

312/1

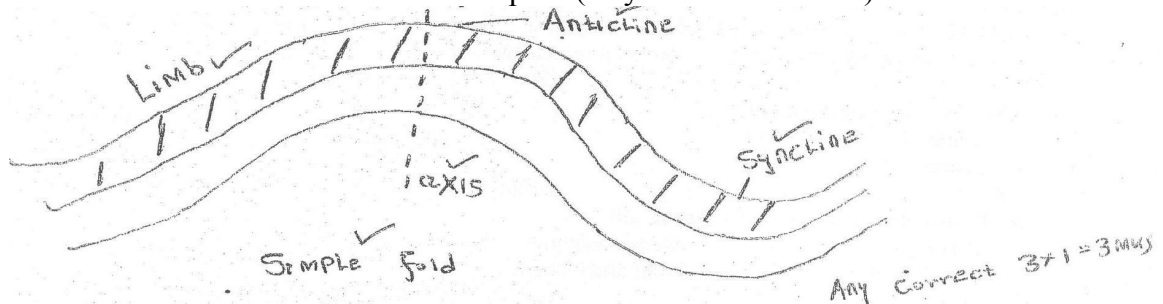
GEOGRAPHY

PAPER 1 MARKING SCHEME

MARCH/APRIL 2010

2 ¾ HOURS

1. a) passing star theory
Nebula cloud theory (2 marks)
- b. troposphere
Stratosphere
Mesosphere
Thermosphere (2 marks)
2. a.) loamy
 - clay
 - silty
 - sandy
 - gravel (2 marks)
- b. Nature of the soils – porous soil encourage leaching
 - Topography – gentle sloping lands encourage high rates of water percolation as compared to steep slope
 - Solubility of minerals - soluble minerals are easily leached
 - Amount of rainfall - large amount of water dissolves mineral and transfers them to other horizons
3. a) There was one land mass called pangea surrounded by an enormous sea called pantalasa. Due to crustal or gravitational force pangea broke into lauracisi (ion the Northern hemisphere) and Gond wareland in southern hemisphere. Later the two lands broke into present six. Continents i.e land drifted apart (any 6 x ½ = 3 marks)



NB any other of fold accepted.

4. a) High temperature results into low pressure cell while low temperature result into high pressure cells
the high pressure cell is an anti - cyclone in which wind moves in clockwise direction while low pressure cell is a cyclone in which wind moves in anti- clockwise direction. 3 marks
- b) Wet bulb thermometer is wrapped in wet muslin and dipped into water to keep muslin moist. This records the lower temperature as the water evaporates, from the muslin.

Dry bulb thermometer is left in normal environmental to record the highest temperature . the difference between two reading is used to calculate the related humidity 3 marks.

5. i) old stage/ senile stage/ plain stage
- ii) S- Erosion
- iii) Ox – bow lake/ meander scar/ lake cut off (3 x 1 marks)

SECTION B

6. a) 2° 31 min 1 mark
- b) NW 1 mark
- c) The area receives heavy rainfall evidenced by presence of forest i.e south western forest , presence of Tea growing i.e Tea estate sambret , presence of many permanent rivers.
- The area experiences cool temperature evidence by Tea growing ie Tilvet Tea estate (4 marks)
- d. 9.8 km ± 0.1 km
- e) On the area covered by the map
there are many permanent rivers i.e kimungu , Turgenan , Kipwes
There is a papyrus swamp at south of Kipchimchim – grid reference 5256
There is a dam /reservoir at 6771 and 5661
There is a pond in grid reference 6470
Rivers flow in various directions i.e. kimungu flow towards the SW , NE and SE.
Radial pattern is formed by river flowing to all directions from Kapcheotoron peak
Trellis pattern is formed by rivers kipkwe and Turgenon
Parallel formed by rivers flowing from Ainamoi hill flowing to the west (4 marks)
- f. Agriculture - tea farming
Transport - road
Trade – market centre, shops , roads
Forest / lumbering - kericho forest station grid reference 6361 (2 marks)
- g. Relief of the area covered by the map
- generally the area is an highland with highest contour of 2360 m A.S.L at NW
The land slopes from SE towards NW and rises from NW towards SE.
There are river valleys drained by major rivers like Timili , Kimungu etc
There is presence of isolated conical hills e.g Ainamoi
Presence of plateau land to the SE (4 MARKS)
- h. i) To find out factors responsible for the type of settlements
- To find out the effects of topography on settlement

- To find out the effects of infrastructure on each settlement (2 marks)
 - ii) Nucleated settlement pattern
linear
sparse (2 marks)
 - iii) Transport network
 - Forest
 - Tea plantation
 - Fertile soil
 - Economic activities
 - Rainfall distribution
7. a. i) – Polar cold climate/ Tundra climate 1 mark
- ii) Ocean current R. canary . Ocean current
S Gulf stream
V – Agulhas current
- iii) T- tropical equatorial climate
- temperatures are high throughout the year at about 21 ° c (5° c)
 - experience high rainfall of between 1,5000 mm and 2,000 mmm evenly distributed throughout the year
 - the region has also high humidity due to heavy rainfall and high evaporation rates.
 - Major winds experienced are the south - east and north - east trade winds
 - Experiences low pressure all year round thus no distinct season.
 - Rainfall is mainly convectional type- usually accompanied with thunderstorms , highland experiences relief/ orographic rainfall. (4 marks)

B i) H- Pampas

J – steppes

K – Downs (3 marks)

ii) N – Tropical rain forest / equatorial forest

- The forest consists of mixed variety of tree species
- The forest consist of tree that shed their leaves at different time of the year evergreen.
- Trees take long time to mature
- Forests have little or no undergrowth
- Tree species are mainly hardwood
- Forest trees grow close together
- Forests have numerous lian / climbing plants /epiphytes

- Some of the trees have buttressed root canopies three distinct layers. (4 marks)
 - iii) Some plants have thick fleshy leaves to enable them store water.
 - some have no leaves/ have thin /spiky/ waxy needle like leaves to reduce transpiration
 - some plants have thorn to protect themselves, from browning animals
 - Most plants are stunted / dwarf – like due to harsh conditions.
 - iv) Fire often - areas of forests are destroyed by accidental and sometimes intended fire such forest take long to recover.
 - Diseases cause pest and parasites attack mainly the planted forests causing trees to die.
 - Human activities - settlement , charcoal burning , farming, logging have destroyed many forests areas many of which are transform into farms and grassland.
 - Over – exploitation leads to depletion of certain tree species such as meru oak, camphor and elgon teak. The trees take long to mature.
 - Government policy of degazetting of some forests made people free to clear mainly forested areas.
 - Prolonged droughts lead to degeneration of forests some of which take long to recover. (6 marks)
8. a. i) weathering is the breaking down and decomposition of solid rocks on the earth through physical, chemical and mechanical weathering without movement.
Mass wasting materials due to gravity (2 marks)
- ii) Solution
- oxidation
 - hydration
 - hydrolysis
 - carbonation (2 marks)
- iii) Heating and cooling soil
- freezing of soil
 - ploughing down hill
 - shaking by earth quakes
 - alternating dry and wetting of soil
 - frampling and borrowing of ground (6 marks)
- b. i) the surface rock and rock beneath should be thick limestone, chalk or dolite
- The rocks should be hard and well jointed to allow solution to occur along the joints
 - The climate should be hot and humid to accelerate chemical weathering by solution

The water table in the area should be deep below the surface to allow rocks bare it to form distinct features e.g. stalactites and caves. 6 marks

ii) Formation of grikes and clints

rain water react with carbon dioxide as it passes through the air forming weak carbonic acid

- weak carbonic acid react with calcium carbonate on the limestone which is soluble in water
- rain water entering the rock through the joints widens and deepens them through solution.
- The water table in the are should be deep bellow the surface to allow rocks bare it to form distinct features e.g stalactites and caves 6 marks)

9. i) Down warping / tilting

- tectonic movements
- man – made lakes
- lava dammed lakes
- glacial erosional lakes
- moraine dammed lakes

ii) formation of lake Victoria;

lake Victoria was formed when the earth surface down warped and tilted forming a hollow depression that was filled with water (4 marks)

iii)Influence of L. Victoria on climate (microclimate)

- Heavy rainfall due to moisture from lake
- High temperatures due to low altitude caused by the depression
- Availability of water has attracted the industrial set up that pollute the environment (6 marks)

b. i) H – bay

J – Sand bar

K- Tombolo

L – head land

M- Estuary

ii) The share should be gentle for deposition to take place

- The wave breaking must have a strong swash and weak back wash /be construction wave.
- The sea water should have a large load. (4 marks)

iii) - Oceanic ridge

- oceanic island
- oceanic deep
- plateau
- deep sea plain (4 marks)

10. a.

- Nicher glaciers
- cirque glacier
- valley glacier
- piedmont glacier

- continental glacier (2 marks)

b. Formation of pyramidal peak

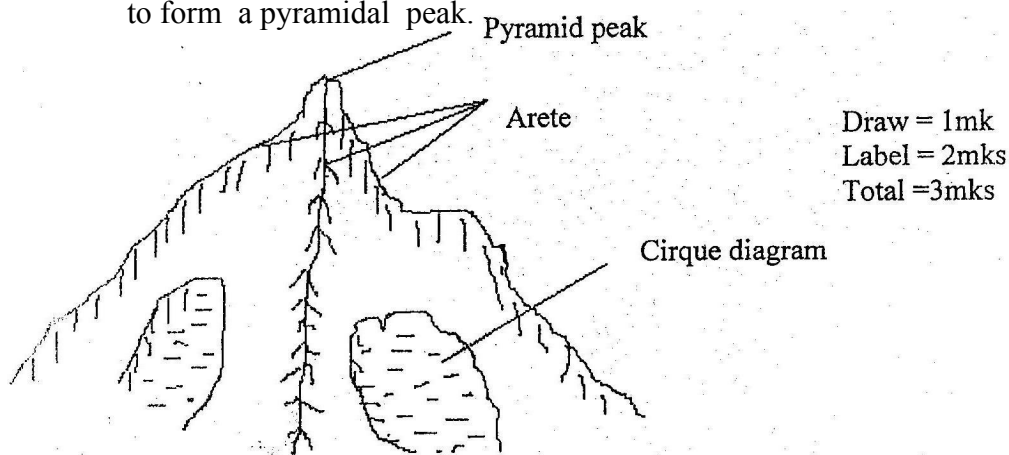
- snow collects in several shallow hollow on mountain side and gets compacted into ice forming cirques glacier

- Frost action enlarge the hollow enabling more ice to occupy the hollow and abrasion at the bottom of glacier deepens the hollows.

Plucking process steepens the back wall to eventually form a deep arm chair shaped depression called cirque.

When two cirques cut back wards on adjacent sides of the mountain (due to plucking process) the walls recede to form knife – edge ridge called aretes.

Three or more aretes, separating cirque converge at the mountain top to form a pyramidal peak.



iii) significance of glaciation to human activities

- fertile boulder clay outwash plain encourages agriculture
- some glacial lakes produce natural waterways e.g the water transport
- waterfalls form hanging valleys have been harnessed to generate hydro - electric power
- glacial erosion exposes valuable mineral making it easy to exploit them economically.
- Unique scenery of glaciated highlands / mountain acts as tourist attraction sites hence encourages tourism.
- U – shaped valley form channels for development of route ways (3 x 2marks)

b. i) Mineral is a naturally formed inorganic solid matter with a defined chemical composition and arrangement that occurs within or in the earth's crust.

- Rocks are an aggregate of mineral particles forming the solid part of the earth (2 marks)

ii) Formation of limestone rock

- limestone is a sedimentary rock made up of calcium carbonate. It is formed from dead coral polyps' skeletons. Coral polyps live in colonies and their skeletons contain calcium carbonate.

- Dead coral polyps skeletons accumulate with time to form layers that cement to form hard rocks. (6 marks)

i)

Relative dating

- absolute dating
- Radio carbon dating 2 marks

THE INTER - EAST SCHOOLS EXAMINATION - 2010

MARCH/APRIL 312/2

GEOGRAPHY - FORM 4

PARER 2

MARKING SCHEME

1. a) – Global recession has led to the company losing market
 - poor transport due to rough hilly terrain
- b) Due to civil war, there is no organized mining, intervention internationally could restore peace.
 - development of transport and communication lines
 - instituting proper government policy (2 marks)
2. a) The whole issue has been politicized and it has taken a tribal turn
 - lack of funds for the rehabilitation
 - The factness of the forest already destroyed poses a great difficult in rehabilitation. (2 marks)
- b) controlled lumbering
 - reafforestation
 - Block method of lumbering ensures there is a plan for replanting. (3 marks)
3. a. Land rehabilitation is the process of recovery of land which has been destroyed through human activities while land reclamation is effects directed at making an otherwise naturally used land to be productive e.g irrigation of dry lands or drainage of swamps.
- b) Drainage of swamps
 - rehabilitation of eroded landscapes
 - control of flooded areas by building dykes
 - re- afforestation (3 marks)
4. a. i) Exploitation of water resource including fish, seed, whales etc
ii) Building of dam across river Omo which will cut off water from the lake (1 mark)
- b – Fishing is developed because the country is small country which is mountainous and so doesn't favour arable or livestock farming this leaves room for fishing. Kenya however, has good arable land and people take on farming more than fishing.
- Japan has a high population density with poor sea food. However, Kenya has rich variety of food sources.
- Japan has a large ship building industry complete with refrigeration and processing facilities. Kenya lags behind in such technology no modern fishing is less advanced. (3marks)
5. a. Some Kenyans find it a waste to tour their own country. They better pay school fees with their incomes
Many have seen the wild animals so find no need of visiting game parks and game reserves. (3 marks)
- b) foreign exchange earned through tourism dwindled.

Slow economic growth. (2marks)

SECTION B

6. a) Ground close up

b) Rice farming . the crop is at full growth level. Possibly weeding and topdressing is going on .

ii) The irrigation schemes had been run down to poor management

- unscrupulous traders import cheaper rice, thus killing the local market for locally produced rice
- costly venture with little returns
- middlemen over low prices
- health problem associated with rice growing especially malaria and bilharzias.

iii) Allocation more money to the Kenya irrigation board.

- reviving collapsed irrigation schemes
- increasing acreage for example , the resent Tana river Delta maize farming.
- Health- malaria benits due to stagnant water in the paddies
- Mismanagement
- Middlemen take advantage of marketing strategies.
- Poor government policies
- Cheap imports from countries such as Taiwan

c. Creation of a large fresh water lake in the middle of the country. This supplies fresh water to the surrounding areas .

The reclaimed polder have attracted towns thus improving infrastructure and social amenities

- the great dyke built resulting in a road running across from North to South shortening te coastline distance by over 300 kms
- tidal flooding have been reduced drastically.
- Reduction of salinity of the surrounding areas due to fresh water of lake vessel

7. a. Tradition and culture

- Ownership and inheritance of land
- Religion

ii) Climate – The highlands have adequate rainfall and cother climate factors.

- Topography - tea is grown in the gently sloping highland favouring drainage.
- Soil – the PH and faulting on the highlands favour its growth slightly acidic (3 marks)

b. Coffee is planted in nursery , shaded and regularly watered where they germinate and stay for 6 months

- During planting there are planted in holes dug three metres apart.
- they are shaded and mulched
- from planting to five years, the beans begin to ripen and are harvested (5 marks)

- ii) Formation of Kenya Tea Development Authority (KTDA) which assist in marketing.
 - financing of small scale Tea manufacturing industries such as:
 - producing of inputs such as fertilizers (3 marks)
- c. i) More extensive land is available in Brazil for coffee growing than in Kenya
 - more developed transport in Brazil compared to Kenya.
 - Kenya grows mainly coffee, but in Brazil they are intercropped with soya beans
- Hazards in Brazil include forest while in Kenya, it is prolonged drought as heavy rainfall
- marketing in Brazil is more efficient than in Kenya. (4 marks)
- ii) Well developed technology
 - intensive production methods
 - well developed export marketing (4 marks)
- iii) pests and diseases
 - drought
 - cattle rustling (3 marks)
- 8. C is a national reserve while others are national parks.
 - ii) A – East Rudolf
 - B- Mt. Elgon
 - C- Maasai Mara
 - D – Tsavo
- b. i) The spectacular wildebeest migration across the Mara River to Serengeti (2marks)
- ii) Publicity by Tourist board e.g advertisement christened magical Kenya on CNN television
 - high class tourist hotels
 - Kenya is a selectively peaceful country
 - Variety of tourist attractions
 - Cultural activities (8 marks)
- c. i) Earns foreign exchange.
 - creates jobs
 - improves infrastructure (social – cultural)
 - prostitution
 - influences school drop outs
 - spread of diseases
- ii) Transport and communication is more advanced
 - opportunity for snow games during winter
 - Switzerland is the most peaceful country in the world.
 - It is mountainous and has big rivers in Europe from Switzerland e.g Rhine, Rhone etc
 - Warmer climate during winter for southern towns e.g Ticino (4 marks)
- 9.a. North west Atlantic
 - North East Atlantic
- North East Pacific
- b. the influence of

current

- the convergence of cold and ocean current improves circulation of oxygen and dispersal of nutrients for fish.
- Currents regulate the temperature of water favouring growth of planktons.
- Warm currents moderate water temperatures enabling fishing to be carried out throughout the year.

Indented coastline

- indented provide ideal breeding grounds for fish and development of ports.

Climate

- the cool climate allows growth of planktons
- cool climate has made fishing conditions for preservation favourable.

Technology

- advanced technology of the area has led to rapid growth of fishing industry e.g use of riders in fishing and presentation. .8mks}

c)i)Narrow continental shelf has limited the area on which plantation can grow.

- The relatively warm tropical waters do not favour breeding of large fish.The warm current such as Mozambique discourage fish breeding.
- Competition from developed countries such as japan.
- Inadequate capital to purchase modern vessels and equipment.
- Limited market size for fish due to tradition beliefs e.g few people eat fish in Kenya.
- Inadequate facilities for preservation and processing. (6mks)

d)i)Poor road network connecting fishing areas and markets.Roads should be upgraded.

-Poor technology hinders development of fishing . effects should be made to train manpower on use of modern technology.

- pollution of fishing grown by agro - industrial chemical observance of conservation measures should be up stepped.

- inadequate research and knowledge on fishing . pwani university have set up programmes for mmarine studies.

ii) input of foreign technology companies have ventured into sport fishing advancing it further.

10.a) it is ability to work

it is the power or fuel needed to run machinery (2 marks)

b. Green energy is the kind of power produces from sources with the least harm to there environmet and does not produce green house gases e.g solar energy (2marks)

ii)- solar through solar panels as photovoltaic cells
wind energy - wind tubules

plants diseases

biogas (8 marks)

c. I) it is the continual rise in atmospheric temperatures due to release of heat and green houses into the atmosphere . (2 marks)

ii) international treaties to reduce emissions of green houses gases e.g the Kyoto protocol and the recently concluded Copenhagen climate change summit

- advocating for green technologies of energy e.g electric car
- less dependency on fossil fuels
- alternative sources of energy are sought e.g wind (6 marks)

iii) Droughts

- floods
- melting of glaciers threatening low lying islands such as the Maldives
- depletion of ozone leading to U.V rays causing skin cancer

iv) it refers to the scientific method of observing green house emission and their effects on the planet. (1 mark).