these methods involve clearing and burning of vegetation. This has left the soils bare exposing them to soil erosion.

Natural causes: Landslides and mass wasting have left scars along the slopes of most hilly areas of Rwanda. The scars are more common in areas in Rubavu, Musanze and the western regions during the rainy season. When the landslides occur, much of the vegetation is destroyed.

Biotic factors: There are many diseases and insects that destroy the vegetation in Rwanda. For example, the Eastern Province of the country has poor vegetation due to termites which eat up the vegetation during the dry season. The destruction of the vegetation exposes the soil leaving it bare and prone to erosion.

Overgrazing and search for animal feeds: In some parts of the country where farmers keep large numbers of cattle, vegetation is scarce due to overgrazing. An example of such an area is the Umutara area. Farmers practice zero grazing and trees are cut down to construct fences. This demand leads to the destruction of vegetation.

Infrastructural development: The government has invested money in infrastructural development. New roads are constructed leading to the destruction of vegetation.

Fuel needs: The Rwandan population is rural in nature. They depend on wood and charcoal as the convenient sources of fuel for domestic use. This has led to the cutting down of trees in search of fuel. This activity destroys vegetation.

Fire outbreaks: There is a common tendency in some areas of the country where in the dry season, grasslands are intentionally or accidentally burnt. Most of the time, swamp vegetation is burn by destroying a host of the ecosystem.

14. a) What is meant by the term wetland? (3marks)

A **wetland** is an area that is either permanently or seasonally saturated with water.

b) Explain the importance of wetlands to the development of Rwanda. (12marks)

They are a source of water for both domestic and industrial purposes.

Natural water purification system: Wetlands play a role in filtering water naturally. They trap and absorb toxins, sediments and dirt from water. This purification avails fresh water that reaches the lakes and rivers of Rwanda.

Fishing activities by providing suitable breeding and feeding grounds for fish.

They also offer refuge to the young fish. They are therefore important sources of fish. The swamps of Bugesera in the Eastern Province provide suitable breeding places for tilapia and cat fish.

Homeland for flora and fauna: There is a wide variety of biodiversity in wetland areas. These are important in the development and promotion of tourism in the country. For example, the Akagera swamps where there are different bird species, various swamp vegetation and animals such as hippos, crocodiles, varans and snakes.

Source of raw materials: Wetlands are rich in materials that are used in the production of art and craft products. These raw materials include papyrus, palms and other swamp vegetation. They are used in weaving.

Provision of clay: These areas have been and are still areas where good clay can be found. Clay is used in pottery, ceramics and brick making. A good example is the establishment of Ruliba factory that entirely depends on clay got from Nyabarongo swamp.

Source of food: Swamps in Rwanda support the growth of specific types of crops. These have enhanced food security in the country. The crops grown in wetlands are water tolerant and require highly saturated soils. They include; yams along Nyabugogo swamp, rice at Muhanga in the valley of Rugeramigozo River and Cyabayaga in Eastern Province.

Grazing areas: There are plants that grow near or within the wetlands that are used as pasture for domestic animals such as goats, sheep and cattle. The plants include sedges and different types of grasses. The wetlands provide a secure alternative grazing land during the dry seasons.

Modification of climate: Wetlands play a great role in the hydrological cycle which is the main component in the modification of climate. They contribute to the formation of convectional rainfall, hence influencing the micro- climate of the surrounding areas.

Source of medicine: The wetlands of Rwanda have swamp vegetation, some of which are medicinal. These include the roots of *Mondia whitei* and *Phoenix reclinata* which are used in treatment of various diseases.

Reduction of the occurrence of floods: Wetlands trap sediments which would otherwise find their way to river channels, narrowing the carrying capacity of rivers causing floods. They also store much water that would otherwise increase the water volume in rivers and lakes and causing floods.

Recreational resource: Wetlands provide good sites for peaceful relaxation and walks. Some of them support hunting and fishing sports that attract tourists who bring foreign exchange to the country.

Sanctuary for birds: Wetlands are homelands to a wide variety of bird species in Rwanda. This explains why Akagera and Bugesera areas have many birds and host birding activities. These areas are tourist attraction sites.

15. **Giving specific examples, examine the causes of the semi-arid conditions in some parts of Rwanda. (15marks)**

Deforestation

Industrialization

Pollution

Overgrazing

Poor methods of farming

Use of chemical fertilizers

Urbanization

Population growth

❖ **Introduction=3marks**

❖ **Five causes well with examples=10marks**

❖ **Conclusion=2marks**

END!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!

TEACHER: SIBOMANA Innocent

MERRY CHRIST MAS DAY AND HAPPY NEW YEAR