GEOGRAPHY PAPER
FORM 2
TERM 3 2017
2017

MARKING SCHEME

1. Explain the relationship between Geography and the following subjects. (4 marks)

(a) History

history uses geographical tools like maps, charts and graphs to show where past events took place e.g. the movement of people in the past.

(b) Biology

Geography explains the distribution of organisms and factors influencing their distribution on the earth's surface

2. State **two** weaknesses of the passing star theory in its attempt to explain the origin of the solar system. (2 marks)

- ✓ **Doesn't explain the origin of the sun and star.**
- ✓ **Minimal chance of a star approaching another**
- ✓ **Materials would disperse than condense**

3. Give **three** characteristics of planets. (3 marks)

- ✓ **Spherical in shape**
- ✓ **Don't have their own light but reflect it from the sun.**
- ✓ **Revolve around the sun in anticlockwise direction.**
- ✓ **Have their own force of gravity**
- ✓ **Only one is known to support life.**

4. (a) What is relative humidity? (1 mark)

Ratio between the absolute humidity and the maximum amount of water the air can hold expressed in a percentage.

b) If the air at 20C contains 12g/m3 and given air can hold a maximum of 20g/m3, calculate the relative humidity. (2 marks)

10×100/20=50%

5. List **three** factors that influence wind flow. (3 marks)

- ✓ **Pressure Gradient**
- ✓ **Distance between Places of High and Low Pressure**
- ✓ **Rotation of the earth**
- ✓ **Frictional Force**

6. State **three** limitations of using observation as a method of collecting data. (3 marks)

- ✓ **Data on past activities isn't available.**
- ✓ **May be hindered by weather conditions e.g. mist and dust storms.**
- ✓ **Ineffective for people with visual disabilities.**
- ✓ **Tiresome and expensive as it involves a lot of travelling because physical presence is required**

7. List **two** examples of Ferrous Minerals. (2 marks)

- ✓ **Limonite**
- ✓ **Magnetite**
- ✓ **Siderite**
- ✓ **haematite.**

8. Highlight how soda ash mining has led to the development of Kenya. (2 marks)

- ✓ **Has led to growth of Magadi town ship.**
- ✓ **Has led to development of social amenities such as hospitals and schools.**
- ✓ **Has led to development of infrastructure e.g. railway line from Konza to L.Magadi.**
- ✓ **The Magadi Soda Company employs many Kenyans including the nomadic Maasai.**
- ✓ **Exports of soda ash earn Kenya a substantial amount of foreign exchange**

9. (a) Define horizontal earth movements. (1mark)

Movements which act along a horizontal plane within crustal rocks.

(b) Name the features that are formed as a result of horizontal earth movements. (2 marks)

- ✓ **fault**
- ✓ **rift valleys**
- ✓ **fold mountains**
- ✓ **escarpments**
- ✓ **basin**
- ✓ **tilt block**
- ✓ **block mountains**

SECTION B (75 Marks)

10. (a) study the type of rainfall below and use it to answer questions that follow.

(i) What type of rainfall is above? (1 mark)

Cyclonic/frontal rainfall

(ii) In which areas is this type of rainfall common? (1 mark)

Common in mid-latitudes

(iii) Describe how this type of rainfall is formed. (4 marks)

- ✓ Warm moist air mass meets with a cold air mass.
- ✓ The warm air is forced to rise as it's less dense.
- ✓ It cools as it rises at the line of contact with cold air.
- ✓ The moisture condenses forming clouds resulting in frontal rain.

(b) Explain **four** factors influencing rainfall types and amounts. (8 marks)

1.**Relief/Topography**

Relief features such as mountains and hills results in the rising and cooling of moist winds to form relief rainfall.

2.Aspect

Windward slopes which are on the path of rain bearing winds receive heavier rainfall than leeward slopes which face away.

3.Forests and Water Bodies

Areas near forests and large water bodies experience higher rainfall and more often due to high rate of evaporation.
4.air pressure
High pressure areas receive low rainfall than low pressure areas due to pushing of air masses from high pressure to low pressure. The high pressure areas have descending dry air.
5.air masses
When warm and cold air masses meet frontal rainfall is formed.
6.Ocean Currents
It influences rainfall whereby coasts washed by warm ocean currents experience heavy rainfall when moist onshore winds are warmed by the current and made to hold on to moisture which they release on reaching the land.

(c) Below is a picture. Use it to answer the questions that follow.

(i) What name is given to a place shown in the picture? (1 mark)

Weather Station

(ii) Mention three activities that are normally done in this place. (3 marks)

- ✓ **Observation of weather elements**
- ✓ **Measuring of weather elements.**
- ✓ **Recording of weather elements**

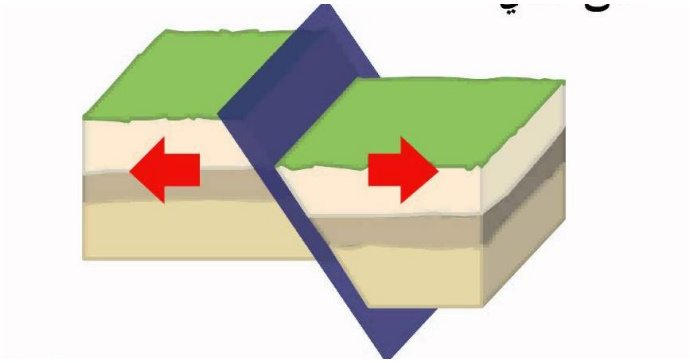
(iii) State three factors that must be taken into account when sitting the place in the picture. (3 marks)

- ✓ **An open place where there is little obstruction of weather elements.**
- ✓ **Accessible place so that recording can be done easily.**
- ✓ **A fairly level or gently sloping ground (5◦) so that it's easy to position weather instruments.**
- ✓ **The place should provide a wide view of the surrounding landscape and the sky.**
- ✓ **The site should be free from flooding.**
- ✓ **The place should have security**.

iv) Giving their uses, name four instruments found in the place shown. (4 marks)

- ✓ **Thermometer-temperature**
- ✓ **Hygrometer-humidity**
- ✓ **Rain gauge-rainfall**
- ✓ **Barometer-air pressure**
- ✓ **Sunshine recorder-sunshine duration and intensity**
- ✓ **Wind vane –wind direction**
- ✓ **Anemometer-wind speed**
- ✓ **Evaporimeter-rate and amount of evaporation**.

11. Study the feature below and then answer questions that follow.



(i) Identify the feature above. (1 mark)

A fault

(ii) On the picture, label at least five of its parts. (5 marks)

(iii) Explain three instances when the feature is formed. (6 marks)

- ✓ **When tensional forces cause crustal rocks to fracture at the region of maximum tension.**
- ✓ **When shear forces cause crustal rocks to tear.**
- ✓ **When compressional causes squeezing of crustal rocks to fracture at the areas where they are intensely squeezed.**
- ✓ **When vertical movements exert pressure on rocks leading to fracturing.**

(iv) List **four** types of the feature above. (4 marks)

- ✓ **Normal faults**
- ✓ **Reverse fault**
- ✓ **Shear/tear fault**
- ✓ **Thrust fault**
- ✓ **Anticlinal fault**

(b) (i) State three natural causes of earthquake. (3 marks)

- ✓ **Tectonic movements**
- ✓ **Vulcanicity when magma movement displaces rocks suddenly**
- ✓ **Gravitative force when crustal rocks collapse**
- ✓ **Energy release inn the mantle**
- ✓ **Isostatic adjustments**

ii) Explain three effects of earthquake. (6 marks)

- ✓ **Can cause loss of life and property when buildings collapse burying people.**
- ✓ **Disrupt transport and communication by vertically and laterally displacing land which disconnects pipelines, etc**
- ✓ **Causes landslides which also cause loss of life and property and disrupts communication.**
- ✓ **Causes rising and lowering of the sea floor and the coastal regions.**
- ✓ **Cause huge sea waves called Tsunami which may flood the neighbouring coastal areas.**

12. Study the two photographs below carefully and then answer questions that follow.

Figure 1

Figure 2

(a) (i) Identify the type of photograph represented by: (2 marks)

I. Figure 1

Vertical aerial

II. Figure 2

Oblique aerial

ii) From where can the above photographs be taken? (2 marks)

aircrafts/balloons /satellites

(iii)Give the main difference(in terms of how they are taken) between 1 and 2. (2 marks)

2 is taken from the air with camera tilted towards the ground while 1 is taken from the air with the camera directly above the object or scenery.

iv) Explain three advantages type of photograph 1 has over photograph 2. (6 marks)

- ✓ **An oblique photograph covers much more ground area than a vertical photo taken from the same altitude and with the same focal length.**
- ✓ **If an area is frequently covered by cloud layer, it may be too low and/or impossible to take vertical photographs, but there may be enough clearance for oblique coverage.**
- ✓ **Oblique photos have a more natural view because we are accustomed to seeing the ground features obliquely. For example, tall objects such as bridges, buildings, towers, trees, etc. will be more recognizable because the silhouettes of these objects are visible.**
- ✓ **Objects that are under trees or under other tall objects may not be visible on vertical photos if they are viewed from above. Also some objects, such as ridges, cliffs, caves, etc., may not show on a vertical photograph if they are directly beneath the camera.**
- ✓ **Determination of feature elevations is more accurate using oblique photograph than vertical aerial photographs.**
- ✓ **Because oblique aerial photos are not used for photogrammetric and precision purposes, they may use inexpensive cameras.**

(b) What is a photograph? (2 marks)

A photograph is an image of an object, person or scene recorded by a camera on a light sensitive film or paper.

(c) List any **four** parts of a photograph. (4 marks)

- ✓ **Left back ground**

- ✓ **Centre background**
- ✓ **Right background**
- ✓ **Left middle ground**
- ✓ **Centre middle ground**
- ✓ **Left middle ground**
- ✓ **Left foreground**
- ✓ **Centre foreground**
- ✓ **Right foreground**

(d) State **four** uses of photographs. (4 marks)

- ✓ **Used in learning geography because they bring unfamiliar features in the classroom enabling the students to understand them better.**
- ✓ **Photographs showing vegetation and human activities can be used to deduce the climate of an area.**
- ✓ **Aerial photographs show vital information on land use.**
- ✓ **Photographs showing land forming processes help us to understand those processes.**

(e) State **three** limitations in the use of photographs. (3 marks)

- ✓ **Black and white photographs don't show the real colours of objects or scenery e.g. it's difficult to distinguish ripe coffee berries from green ones.**
- ✓ **Some aerial photographs have objects which are far away and hence unclear which may lead to the wrong interpretation.**
- ✓ **Vertical aerial photographs are difficult to interpret without special instruments like stereoscopes.**
- ✓ **Photographs are difficult to interpret if theyare brulled because it's difficult to distinguish objects which look similar e.g. wheat and barley**.
- ✓ **Coloured photographs are generally expensive to produce.**