FORM FOUR CLUSTER KCSE MODEL9

GEOGRAPHY PAPER 1 ANSWERS

SECTION A (25 Marks)

Answer all questions

1. (a)

   -Clay stone

   -Siltstone

   –shale -mudstone

   (b)

   -New minerals are formed.

   -Minerals recrystalize further.

   -Rock particles become compacted.

   -The physical appearance of the rock changes.

   -Metamorphism without any details.

2. (a)
   i) -Tropical of cancer.

   (ii) The angle between the true north and the magnetic north at a given period of time

   (b)

   -Only planet that sustains life
   -Has sufficient oxygen for life forms
   -Has suitable temperatures favoring terrestrial life forms

3. (a) NO ANSWER)

   (b)

   -Are reservoirs in the water cycle.
   -Support bio-diversity/support floras and fauna.
   -Enable self-purification of water and air.
   -Modify local weather and climate.
   -Regulation of river/flow controlling flooding.

4. (a) E -sea/lake breeze F -land breeze

   (b) -As it rises it expands thus spreading over a wider area and hence becoming cooler.

5. (a) X - a cave Y - a blowhole

   (b)

-A (weak) long current/drift.

-An indented coastline/presence of a headland.

-A shallow continental shelf.

SECTION B (75 Marks)

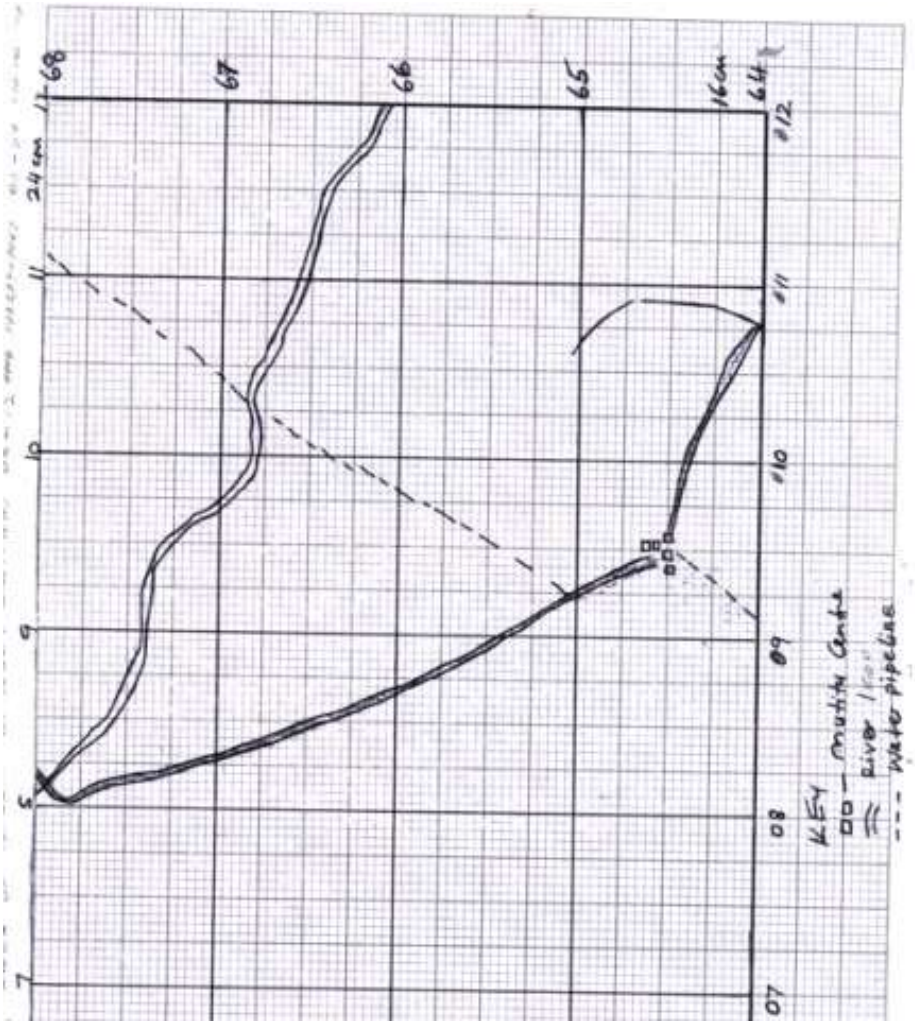
Answer question 6 and any other two

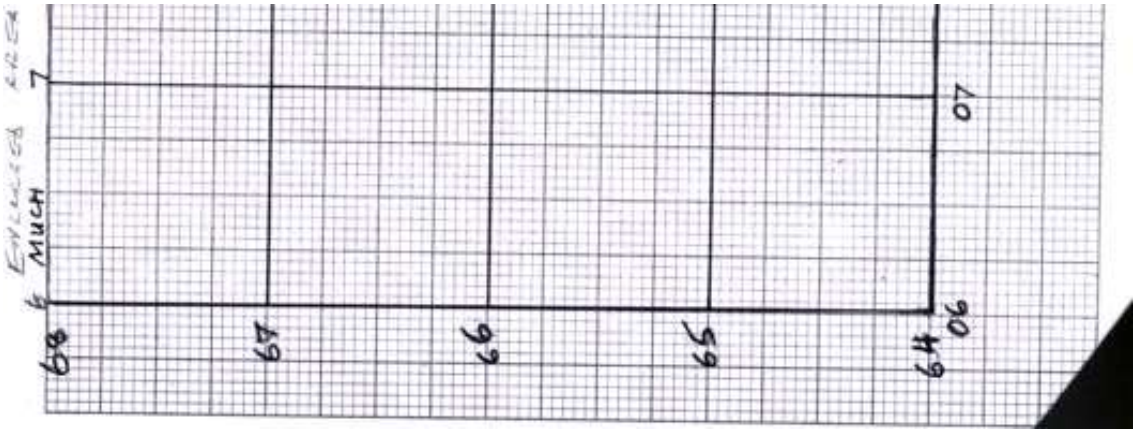
6. (a)i) $1^0\,02''$ S – $1^0\,15'$ S √√

(ii) The bearing o Mboni dam from the dispensing at Nzeluni.
0.85^0 √√

(iii) 6- figure grid reference of Kangoni School
-905701 √√

(b)i) Refer to the map on the graph paper.





(c)

. -There are many rivers in the area covered by the map.

-Main rivers are Ikoo, Mui and Ngoo.

-Most rivers are flowing to the south east direction.

-Most rivers form dentritic drainage pattern.

-Rivers are the main drainage features in the area.

-There are several water dams in the area as in grid square 9078.

(d)

-Administration centre - chief's office

-Medical centre. - Health centre

-Trading centre - Shops

-Educational centre - School

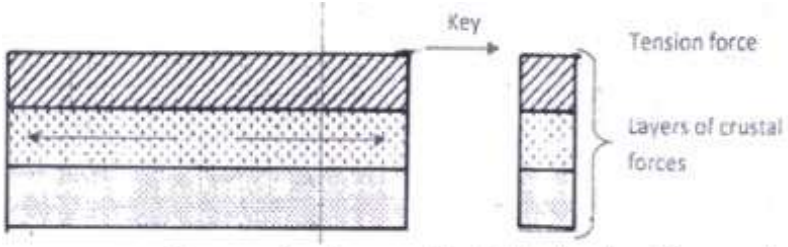
-Transport and communication - Road and post office

7. (a)i) tilt block

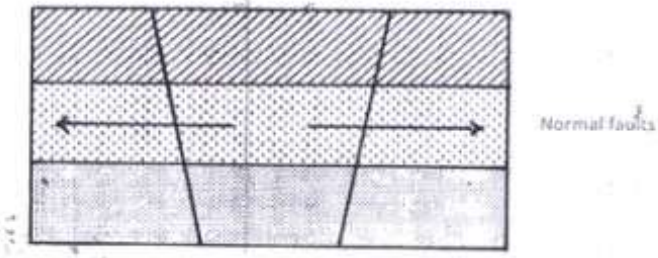
-Escarpment/scrap slope

-Block mountain/horsts

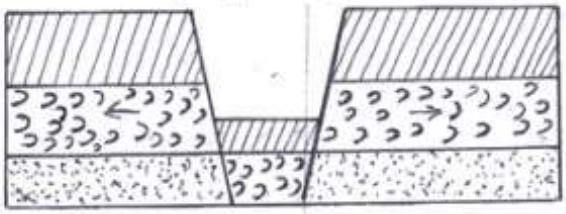
(ii)



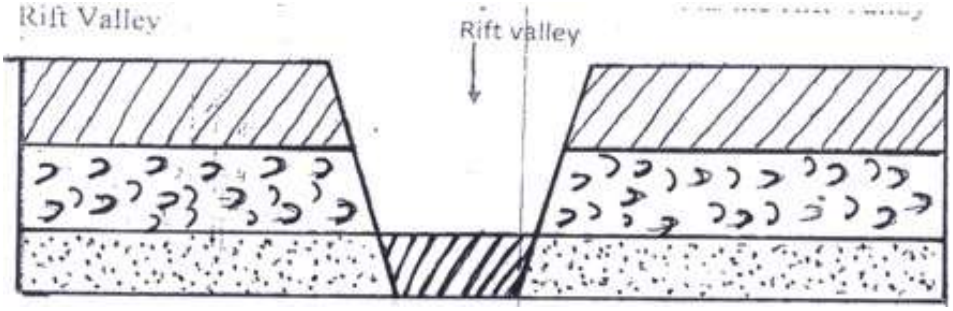
-Layers of rocks are subjected to tensional forces when there is some tension forces when There is some instability within the earth's crust.
-Parallel normal faults develop/lines for weakness develop.



-The middle part gradually sinks/subsides



The sunken middle part forms a depression known as the Rift valley.



b)

-Depression in the Rift Valley contains water that forms lakes.
-Faulting exposes minerals such as diatomite.
-Step faulting makes rivers to have water falls, rapids and cataracts.
-The scrap slopes/steep slopes tend to discourage settlement.
-Some rivers such as Katonga in Uganda hand their directions of flow changed.

c)

-To familiarize themselves with the area of study.

-To enable them draw a route map.

-To enable them a works schedule/plan activities.

-To enable them identify suitable methods of data collection.

-To seek permission from t he occupants of their site of study.

-To enable them prepare financial.

d)

-It is expensive.

-It is time consuming.

-It is tiresome.

-It is limited only to direct sources/primary sources.

-it is only suitable to the signed people.

8. (a)

i)-A mass of ice of limited with which moves outwards from a central area of ice accumulation

ii)

GLACIER TROUGH	RIVER VALLEY
U - shaped	v- shaped
Formed by glacier erosion	Formed by river erosion.
Have formulated spurs	Has inter-locking spurs.
The course is straight	The course is mean/zigzag

b)

i) -Pre colonial 5000 million years ago.

-Ordination C 500 million years ago.

-Carboniferous/Permian (350-280 million years ago

-Pleistocene C 1 million years ago.

ii) -A great pressure is exerted on the layers at the bottom sides and center within the ice mass

-This pressure causes ice particles to melt.

-The melting causes some particles to change their positions by slightly moving downhill later than freeze again and their action which goes on all the time cause the ice to move down slope.

Basil slip

-The weight of the ice layers which is in contact with the wall to melt.

-This crates a film of water which as a lubricant between the ice and the surface.

-To ship and slide over the underlying work. Extension flow

-It mainly affects the ice sheets in lowland areas.

-When ice accumulates, it builds up to great thickens at the center.

-The resultant weight compresses the layer of ice beneath forcing them to spread out to where is less pressure.

c)

i) -It has steep sides.

-It is surrounded by circles.

ii) -Ground movement

-Medial movement.

-Lateral movement

-Terminal movement.

d)

-Snow accumulates in a pre existing depression on a mountain side.

-The snow gets converted into ice forming a cirque glacier.

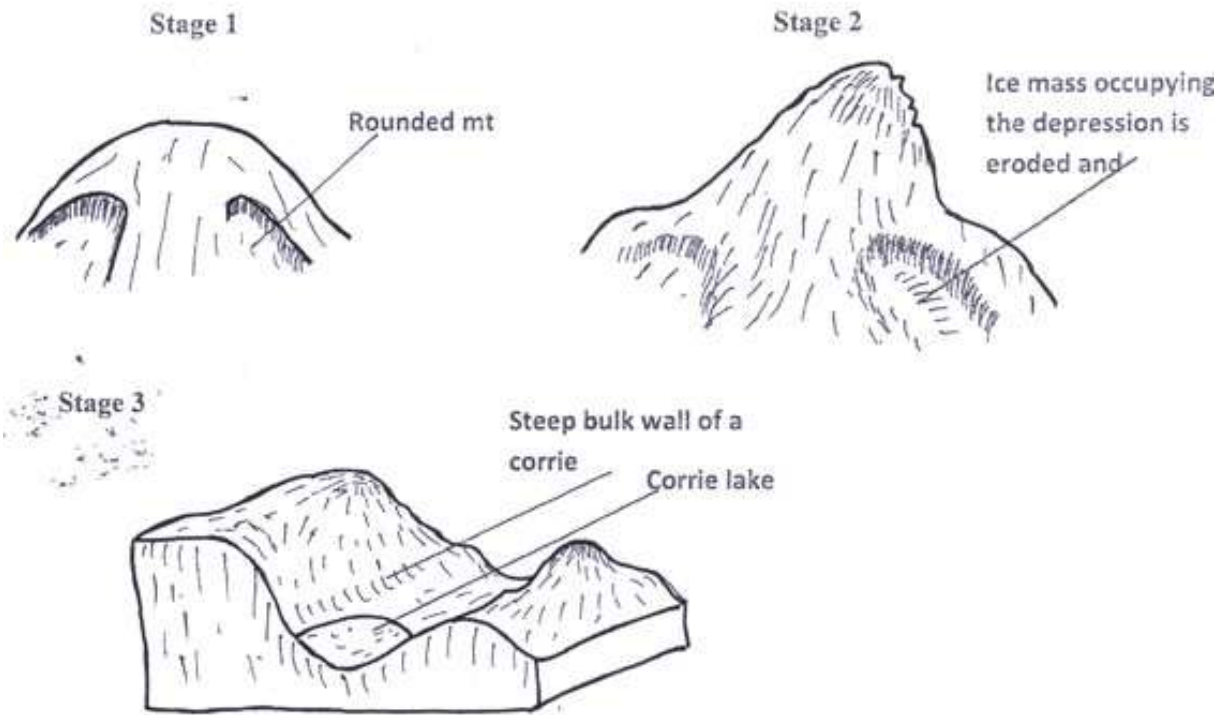
-Frost action/alternating free-than action enlarges the hollow.

-Abrasion/snowing action at the bottom of the glacier deepens the hollow.

-Phorching process steepens the rocks.

-Eventually a deep arm-chair shaped depression known as a carrie is formed.

-When water accumulates in the corrie it becomes correie lake.



e)

-Boulder clay deposits marshy landscape which harbpours wild animals.

-Land become unsuitable for agriculture due to infertile deposits of sand.

-Numerous lake reduce the land available for human settlement.

-it results in a rugged landscape t ah discourages settlement and agriculture.

9. a)i) **Hydraulic action**

-Water is forced into cracks on the river banks/water hit banks.

-Air in the crack is compressed.

-As the water retreats, pressure in the cracks is suddenly released.
-The compression and widening of the cracks repeatedly.
-The retreating water carries away the loose particles.
-The force of the moving water and the eddying effect.
-Sweep away loose materials in the river channel.

ii) Abrasion
-River carries sand, gravel and boulders.
-The load is used as a tool for scoring the load is hurled by the water against by the river water against the banks and drafted along river bed.

-The load chips off ricks on the bank and the floor (the size of the load determines the rate of erosion)

-The load of being dragged smoothens the river bed.

-Eddy current rotate rock particles in hollow and widen them in potholes.

b) i) Local uplift of land (dynamic rejuvenation) lead to a change in the base level hence the river revives its erosive activities.

-Lowering at the seal level (eustactic rejuvenation)creates sharp breaks/knick points at the rive mouth. This leads to revived erosion.

-Increase in discharge raise the volume of a river thus increasing its erosive power.

-Presence of a hard rock out crop a long the river causes breaks over which a river drops in falls and renews sits erosive work.

ii) River rapture may occur by head ward extension of the long profile

- This happens when rivers are sharing a watershed.

- The actively eroding river gradually cuts back its slope head until it encroaches upon the divide or water shed of the other river.

- Eventually the power reaches the source of the weaker river and diverts its water into its channel.

- River rapture may also occur where there are two adjacent rivers.

- One of the rivers has more erosive power than the other.

- The more powerful river erodes away the ridge that separates the two by head ward erosion.

- Eventually it encroaches into the valley of the weaker river diverting its waters into its valleys.

c) i. List three features formed as a result of river erosion.

-V –shaped valley/canyons

-Pothole -Interlocking spurs

-Waterfall rapids

ii. State three methods that student may have used to record their data

-Taking photographs

-Note making

-Filling questionnaires.

-Making sketch diagrams.

iii. Significance of features resulting from human activities

-Food plains formed by finer deposition from fertile soil for agriculture.

-Raised river beds/deformed steams caused flooding which lead to loss of life and destruction of properties.

-Ox-bow lakes e.t.c. attracts tourists.

-Sand deposits are extracted – provide sand for building.

10. a)i) Weathering is the disintegration of rocks in the earth's crust while denodration refers to all activities that wear away the earth's crust.

ii) Three factors that influence the rate of weathering.

-Vegetation cover.

-Gradient of land/slope

-Climate/rainfall and temperature.

Human activities/ blasting /quarrying.

b) Explain how the following processes of weathering occur in arid areas.

Crystal growth

– Occur in hot desserts where vaporation exceeds the amounts of rainfall received.

-It involves the growth of salt crystal within a rock.

-Capillary action drains the water from the rock to the surface.

-Once the water reaches the surface, it evaporates leaving a precipitate which crystallizes.

-The crystals extent pressure on the crevices and widen them.

-This leads to the rocks forming hollows and breaking them.

Exploitation

-Occurs in rocks with a uniform structure/homogenous.
-During the day the rock's surface heat up rapidly because of high temperature.
-The rock surface expands more than the inner parts leading to cracks in the rocks.
-When temperature fall of right the surface layer of the rock contracts and more rocks develop.

-The alternate expansion and contraction resulting in the peling off the rock forming a round mould of rock called exploitation dome. Block disintegration -Caused by large withdrawal of temperatures.
-Occurs where rocks are well formed.
-During the day, the rock heats up and then expand.
-The repeated alternate expansion and contraction results in breakage of rocks along their joints into smaller blocks.
Granular disintegration.

Occurs in the rocks that are made of different minerals (hetegrenonol) Different minerals have different roles of expansion and contraction when exposed to alternate heating and cooling. This leads to the breaking of a rock into individual smaller granulate fragments and coarse grains.

c(i) Apart from soil creep, name three other types of slow –mass wasting

-Talurs creep

-Solifunction

-Rock creep

ii) Three causes of soil creep

-Tertomic movements like earthquakes.

-Plough down slopes.

-Splash/rain drops

-Quarrying

d)(i) Ways in which they prepare for the field study.

-Formation of objectives and hypothesis.

-Preparing questionnaires.

-Decide on methods of collecting and recording data.

-Divide the class into groups.

-Carrying out a pre-visit.

-A assemble the necessary tools/materials

-Design a work schedule.

ii) Name two types of rapid mass movement they could have identified.

NO ANSWER iii)

State two effects of rapid-mass wasting they came across.

NO ANSWER