**GEOGRAPHY PAPER 1**

**FORM THREE**

**END OF TERM 2 – 2019**

**TIME: 2 ¾ HOURS.**

**MARKING SCHEME:**

**SECTION A: (Answer all questions in this section)**

1. (a) Give two components of the solar system. (2mks)
   * ***the sun***
   * ***the planets***
   * ***Asteroids.***
   * ***Meteors.***
   * ***Comets.***

(b) State three effects of the movement of the earth around the sun. (3mks)

* + ***Change the position of the midday sub at different times of the year.***
  + ***Varying length of day and night.***
  + ***Causes the four seasons.***
  + ***Causes the lunar eclipse.***

1. (a) How does a land breeze occur? (2mks)

***This is the movement of the cool air from the land to the sea.***

(b) Name three ocean currents found on the coasts of West Africa. (3mks)

* + ***Benguela currents***
  + ***Guinea currents***
  + ***Cannary currents***

1. The diagram below represents a barchans, use it to answer question (a).
2. (i) Name the feature marked X. (1mk)

***Horns***

(ii) The air current marked Y. (1mk)

***Eddy current***

(iii) The slope marked Z. (1mk)

***The steep concave leeward slopes.***

1. State two ways in which wind transports its loads. (2mks)
   * ***Suspension***
   * ***Saltation***
   * ***Surface creep***
2. The diagram below shows a composite volcano.
3. Name the features marked P, Q, R. (3mks)

***P – Crater***

***Q – Lava layers***

***R – Dyke***

1. Give two ways in which vulcanicity influences human activities. (2mks)
   * ***The lower slope are suitable for agricultural activities.***
   * ***Scenic beauty, the mountains attracts tourists.***
   * ***Expose minerals which are mined.***
2. (a) What is the difference between ice sheet and ice berg? (2mks)

***An ice sheet is a large continuous mass of ice covering a vast area of land while an iceberg is a large mass of ice a floating in a large water bodies.***

(b) Name three types of glacier moraine. (3mks)

* + ***Laterial moraine***
  + ***Medial moraine***
  + ***Terminal moraine***
  + ***Ground moraine.***

SECTION B:

Answer question 6 and any other TWO questions from this section.

1. Study the map of Oyugis 1:50,000 (sheet 130/1) provided and answer the following questions.
2. (i) What is the four figure reference of Kokungu dam? (2mks)

***7134***

(ii) What is magnetic variation of the map? (1mk)

***Oo52’***

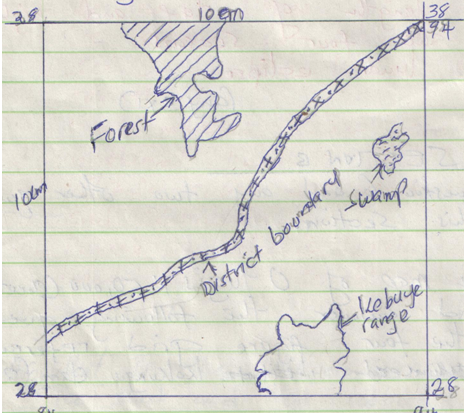
(iii) Calculate the area covered by Kodera forest. Give your answer in square kilometer. (2mks)

***14 half square =***

1. Draw a square 10cm by 10cm to represent the area enclosed by Easting 84 and 94 and Northing 28 and 38. (1mk)

On the square, mark the name;

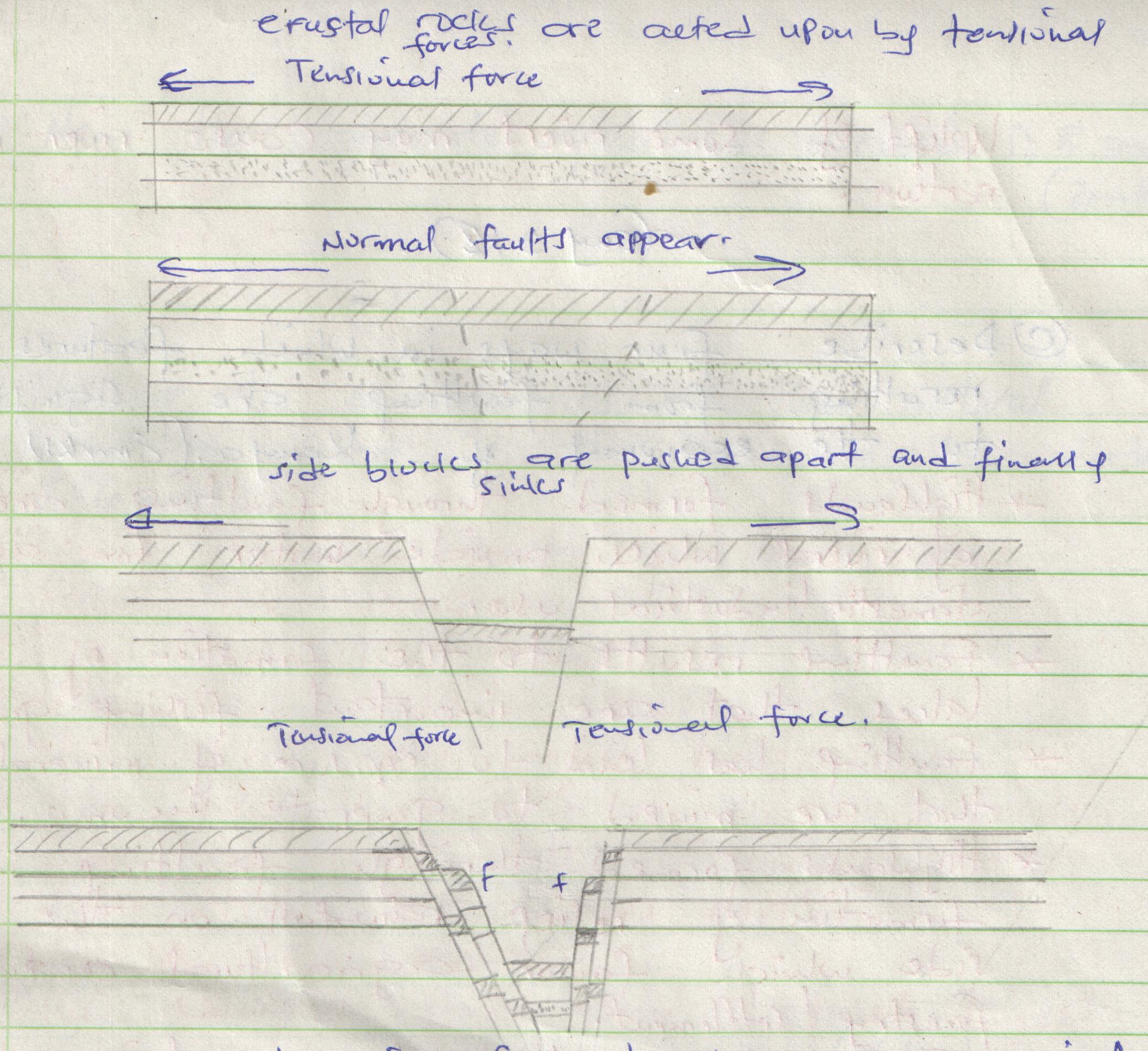
1. Forest (1mk)
2. Swamp. (1mk)
3. District Boundary. (1mk)
4. Range. (1mk)



1. Describe the relief of the area covered by the map. (6mks)
   * ***The highest point is approximately 6025 feet (6001-6049), while the lowest point is slightly 3750 feet.***
   * ***There are many hills in the area.***
   * ***There is a pass between Nyatworo and Nyandiere hills.***
   * ***The eastern part has many river valleys.***
   * ***The south west region is undulating due to widely spaced contours.***
   * ***The south eastern part is highly descended due to many river valleys.***
2. Identify three social service of Kamangambo trading centre. (3mks)
   * + ***Educational services***
     + ***Health services.***
     + ***Religious services.***
3. Citing evidence from the map, explain three factors that favour farming. (6mks)
   * ***High rainfall evidenced by many rivers offer suitable conditions for growing crops.***
   * ***Labour evidenced by dense settlements offering labour during farming of crops.***
   * ***Transport evidenced by many roads that facilitate transportation of the crops from the farm to the factory for processing.***
4. (a) (i) Apart from the Rift valley, name other relief feature formed as a result of faulting. (3mks)
   * ***Fault scarp***
   * ***Block/ horst mountain.***
   * ***Tilt block.***

(ii) With the aid of a well labeled diagram, describe how Rift Valley may have been formed by tensional forces. (8mks)

* + ***layers of the rocks are subjected to tensional forces when there is some instability within the earth’s crust.***
  + ***Line of weakness occur leading to development of adjacent normal faults.***
  + ***The central block eventually sinks as the side blocks are pulled apart.***

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(b) Explain three ways in which faulting influences drainage system. (6mks)

* ***Uplifting landscape which may cause a change of flow of a river.***
* ***Vertical faulting across a river may cause change of the base level resulting in the formation of waterfalls.***
* ***Some rivers may disappear into the ground through fault guided drainage patterns.***
* ***Some rivers may disappear into the ground through a fault forming underground stream.***
* ***Uplift of some rivers may cause river rejuvenation.***

(c) Explain four ways in which features resulting from faulting are of significance to the economy of Kenya. (8mks)

* ***Highlands formed through faulting are sources of rivers which provide water for agriculture, domestic and industrial use.***
* ***Faulting has led to exposure of minerals that are mined to generate income.***
* ***Faulting results to the formation of Lakes that are important fishing grounds.***
* ***Highlands formed through faulting influence formation of relief rainfall on the windward sides which favour farming.***
* ***Faulting has resulted to formation of deep faults which are passage of stream jets that are harnessed to generate electricity.***

1. (a) What is natural vegetation? (2mks)

***Natural vegetation is a plant cover that grows wildly on the earth surface without interference from man and his animals.***

(b) Name the temperate grassland found in the following countries.

1. Canada. (1mk) - ***Prairies***
2. Russia (1mk ***– Steppers***
3. Australia. (1mk) – ***Downs***

(c) Explain how precipitation influences distribution of vegetation in an area. (4mks)

* ***Moisture is an essential commodity for survival of plants.***
* ***It is the various forms of precipitation which provide moisture to plants through the soil.***
* ***The amount of rainfall a region receives determines the type of plants that would grow.***
* ***Heavy rainfall in a region of high temperature would support vegetation grown.***

(d) Describe the characteristics of the Savannah vegetation region. (6mks)

* ***Savannah vegetation is a mixture of trees and grass.***
* ***The dominant type of vegetation is grass.***
* ***Most of the trees are umbrella shaped.***
* ***Most trees are acacia.***
* ***Most of the trees are deciduous.***
* ***Some trees have long roots.***
* ***Most seeds are dominant during the dry season.***

(e) Give two reasons why Tundra region has scanty vegetation. (2mks)

* ***Temperatures are too low to support vegetation.***
* ***The surface is mainly bare rock.***
* ***Water is always in frozen state.***

(f) You are planning to carry out field study in a forest within your district.

1. Give four reasons why it is important to seek permission. (4mks)

* ***Is an official requirement.***
* ***Enable the administration arrange for transport.***
* ***Enable the administration to take care of the disruption of school programme.***
* ***Enable the administration to provide entry fee if required.***

1. Identify four challenges you are likely to encounter during the field study. (4mks)
   * ***Attack by wild animals.***
   * ***Adverse weather conditions.***
   * ***Thick and thorny vegetation.***
   * ***Tiredness due to walking long distance.***
   * ***Inadequate time for data collection.***
   * ***Getting lost or loss of direction to follow.***
2. (a) (i) What is underground water? (2mks)
   * ***Body of water found in the pore spaces of a permeable rock layer underground and above the impermeable rock layers.***

(ii) Explain how the following factors influence the presence of underground water.

1. Amount of rainfall. (2mks)
   * ***High rainfall over a long period of time has led to more infiltration leading to a lot of underground water.***
2. Vegetation cover. (2mks)

***Plenty of vegetation cover on the ground reduce surface runoff allowing infiltration causing a lot of underground water.***

1. Slope gradient. (2mks)

***Gentle gradient allow more water infiltration into the ground leading to availability of more underground water.***

(b) (i) What is an artesian basin? (2mks)

***This is a saucer-shaped shallow depression consisting of a layer of permeable rock layer lying beneath two impermeable layers.***

(ii) State three conditions leading to the formation of artesian basin. (3mks)

* ***The Aquifer should be sandwiched between two impermeable rock layers to hold water.***
* ***The Aquifer should out crop in a region of high rainfall.***
* ***The permeable rock must form a syncline for water to have enough pressure.***

(c) (i) Identify three factors which influence the formation of Karst features. (3mks)

* + ***Presence of thick limestone to allow solubility of rain water.***
  + ***Hard and well jointed limestone to allow water to percolate.***
  + ***Hot and humid climate for chemical weathering.***
  + ***Deep water table to form underground Karst features.***

(ii) State four significance of Karst regions. (4mks)

* ***Karst region form unique scenery attracting tourist.***
* ***Limestone rocks are raw materials for cement manufacturing industry.***
* ***Karst region have their soil suitable for grazing sheep.***
* ***Limestone rocks are used in building construction industry.***

(d) Your class is planning to carry out field study in a Karst landscape.

1. Give two reasons why it is important to seek permission from the school authorities. (2mks)

* ***Form official requirement.***
* ***To enable administration arrange for transport.***
* ***To enable administration provide essential tools.***

1. Identify three challenges that you are likely to encounter during field study. (3mks)
   * ***Attack by wild animals such as snake.***
   * ***Harsh weather conditions high temperature.***
   * ***Rugged therein makes movement difficult.***
   * ***Injuries from sharp rocks.***
2. (a) What is a glacier? (2mks)

***A glacier is a mass of ice moving outward from an area of accumulation.***

(b) Give two reasons why there are no ice sheets in East Africa. (2mks)

* ***East Africa experiences high temperature.***
* ***Most parts of East Africa have low altitude.***
* ***East Africa is located at low latitude.***

(c) Describe the formation of the following glacial features.

1. Hanging valley. (6mks)

* ***There exist river valleys, both the main and tributary valley.***
* ***A glacier occupies former river valley.***
* ***Both the main and tributary valley are occupied by the glacier.***
* ***There will be more erosion on the main valley compared to tributary valley.***
* ***The main valley is therefore deepened and widened faster than tributary valley.***
* ***The suspended tributary valley forms a hanging valley.***

1. Arête. (6mks)

* ***Two adjacent cracks or hollows exist on a mountain side.***
* ***The two hollows or cracks are filled with ice.***
* ***The ice erodes the sides through plucking and deepens the hollow through abrasion.***
* ***Through erosion the back walls of the hollow slowly recedes and eventually the hollows are separated by a knife edged ridge.***
* ***The ridge is called an arête.***

(d) Name three erosional features found in glaciated lowland areas. (3mks)

* ***Crag and tail***
* ***Ice eroded plain.***
* ***Roche montonne***

(e) Explain three positive effects of glaciations in lowland areas. (6mks)

* ***Glacial till provide fertile soil suitable for farming.***
* ***Outwash plains comprises of sand and gravel used as building materials.***
* ***Glacial lakes in low lakes can be exploited for various economic vs such as fishing.***
* ***Glaciations forms features such as drumlins and askers which are tourist attraction.***