

(a) (i) Name two types of environment (3mks)

- Physical environment
- Human environment

(ii) State Four main areas that are studied in physical geography. (4mks)

- The earth and the Solar System.
- The internal landforming processes.
- The external landforming processes.
- Weather and Climate
- Soils and Vegetation

(iii) Identify three areas that are studied in practical Geography. (3mks)

- Photography
- Mapwork
- Statistics
- Fieldwork.

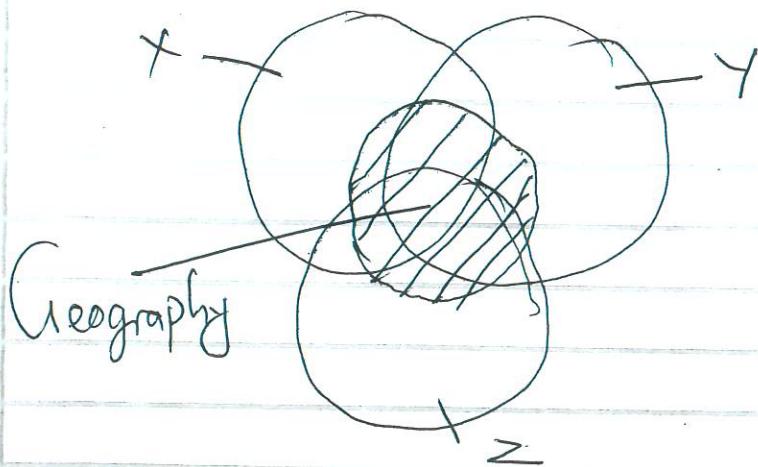
(b) Explain the importance of Geography to a learner. (8mks)

- Enables learners to develop skills in map reading, data analysis and interpretation.
- It is a career subject - Surveyor
- Enables learners to appreciate and understand the environment
- Enables learners to use natural resources for economic development

- creates international awareness and understanding.
- promotes national unity through fieldwork studies & other Societies.
- To acquire knowledge on collecting geographical data.
- teaches one how to manage time properly by draw'g time schedule during fieldwork.
- To learn and explain the origin of the earth, the Solar System and the internal structure of the earth

any $4 \times 2 = 8$ mks.

- c. Study the diagram of Centrality of geography below.
 Name the parts labelled X.Y.Z
 (3 mks)



X - Earth Science
 Y - Social Science.
 Z - Geometrical Science.

for W
1.

2(a)(i) Name four components of the Solar System. (4mks)

- Sun
- Planets
- Natural satellites / moons.
- Asteroids
- Comets
- Meteors / meteorites / meteorites.

(ii) State four characteristics of planet Earth. (4mks)

- Third planet from the Sun
- Rotates on its own axis.
- Supports life
- 149 Million Km away from the Sun.
- Revolves around the Sun.
- Has one satellite.

(iii) Explain how the Earth was formed according to the passing star theory. (5mks)

- The Sun existed earlier than the planets.
- A ~~big~~ ^{with} star, greater gravitational pull passed near the Sun.
- The star pulled a large volume of gas materials from the Sun.
- The gas materials exploded and split into portions which cooled and condensed to form planets.
- The planets were then set on their orbits.

(iv) Give three weaknesses of the passing star theory. (3mks)

- Chances of another star passing near the sun are almost nil.
- Origin of the sun is not explained
- The hot gaseous materials should have dispersed rather than condense.
- The materials should have followed the star as it had greater gravitational pull.
- The effects of the star setting planets on their orbits would have reduced.

(b) (ii) Describe the forces that resulted to the spherical shape of the Earth. (6mks)

- Gravitational force - The force pulls everything on Earth towards the centre causing a sounding effect on the Earth's shape.
- Centrifugal force - Cause bulging at the equator.
- Centripetal force - Cause flattening at the poles.

(ii) What is the local time in Busia town, 34°E when local time in Athi River town, 37°E is 12.05pm. (2mks)

$$\text{Diff. in degrees} = 3^{\circ}$$

$$3 \times 4 = 12 \text{ min.}$$

$$\begin{array}{r} 12.05 \\ - 12 \\ \hline \end{array}$$

(ii) What is an atmosphere? (2mks)

It is a thin layer of gases / air surrounding the Earth.

(iii) Name four Components of the atmosphere.

- Gases or air (4mks)

- Water vapour or moisture.

- Hygroscopic particles: pollen grains, salt dust; smoke

c(i) What is an atmosphere?

(2mks)

The atmosphere is a thin layer of gases surrounding the earth and held by the earth's gravitational pull.

(ii) Name four components of the atmosphere.

(4mks)

($4 \times 1 = 4$ mks) - Gases

- Dust particles

- Water Vapour / Moisture

- Smoke particles

3(a)(i) Define the term precipitation.

(2mks)

These are all forms of moisture which fall from the atmosphere towards the earth surface.

(ii) Name three forms of atmospheric precipitation that are common in Kenya.(3mks)

Rain

Mist and fog

Hail

Thunderstorms

Dew

(Any 3 $\times 1 = 3$ mks)

(iii) Explain three conditions necessary for the formation of dew to take place. (6mks)

- Daytime should be warm, this accelerates evaporation hence leading to presence of abundant water vapour in the air.
- The air should be calm so that it can remain in contact with the ground long enough to be cooled below its dew point.
- Nighttime should be cloudless so as to accelerate terrestrial radiation.

($3 \times 2 = 6$ mks)

b(i) Apart from relief rainfall, name other two types of rainfall.

(2mks)

Convectional Rainfall

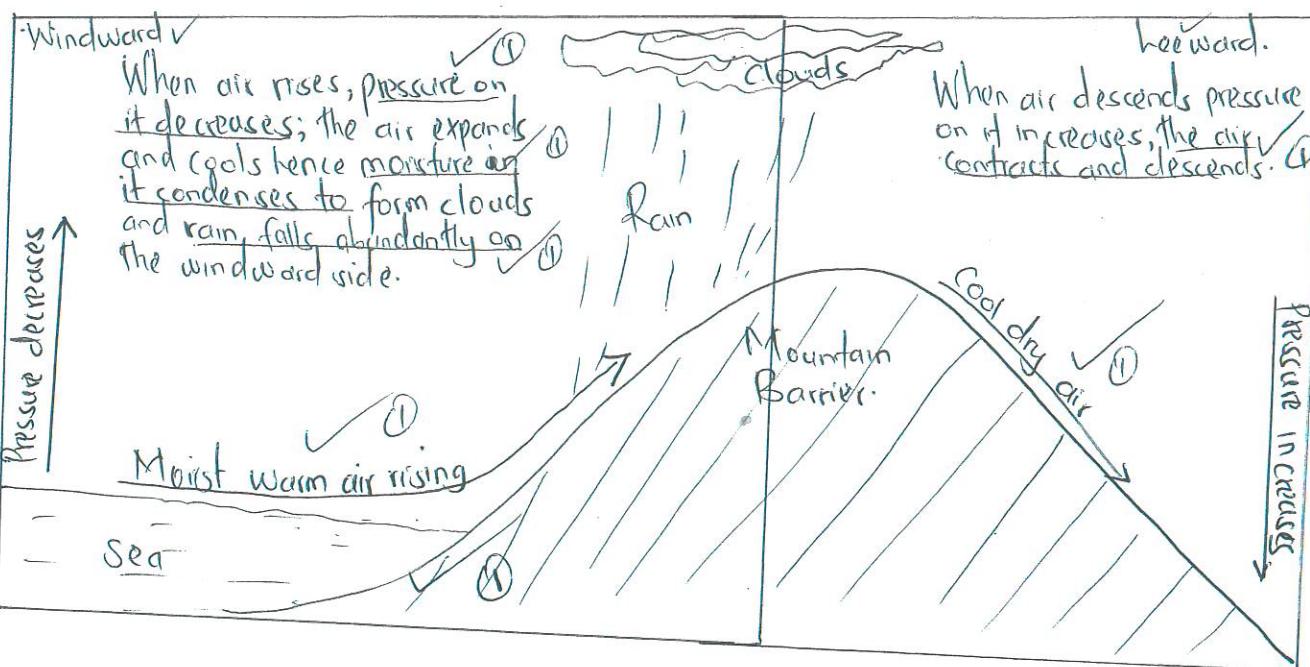
Frontal Rainfall

($2 \times 1 = 2$ mks)

(ii) With an aid of a diagram explain how relief rainfall is formed.

(8mks)

Diagram
4mks
Explanation.
4mks

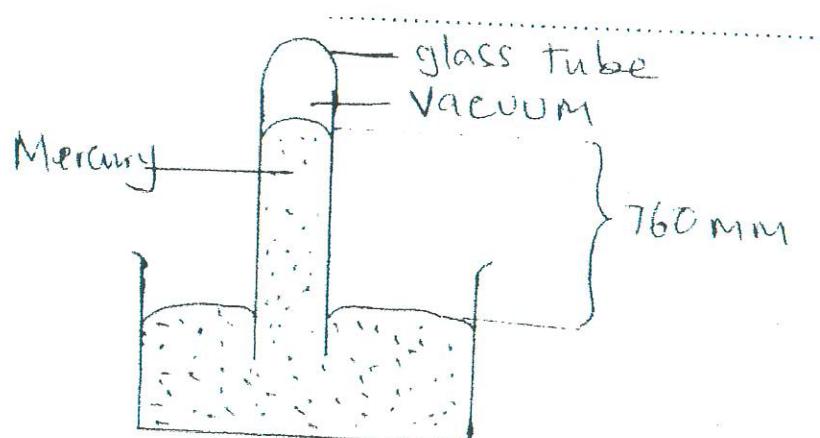


c.) Differentiate between relative humidity and absolute humidity.

(4mks)

Relative humidity is the actual amount of water vapour in a given volume of air at a particular temperature while, Absolute humidity is the ratio of actual amount of water vapour in a given mass of air to the maximum amount of water vapour this mass can hold at the same temperature.

d)



- (i) Name the instrument shown above. (1mks)

Mercury barometer.....

- (ii) Explain how the instrument above is used to measure atmospheric pressure. (6mks)

It contains a glass tube filled with mercury and immersed upside down into a bowl of mercury leaving a vacuum at the top. The mercury in the container supports a column of mercury in the tube to a height of 760 mm at sea level. The column of mercury is supported by air pressure outside the tube; when pressure drops, the column reduces; when pressure increases, the column rises. Readings are taken in millimetres of mercury (mmHg) and recorded.

- e) State four characteristics of the troposphere. (4mks)

- i) lowest level of the atmosphere extends 8km at the poles and 13km at the equator.
Any 4 ✓
(4x1-4mks)
ii) The troposphere contains most of the weather making constituent.
iii) Within the troposphere temperatures decrease with height. It has an environmental lapse rate.
iv) Pressure within the troposphere falls with increase in height.
v) The layer contains most of atmospheric water vapour, cloud, dust, hence very unstable.
vi) It is a life supporting layer within which organisms survive.

- 4.(a) Define the following terms.

- (i) Statistics. (2mks)

.....
.....

- (ii) Statistical data. (1mk)

.....
.....

FORM 1

4(a). Define the following terms.

(i) Statistics.

(2marks)

- Exact numerical facts and figures collected systematically and arranged for a particular purpose.

(ii) Statistical data

(1mk)

Information presented in numerical form.

(iii) Name three forms of statistical data

(3marks)

- Discrete data
- Continuous data
- Individual data
- Grouped data.

b) Apart from observation, identify four other methods of collecting data. (4marks)

- Interviews
- Administering a questionnaire
- Counting
- Taking measurements
- Experimentation (Carrying out experiments)
- Taking photographs.

(iv) State three advantages of observation as a method of collecting data. (3marks)

- Provide first-hand information.
- Provide reliable data.
- Time saving since one doesn't have to look for data elsewhere.

- (ii) Outline ~~the~~^{four} methods of recording data. (4mks)
- filling in questionnaires
 - Tallying
 - Field sketching
 - Mapping.
 - Taking notes
 - Tabulation.
 - Tape recording
 - Taking photographs / videos.
 - Labeling samples.

(c) Fifteen students in form four class have the following ages.

i) What is the mode of the set
18, 17, 19, 16, 16, 20, 19, 16, 18, 18, 20, 19, 16, 17, 16.

ii) What is the mode of the set of data. (1mk)
16 ✓

iii) Calculate the median of the data. (2mks)
16, 16, 16, 16, 16, 17, 17, 18, 18, 18, 19, 18, 19, 20, 20
 $= \underline{18}$

iv) Calculate the mean of the age of the students. (2mks)