

THE UNITED REPUBLIC OF TANZANIA
PRESIDENT'S OFFICE
REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT
NJOMBE REGION
FORM SIX PRE-NATIONAL EXAMINATION
GEOGRAPHY 1 MARKING SCHEMES

1. Answer

- a) The three hypothesis are
- i. Early marriage is caused by poverty
 - ii. Early marriage is caused by illiteracy
 - iii. Early marriage is caused by bad cultural practices
- 6marks**
- b) The method of data collection used is interview **3marks**
- c) Types of interview method are
- i. Structured interview
Meaning is the types of interview in which the same questions are asked to all respondents, in a sense that the questions are pre-prepared. **2marks**
 - ii. Unstructured interview
Meaning is the types of interview in which a researcher asks respondent different questions, the questions tend to vary from one respondent to another. **2marks**
- d) The merits and demerits of an interview are as follows
- i. Merits **4marks**
 - ✚ It includes both literacy and illiteracy respondents
 - ✚ It is flexible
 - ✚ It is not expensive
 - ✚ It provides best detailed information
 - ii. Demerits **4marks**
 - ✚ Time consuming
 - ✚ It is affected by language problems
 - ✚ It is difficult in data analysis
 - ✚ It is difficult to conduct when population is scattered
- e) Importance of applying reconnaissance research are **4marks**
- i. It will enable a researcher to know the cost that will be used.
 - ii. It will enable a researcher to be familiar with the area in which a research will be conducted.
 - iii. It will enable a researcher to select the tools that will be used in data collection, example interview method.
 - iv. It will enable a researcher to select a type of transport that will be used in collecting the data.

2. Answer

- a) The percentage area of map is obtained as follows

From map scale 1:50000 after conversion from constant scale $1\text{km}=100000\text{cm}$ is equal to $1\text{cm}=1/2\text{km}$

Area of one squire will be done through changing its squire length into km, that is

$$1\text{cm}=1/2\text{km}$$

$$2\text{cm}=?$$

$$1\text{cm} \times 2 = 2\text{cm} \times 1/2\text{km}$$

$$X = 1\text{km}$$

Therefore the the area of one squire is obtained by SIDE X SIDE

The length of one side of the squire is 1km

Therefore the area of one squire will be $1\text{km} \times 1\text{km} = 1\text{KM}^2$

In finding the percentage area the students should first find the area of a whole map and then the area of lake Victoria.

- i. The whole area will be:

$$\text{Full square} = 168$$

$$\text{Half squire} = 56/2 \text{ will be } 28$$

$$168 + 28 = 196 \text{ full squire}$$

$$\text{The area of a whole map will be } 1\text{km}^2 \times 196 = \mathbf{196\text{km}^2}$$

- ii. The area of lake victoria will be:

$$\text{Full square} = 24$$

$$\text{Half squire} = 61/2 \text{ will be } 30.5$$

$$24 + 30.5 = 54.5 \text{ full squire}$$

$$\text{The area of a whole map will be } 1\text{km}^2 \times 54.5 = \mathbf{54.5\text{km}^2}$$

$$\text{The percentage area of lake victoria will be } \mathbf{54.5\text{km}^2 \div 196\text{km}^2 = 0.278\text{km}^2}$$

$$\mathbf{0.278\text{km}^2 \times 100\% = 27.8 \% \text{ or } 28\%}$$

The percentage area of lake victoria is **27.8 % or 28%**

5marks

- b) The two drainage that is found on the map are **2marks**
- Lake example lake victoria
 - River example mirongo river
- Other drainage seasonal swamp eg; nyamalele
- c) The three processes that is responsible for the formation of different landforms are **3marks**
- Volcanicity due to the presense of hills like kagela hill and nganza hill and any other hills.
 - Weathering due to the presence of nyabusalu hill, scattered cultivation, seasonal swamps
 - Erosion due to the presense of coastal landscapes such as bay like kilumba bay, cliffs near ihumilo hill and butimba hills.
- d) Geological structure of the area is dominated by **2marks**
- Igneous rocks due to presens of hills and cultivation area example bulale hill and nyegezi agriculture institute
 - Sedimentary rocks due to the presense of rivers and seasonal swamps example malenja swamp and miongo river
- e) The hemisphere of a mapped area is southern hemisphere this is because the latitudinal location which indicated is $2^{\circ}35''$ and Mwanza is in south of equator **1marks**
- f) The climate of the mapped area is equatorial climate, due water bodies found like lake Victoria and latitudinal location found is $2^{\circ}35''$ **2marks**

3. Answer

- a) Data given

Photo scale 1:20,000

Focal length is 152mm

H ?

h = 2000m

vertical height = H-h

From photo scale = $F/H-h$

where by f = focal length, H = flying height of aircraft above the sea level and h = flying height of the ground above the sea level.

$$1/20000 = 152\text{MM}/H - 2000\text{M}$$

$$(152\text{mm} = 0.152\text{m})$$

$$H - 2000\text{M} = 0.152\text{M} \times 20000$$

$$H - 2000\text{m} = 3040\text{m}$$

$$H = 3040\text{m} + 2000\text{m}$$

$$H = 5040\text{M}$$

Vertical height will be H-h, which will be $5040\text{m} - 2000\text{m} = 3040\text{m}$

Vertical height will be 3040M

6%marks

- b) Map and photographs have the following similarities **1%@1 =4**
- Both maps and photographs represent parts of the earth's surface.
 - Both can be used to show positions and location of place and a features
 - Both use scales to represent the geographical information
 - Both are used to store geographical data for the future use.
- c) The following are the value of aerial photographs **1%@1 =5**
- It gives the best view of the ground.
 - Are useful for military purpose.
 - It give plan for land use
 - It is good for wild life population census.
 - It cover large area

SECTION B

4. Answer

Introduction 1%

Manbody 3%@1 six points

The processes that Juma will explain to his great grandfather are in two forms which are internal and external forces/processes. These forces/processes are responsible for the formation of different features or landforms and sometimes are called exogenic and endogenic processes

- a) Juma will explain the following in Internal processes,
- Earth movements/diastrophism and related landforms such as rift valley, block mountain e.t.c
 - Earthquakes and its effect such as faulting
 - Vulcanicity and related landforms such as caldera, dyke, sill, composite cone and others
- b) Juma will explain the following in External processes,
- Weathering and its effect such as formation of exfoliation dome
 - Mass wasting and its effect such as soil creep, rock fall, land slide and others
 - Erosion and deposition, agents of erosion and deposition should be involved that is water, wind, wave and glacial and related landforms such as rock pedestal, arête, cliff, tombolo, lagoon, interlocking spurs e.t.c

Conclusion 1%

5. A candidate should explain the three theories of origin of the coral reefs as follows:-

INTRODUCTION01.5 MARKS

Each theory(3points)04@= 12 marks

Distribution of coral reefs(5points)01@= 05 marks

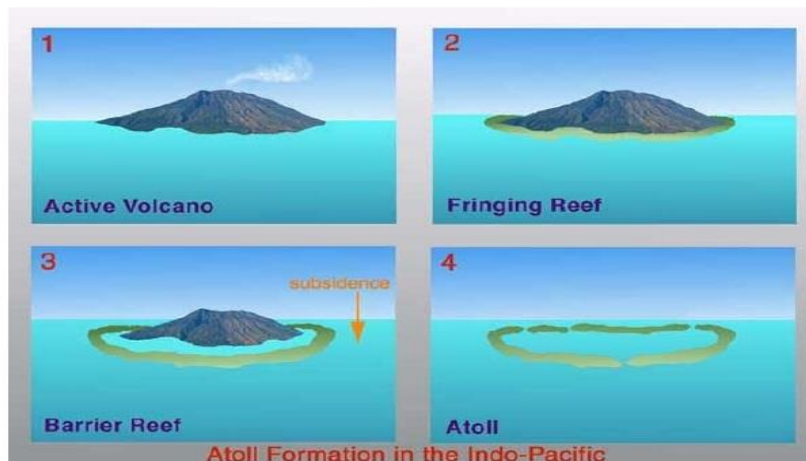
Conclusion01.5 mark

Darwin's theory

Darwin suggested that both barrier reefs and atolls form from fringing reef which develops around an island. An island begins to subside but the coral continues growing upward to keep pace with the rising level of the sea. Growth was more outward than landward which over time led to formation of barrier reef.

When the island was completely submerged and covered with water an atoll was formed.

After Darwin



Daly's theory

He focused his attention on atolls only. He argued that during glacial period coral reef was not forming due to low temperatures. Thus waves and melting ice erode and reduced an island and flattened them to same level as the sea at that time.

At the end of ice age temperature started to rise again and create favorable condition for coral formation. As water continues to rise coral reef also grows with relation to melting water to form atoll.



Murray's theory:

The formation of the barrier reef does not involve subsidence. He argues that coral reefs might have grown as a result of deposition of the coral debris on the seaward sides of the fringing reef. The deposited materials eventually form a base for further growth of polyps.

The material deposited on the main hills or plateaus reduce the depth of the oceans thus making them sunlight and consequently the condition becomes conducive for polyps' habitation. As these polyps die, they lead to the growth of coral reefs.

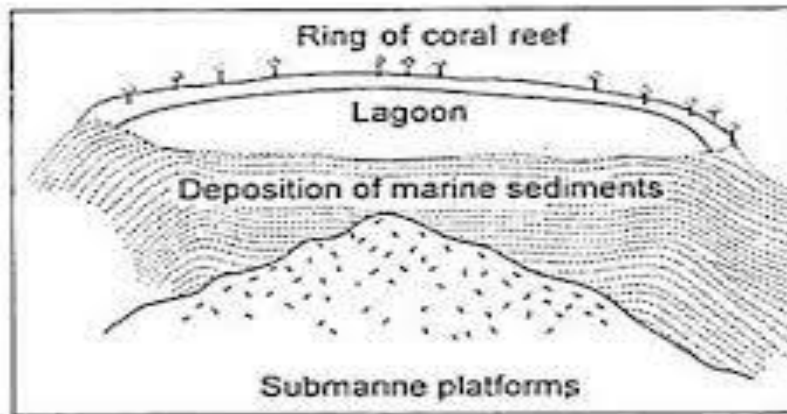


Fig. 30.6 : Formation of coral reefs according to Murray.

The specific areas with coral reef include the following

- Along the edges of continents, for example, Along the edge of Australia where there is the greatest Barrier Reef of the world.
- Around island shores in the Pacific Ocean, for example, New Guinea and Caledonia
- Around the shores of volcanic peak especially in central and western pacific for example, Fiji and Samoa islands.
- In the Atlantic Ocean in the west Indian Archipelago where there is a group of Islands
- Around some islands in the Indian Ocean for example, Mauritius and Seychelles.

6. Answer

Introduction 1%

Soil classification refers to the grouping or classification of soil into classes according to their general characteristics.

Main body 3% @ 1 six points

The following are the criteria / factors for soil classification

- i. Climatic variations
- ii. Morphological properties of soil like depth, color etc
- iii. Genesis or modes of formation, processes for soil formation
- iv. Time or stage, zonal, azonal and intra zonal soil
- v. Suitability to agriculture, fertile or infertile soil
- vi. Drainage of soil. As well drained or poorly drained.

Conclusion 1%

7. ANSWERS

Introduction01 mark

Main body02 marks@8= 16 marks

Conclusion01 mark

INTRODUCTION, a candidate should explain 4 events associated with atmospheric stability and other 4 events associated with atmospheric instability in the atmosphere.

Atmospheric conditions refer to the state or characteristics of the Earth's atmosphere at a specific location and time. These conditions include various factors such as temperature, humidity, air pressure, wind speed and direction, cloud cover, and precipitation. Atmospheric conditions can vary widely from one place to another and can change rapidly due to weather systems, such as fronts, storms, and atmospheric disturbances. Understanding atmospheric conditions is essential for weather forecasting, climate analysis, and assessing environmental impacts on human activities and ecosystems.

Events associated with atmospheric stability include:

- i. **Clear Skies:** Stable air inhibits vertical movement, leading to the suppression of cloud formation. This often results in clear skies and generally fair weather conditions.
- ii. **Temperature Inversions:** Stable conditions can lead to the development of temperature inversions, where warmer air is trapped above cooler air near the surface. This can result in the trapping of pollutants and fog formation, particularly in valleys and urban areas.
- iii. **Radiation Fog:** During stable conditions, especially at night, the ground cools rapidly by radiating heat into the atmosphere. If the air near the surface is moist and stable, this cooling can lead to the formation of radiation fog, which reduces visibility.
- iv. **Smog and Pollution Trapping:** Stable conditions can trap pollutants, such as smog and particulate matter, close to the surface. This can result in poor air quality, especially in urban areas with high emissions.
- v. **Stable Air Masses:** Stable air masses tend to be associated with high-pressure systems, which often bring dry and stable weather conditions over a region for an extended period.

Some common events associated with atmospheric instability include:

- a. **Thunderstorms:** Instability in the atmosphere can lead to the rapid upward movement of warm, moist air, which can result in the formation of cumulonimbus clouds and thunderstorms. These storms often bring heavy rain, lightning, strong winds, and sometimes hail.
- b. **Tornadoes:** In particularly unstable atmospheres, thunderstorms can organize into rotating supercells, which may produce tornadoes. Tornadoes are violent columns of rotating air extending from a thunderstorm to the ground, capable of causing significant damage.
- c. **Convective Clouds:** Instability can cause the rapid development of convective clouds, such as cumulus and cumulonimbus clouds. These clouds are associated with vertical motion and can produce precipitation, including heavy showers or intense downpours.
- d. **Vertical Wind Shear:** Instability combined with wind shear (changes in wind speed and direction with altitude) can enhance the organization and intensity of thunderstorms. This can lead to severe weather events such as squall lines, bow echoes, and derechos, characterized by strong, damaging winds over a wide area.
- e. **Atmospheric Turbulence:** Instability can also lead to increased turbulence in the atmosphere, affecting aviation and causing discomfort for passengers on aircraft. This turbulence can be especially prevalent near convective clouds and thunderstorms.

Overall, atmospheric instability can result in a wide range of dynamic and potentially hazardous weather phenomena.

Any relevant conclusion