TIGANIA SOUTH PRE-MOCKS 2015

GEOGRAPHY PRE-MOCK

MARKING SCHEME

PAPER 1

SECTION A

1. **a) Forces that shape the surface of the earth centripetal – pulls the poles towards each other and causes flattening**
   - Centrifugal flinging force that causes the bulge at the equator
   - Gravitational – pulls towards the centre causing the rounding effect

2 x 1 = 2 marks

b**) Characteristics of the crust**

- Average thickness 16 – 24km (Mts upto 70/80 km)
- Made up of two parts. the outer and inner crust
- The outer crust made of Silica and aluminium (SIAL)
- The inner crust made of SIMA
- SIAL density - 2.7 gms / cc
- SIMA average density 2.3 - 3.0 gm/cc
- Sial mainly forms the continental crust while Sima forms the oceanic crust.

Max. 3 x 1 = 3 marks

2. Exfoliation dome

- forms in areas with high temps and in homogeneous rocks
- during the day the rocks surface heat up
- this causes the surface layers to expand
- at night low temps result in cooling and contraction of the out layers
- the alternative expansion and contraction results in peeling off from the rock
- this leaves behind a round-off mass known as Exfoliation dome

(5 marks)

3. a) A coast us shore

- A coast is a strip of land that is bordering the sea while a shore is the point along the coast that lies between the lowest water tide and the highest point reached by waves.

(2mks)

b) Conditions necessary for the formation of a spit

- relatively shallow and sheltered water
- Availability of a lot of load
- A long one ward shore drift must occur
- A gently sloping shoreline
- A change in the angle of the coastline for deposition to occur

Max 3 x 1 = 3 marks

4.a) Ideal conditions for an artesian well

- the aquifer must outcrop in a region which is a source of water
- the aquifer must did from a region of water intake to form a broad syncline
- the aquifer must lie between impermeable rocks so as to retain water
- the mouth of the well must be lower than the intake area to ensure water comes out on its own. **(max 3 x 1 = 3 marks)**

b) Water may reach the surface through

- through spring / wells / seepage
- through capillary action / trangiration **(2 marks)**

5.a) P. Heath and Moorland Q Bamboo forest

b) **Characteristics of Savanna vegetation**

- Consists of a grass and scattered trees
- Wetter areas grass is tall and close together
- Drier areas, the grass is shorter and
- Grass dominates the vegetation
- The trees are shorter and more scattered
- The trees are umbrella shaped
- Some trees like baobao have thick back

SECTION B

Answer question 6 and any other 2 questions from this section

6.a. i)Six figure grid ref. for Teldet school. (2mks)

406595√√

ii) Approx. area of Homa Bay District (2mks)

Full sq = 1

Half sq = 10/2 = 5

A = 5x1 = 6 km^2√ √ + 0.5 (5.5 – 6.5)

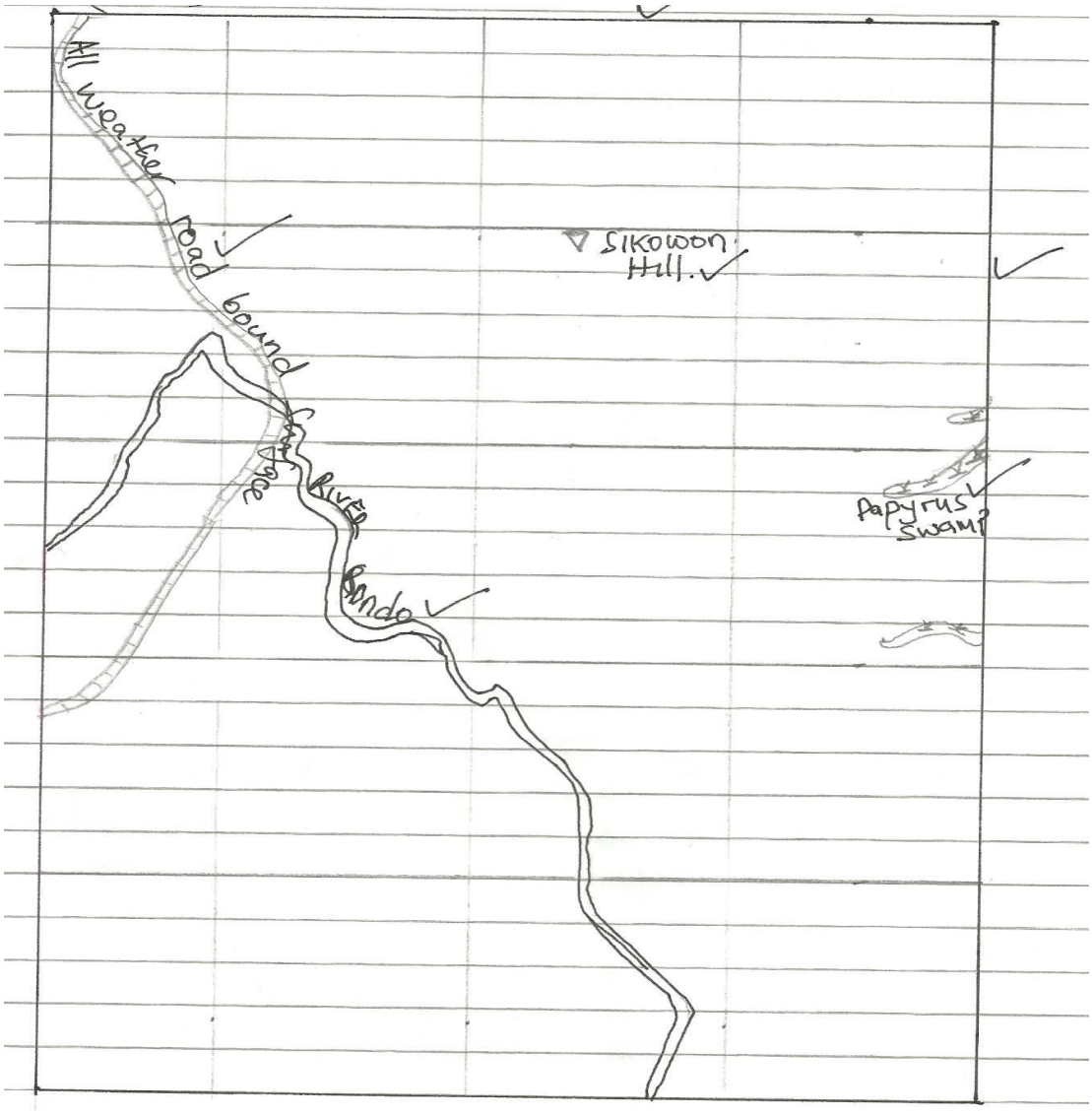
b i) Direction and bearing of Mindililwet school from Chebribi junction (2mks)

NE√ 049°√

iii) **Measure the distance of river Sondo from Northing 50 to the End in the West.**

11.8 km√√ ± 0.1 (11.7 – 11.9 km)

c) Draw a rectangle representing the area West of Easting 30 and North of Northing 50. (2mks)



d i) Citing evidence from the area covered name any 2 social activities taking place in Kebenet

- Health as evidenced by a dispensary√
- Education as evidenced by a school√
- Transport as evidenced by the all weather road loose surface√ **any 2 x 1 = 2 marks**

ii) Give two uses of river Sondo in the area. (2mks)

- For domestic use
- It forms a boundary √ provincial and district **2 x 1 = 2 mks**

iii) Explain 3 factors that have influenced the growing tea in the area covered by the map with evidence. (6mks)

- Rainfall as evidenced by permanent rivers for growth of Tea√√
- Transportation as evidenced by the all weather road loose surface for transportation of tea√√
- Labour as evidenced by many settlements for picking tea√√
- Well drained soils as evidenced by spaced contours which favours tea growing√√
- High altitude as evidenced by high contour heights of about 1800m for growth of tea√√

Any 3 x 2 = 6 mks

iv) Name two types of settlement found at grid 2457 (1mk)

- Village settlement
- Huts
- Permanent settlement

Any 2 x ½ = 1 mk

7. a i) 1 - Gregory /Kenyan rift√ **1 mk**

2 - Kavirondo√ **1 mk**

ii) 3 - Elgeyo√ **1mk**

4 - Nguruman√ **1mk**

4 - Nyandarua√ **1mk**

iii) 7 - Magadi **1mk**

8 - Turkana **1mk**

b) i) - varies in height 600m

- has Lake basins

- has volcanic hills/ridges

- varies in width 100km – 50km **3 mks**

ii) Horst

- Crustal rocks are subjected to tensional forces√
- Parallel faults develop√
- The side blocks are downwarped as the middle√ block upward
- The flat topped hill bordered by sleep scarps is a horst√

C i) The rift valley has attracted dense settlements **1 mk**

ii**) Problems experienced during the study**

- steep slopes are difficult to climb
- Inaccessibility in some areas
- Attack from wild animals
- Fatigue from the high temperature **3 x 1 = mks**

iii) findings

- Exposes minerals easing mining
- Rainfall the windward slopes - support agriculture and forestry
- Faults pave way for hot spring – tap for Geothermal power
- Fault scarps – provide sites for water fall – tourists attraction & generation of HEP

3 X 1 = mks

8. a) i) Distinguish between soil profile and soil catena

Soil profile refers to the vertical arrangement of soil layers from the surface to the bedrock while soil catena is sequence of different soil types down a slope from the top to the bottom of the hill.√√ **(2mks)**

Mark as a whole

ii) State two importance of minerals in the soils

- Form the soil framework
- Give anchorage to plants
- Determine the porosity of the soil
- Add minerals to the soil

(any 2x1 – 2 mks)

b i) Explain how the following factors influence soil formation

a) C**limate**

- rainfall provides moisture required for chemical weathering leading to soil formation
- rainfall affects the rate at which soil forming process occur
- seasonal variation of rainfall can cause concentration of salts in the soil
- high temperatures increase the rate of weathering thus accelerate soil formation
- also speed up bacterial activities hence help in decay of organic matter adding humus in the soil
- wind water and ice erosion carry away the top soil leading to formation of this soils
- eroded materials are carried and deposited elsewhere leading to formation of loes and alluvial soils

b) Living organism

- Assist in breaking down of rocks through burrowing ploughing and root penetration
- Influence the chemical composition of soils by adding or removing organic acids and minerals
- Burrowing of animals improves soil aeration
- Decay of plant and animal remains add hums and mineral hence influencing soil fertility

(any 3x1 = 3 mks)

c)Describe as a teaching process in soil formation

- Process involving formation of soil rich in carbonate horizon B and C
- Process occur in areas where evaporation exceed precipitation and the parent rock in rich in calcium carbonate
- As evaporation take place, the concentration of salts and bases in the soil solutions increases
- The dissolved substances rise through capillary actions then precipitates in horizon B and calcium bicarbonate change into carbonates forming a crust of calcium compounds within the same profile

d) i) What is soil degeneration?

This is the decline in the usefulness of soil due to soil mismanagement or environmental causes or both

OR

This refers to the loss of soil fertility (1mk)

ii) Identify two types of soil degeneration

- physical degeneration

- chemical degeneration
- biological degeneration

any 2x1 = 2mks)

e) Explain three ways in which vegetation protects the soil from degeneration

- Leaf cover reduce the force of raindrops which would loosen and dislodge the soil particle reducing splash erosion.
- Vegetation cover increases the infiltration of rainwater into the soil thus keeping the soil moist.
- Plant roots penetrating into the soil help to carry moisture into the soil and allow it to gradually percolate deeply.
- Plant cover break the force of wind at the ground level thus reducing loss of soil particles and reduce evaporation which would make soil dry and loose.
- Decayed vegetative matter provide humus which bind soil particles together.

Any 3 explained x 2 = (6mks)

TIGANIA SOUTH PRE-MOCKS 2015

GEOGRAPHY P2
MARKING SCHEME
PRE-MOCK 2015

1. a) **Name two tree species of high commercial value in a coniferous forest. (2mks)**
   - pine
   - spruce
   - Fir

   (any 2x1 = mks)

b) State three characteristics of Tropical hardwood forests which hinder exploitation
- Trees are closely set / packed making it difficult to cut and penetrate into the forest
- -Trees have large massive/heavy trunks which make it hard to cut and haul
- Different / many species within a unit area
- trees take long to mature (65 – 100 years)
- large buttress roots make it difficult to cut the trees

(**any 3x1 = (3mks)**

2. State two factors that influence exploitation of minerals
- Quality of the ore
- Size of the mineral deposit
- Value of the mineral
- Transport costs
- Availability of capital
- Availability of skilled personnel labour
- Demand for the mineral
- Political influence / climate
- Methods of extraction
- Level of technology

Any 2x1 = (2mks)

b) Describe how soda ash is extracted from Lake Magadi
- Mined using a **bucket√ dredger** floating on the lake water.
- Dredger **digs√ out** trona from the lake bed upto 3m deep.
- Inside the dredger trona is **crushed√ into smaller pieces** and **mixed√ with** solution from the lake called Lake liquor.
- The trona and the solution is pumped into the factory through a pipeline for processing

(**max 3mks)**

3. a) i) Distinguish between population distribution and population density

– Population distribution refers to the way people are spread out on the land while population density is the average√√ number of persons per square kilometers.

(1mk) marks as a whole

ii)What is dependency ratio?

This is the proportion of the population that is not involved in productive activities to t he one that is OR
The ratio of the population that is dependent on the population that is working

(1mk)

b) state three reasons for reduced fertility rate in Kenya

- Late marriages / more girls attending school
- Modern career opportunities limit fertility rate / maternity leaves.
- Use of birth control measures lowering number of children a woman get.
- Urbanization leading to people opting to smaller families.
- Increase in the number of women opting to remain single. **(Max 3 mks)**
-

4. a) Name two dairy cattle breeds reared in Kenya

- Ashyire
- Guernsey
- Jersey
- Friesian
- Sahiwal **(2x1 = 2 mks)**

b) State three differences between beef farming in Argentina and Kenya.

Argentina	**Kenya**
- Has more beef processing plants	- Has few processing plants
- Beef products are exported	- None of the beef products is exported / most consumed locally
- Animals have enough pasture	- Pasture may be scarce in the dry season
- Animals mainly transported by rail	- Animals mainly transported by road
- Exotic breeds mainly reared	- Both exotic and locally indigenous breeds are reared
- Corn is used to fatten the beef cattle	- Animals mainly rely on natural pastures

Any 3 complete comparison x 1 = 3mks

5.a) Give two advantages of wood as a source of fuel

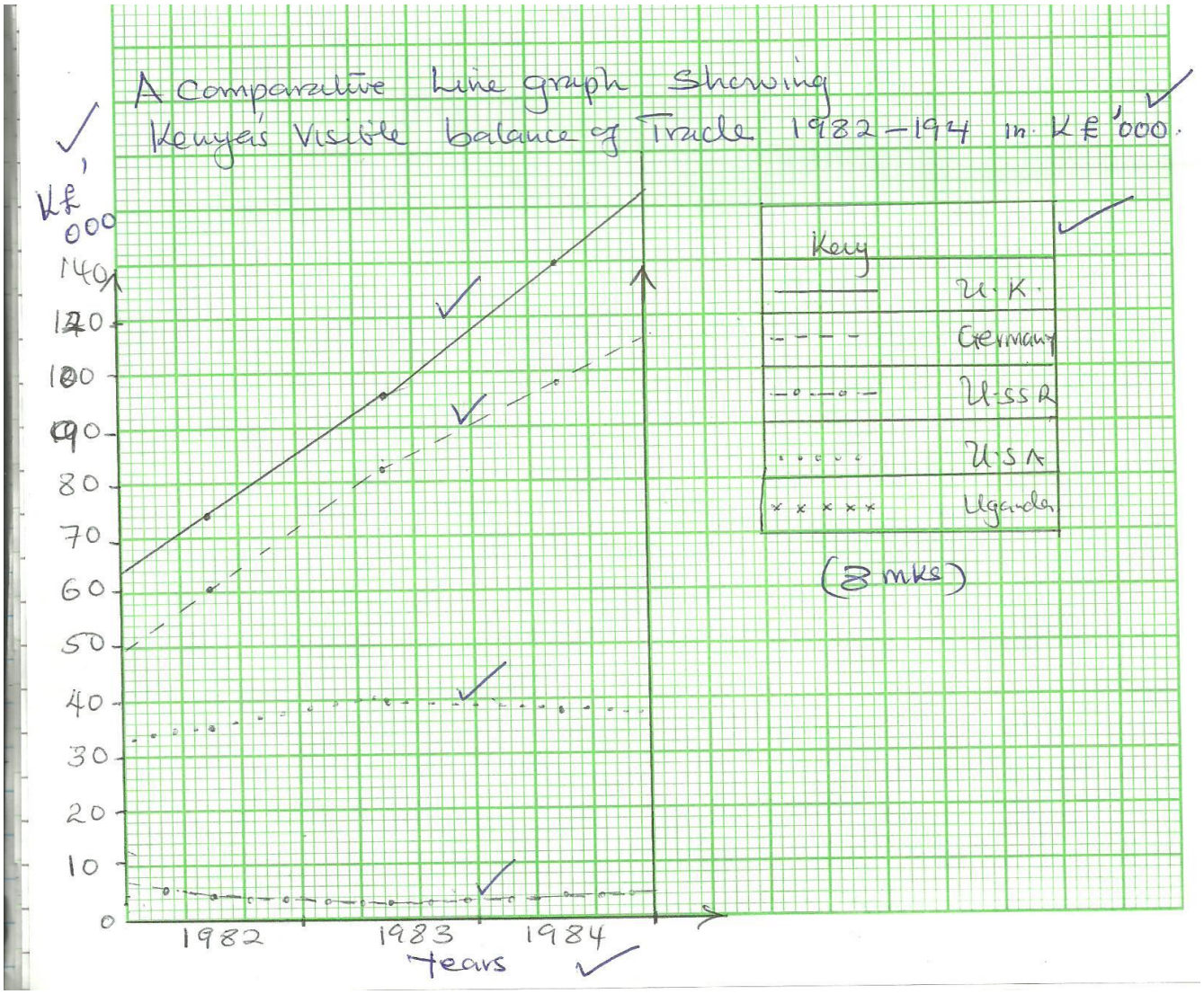
- available nearly throughout the world
- there are no maintenance costs
- -cheap source of energy
- -ashes can be used for other purposes e.g plastering traditional houses

Any 2x1 = 2mks)

b) State three conditions necessary for the formation of oil

- -presence of sedimentary rocks
- -Presence of organic remains fossils
- presence of non-porous rocks overlying the porous rocks
- presence of porous rocks to trap the oil
- presence of pressure to compress the organic matter **(Any 3x1 = 3mks)**

6.a. i)



ii) plotting small values is difficult where the range is large

- The total amount of each variable in the group cannot be known at a glance
- Locating the position for the point is difficult (3mks)

b. i) Balance of trade is the difference in value between the visible imports and visible exports of a county. (2mks)

ii) Calculating the balance of trade. (2mks)

Exports 347,000
Imports 400,300

- 53,300
- 53,300,000

c. i) **Major imports** : - Motor Vehicles
- Machinery
- Electronics
- Petroleum

Major exports:

- Horticulture
- Tea/coffee
- Soda ash / fluorspar/ cement
-

i) Kenya has an unfavourable balance of trade.

-Kenya exports mainly agricultural raw materials which are of law value and imports manufactured goods which are of high value.
- The agricultural raw materials face not only stiff competition from other counties / but also the quota system in the world market which leads to reduced sales and less earnings.
-The minerals and other goods such as curio are of low quality hence generate little earnings.

d) Measures to achieve a favourable balance of trade

- Development of other sources of energy to reduce on the importation of fuels
- Establishment of import – substitute industries to reduce imports of commodities
- Restriction on importation of luxury items through high taxation to save the county foreign exchange
- Diversifying agro-exports such as horticulture that has a large market and earns more
- Increasing invisible exports such as tourism, shipping and insurance that is not vulnerable to weather adversities.

7. a) i)Wheat growing areas in Canada

- Alberta; Saskatchewan; Mamtoba

ii) Physical factors – Kenya

- Gently sloping/fairly level – allows proper drainage and mechanization
- Volcanic soils which are well drained – provide proper anchorage for wheat stalks
- Moderate r/fall – between 305mm – 1015mm ⟶ sufficient for growing wheat
- Warm dry sunny spell which enhances ripening and harvesting of wheat
- Warm temperatures ranging from 15^oC to 20^oC – this facilitates maturity of wheat (for at least 3 months)
- High altitudes of 1500 mm – 2900 mm

b) i) Comparison Wheat Kenya Vs Canada.
- Cultivation – small scale farmers doing it manually / mechanized while in Canada all the work is mechanized.
- Kenya small scale ⟶ Canada large scale.

ii) Harvesting – in Kenya both manual (small farmers) and mechanized while in Canada all work mechanized.
iii) Marketing – in Kenya all the wheat is consumed locally while in Canada – consumed locally and the bulk exported.

b. i) Human and economic problems in Canada.
- Monoculture has led to soil exhaustion – low yields
- Over production of wheat – too much surplus and low income.
- Fluctuation of market prices, affects the farmers income and it makes it difficult to plan ahead.

c. i) Human / economic problems in Canada
- Fluctuation of market prices for wheat exports affects the farmers income and makes it difficult to plan ahead.
- Overproduction of wheat
- Monoculture has led to soil exhaustion, resulting in low yields

8. a i) Countries found in NW pacific fishing ground
- Japan
- China
- Malaysia
- Indonesia

ii) **Explain four physical factors that favour fishing in the above fishing ground.**
- Numerous Islands provide good breeding ground for fish hence fishing.
- Extensive continental shelf are shallow providing light for the growth of Plankton which food for fish.
- Cool temperature arising from the meeting of cold Kamchatka and the warm Kurosiwo providing conditions for Plankton survival.
- Japan is generally mountainous which does not favour Agriculture making fishing the only economic activity. **(4x2 = 8 mks)**

-

b) Describe the following methods of fishing
i) Drifting **(4mks)**
- The net is vertically hanging in water
- They are fitted with floats on the upper edge and weights below and placed a few meters below the water and pulled by powerful boats called drifters
- When fish swim into the net they are entangled by their gills and cannot get out of the net.
- Once enough fish are caught the net is hauled onto the boat and fish is removed.

Any 4 x 1 = (4mks)

i) Purse seine (4mks)

- The purse seine net is laid in a circle to enclose a school of fish.
- At the bottom of the net are rings through which passes a rope
- One end of the rope is attached to a boat and the other part is pulled by another boat around a school as fish.
- When the circle is completed the rope is pulled to close the net forming a bow- like shape hence trapping fish.
- The net is them hauled to the shore and fish is removed.

4 x 1 == (4mks)

C. Compare fishing in Kenya and Japan under the following sub-headings:

i) Fishing ground. **(2mks)**

- Japan main fishing ground is marine while Kenya's is mainly mainland.√√

ii) Climate. (2mks)

Kenya's climate is warm discouraging growth of planktons and variety of fish species therefore fishing is not elaborate while Japan's climate is cool favouring Planktons hence intensive fishing.√√

d. State 3 significance of fishing to the economy of Kenya. **(3mks)**

- Export of fish earn foreign exchange used to develop the economy.√
- Fish creates employment opportunities which earns income that improves their standard of living.
- Fishing wastes produce raw materials to produce Lubricants, fertilizer and cosmetics.
-Fishing is a source of government revenue through taxation which is invested in other sectors.
- Fishing is a sport that attracts tourists thus generate foreign exchange for the country.
- Fishing stimulates and promote establishment of industries e.g ship building repair and net making.

Any 3 x 1 (3mks)