

GEOGRAPHY 312/1 MARKING SCHEME

1 State four proof that the shape of earth is spherical

- Photographs of earth taken by satellites from outer space show that earth is spherical.
- During the lunar eclipse, a spherical shape of the earth is cast on the moon
- The earth horizon appear curved as viewed from a high tower showing that earth is spherical.
- A ship approaching a harbour has a gradual appearance showing that earth is spherical.
- The rising and the setting of the sun due to rotation of the earth have the east seeing the sun ahead of the west. If earth was flat all places would see the sun at the same time.
- Circumnavigation of the earth along a straight line will bring one to the starting point but from the opposite direction.
- All the planets of the solar system are spherical and earth as one of them must be spherical.

Any 4*1 = 4 mks

2 a)i) Name the part marked M

- Horn 1 mk

ii) Wind current marked N

- Eddy current

b) How a rock pedestal is formed.

- a rock outcrop that stick out of the ground has alternating layers of hard and soft rocks.
- The rock is weakened by weathering and abrasion.
- _ The softer rocks are eroded faster than the hard rock
- wind abrasion is more active at the lower part than the upper layers
- *- The feature that form is a rock tower that has alternating grooves and protrusions and a thin base.

Any 3* 1 = 3mks. * point is a must to score max 3 mks

3 a) Xtics of plutonic rocks

- Rocks form from magma
- rocks form deep in the earth crust

- rocks are coarse textured.
- rocks have large crystals

Any 2* 1 + 2 mks.

b) Mechanically formed sedimentary rocks

- Existing rocks undergo erosion and weathering to produce sediments
- sediments are transported by water wind and ice.
- _ they are deposited in layers on land or in water
- particles are cemented, compacted and consolidated to form a hard rock.

Any 3* 1 = 3mks

4 i) cloud p

- Cumulus 1* 1= 1mk

ii) weather conditions associated with cumulonimbus clouds

- Thunder and lightning
- hailstones
- heavy rainfall
- dark clouds
- thunderstorms

Any 2*1 = 2mk

b) formation of dew

- clear sky to allow terrestrial radiation
- sufficient moisture in the atmosphere
- air must be cooled below dew point at ground level
- Calm atmosphere

Any 3 * 1 = 3mk

5 a) what is glaciations

- glaciation is a process in which moving ice erode, transport and deposit materials on the earth surface.

2mk

b) movement of ice

- plastic flowage. Pressure exerted on ice cause particles to melt slightly thus changing their position and moving down hill.

- Basal slip. Weight of ice cause ice in contact with ground to melt and act ad a lubricant thus ice slip and slide down hill.

_ Extrusion flow. Ice accumulate to great height and thus spread sideways under gravity

7 a) what is folding.

The process in which young sedimentary rocks bend upward and downward due to compressional forces.

2mk

b) i) fold mountains marked

W = andes

Y = Appalachians

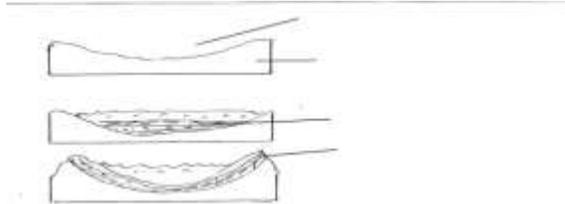
Z = rockies

each 1 mk

ii) Continent where v is found

- Asia

1mk)



c) formation of fold mountains

Geosynclines are formed on the earth surface.

- - prolonged and extensive erosion occur on the surrounding higher grounds/ areas
- Sediments are deposited in the geosynclines to form thick layers

- Weight of sediments cause subsidence of the geosynclines leading to accumulation of more sediments.
- Further subsidence of the geosynclines trigger off compressional forces which draw the higher grounds closer.
- The sediments are compressed and drawn together and thrust upwards to form fold mountains
- The main mountain formed at the edge of the geosynclines where the forces of compression were greatest

Text = 7mk

Diagram = 4mk total 11 mk

d) benefits of fold mountains.

- fold mountain are water catchment areas as they receive high rainfall that provide water for domestic, industrial or agricultural use.
- fold mountains are forested and provide timber for building and construction
- some fold mountains have valuable minerals eg coal and petroleum that is extracted and sold to generate income.
- fold mountains have beautiful sceneries that attract tourists who generate foreign exchange to respective countries.
- fold mountains receive heavy rainfall on their wind ward slopes that encourage settlement and agriculture.
- fold mountains influence transport systems as passes or as barriers.

Any 4 * 2 = 8mk

8 a) influence of factors on climate

i) aspect

- in the northern hemisphere, the north facing slopes are cooler than the south facing slopes as they do not receive direct solar radiation
- wind ward slopes generally are wetter as they receive the moist laden winds.

2 * 2 = 4mk

ii) latitude

- areas near the equator are hotter as they receive a higher concentration of the sun's rays per unit area.
- amount of solar installation decrease pole ward since the sun's rays travel a longer distance.

2 * 2 = 4mk

b) x-tics of equatorial climate.

- High temperatures throught the year. / average temp is 27°C
- Small annual range of temperature/ 3° – 5 ° C

- Small diurnal range of temp / about 6° C
- High rainfall throughout the year / about 1500 mm and 2500 mm
- Rainfall regime has a double maxima
- Rainfall is mainly convectional
- Thunderstorms are common
- High humidity throughout the year
- Extensive cloud cover.

Any 6 * 1 = 6mk

c) temperate grasslands

- pampas
- Steppe
- Praries
- Down
- veldt

Any 3 * 1 = 3mk

d) adaptation of vegetation

- some plants have thick/ succulent leaves to enable them store water
- some plants have long roots to tap the ground water
- some plants are quick sprouting to take advantage of the short lived rains
- some plants wilt in the absence of moisture have quick recovery
- some plants are stunted/ dwarf like due to the harsh climate

Adaptation= 4mk

Explanation= 4mk

9 a) differentiate between watershed and interfluves

- watershed is the boundary separating on drainage basin from the other while an interfluve are the high areas between two tributaries.

- 2mks

ii) ways in which river water flows

- Laminar flow

- Turbulent flow
- Helicoidal/ corkscrew
- Plunge flow

Any 2 *1 mk

b) river transport

- Suspension. Transport of light and insoluble materials that float or are submerged in the river water.
- saltation. Materials are transported in a series of hops and jumps
- traction. Materials roll on the river bed.
- solution. Materials are dissolved in the water

Way = 4mk description = 4mk

c) causes of rejuvenation

- Change in base level due to drop in sea level hence water flow in a higher velocity
- regional or local uplift. River velocity increase as the river try to maintain its original river valley.
- unequal subsidence of the land. Land sink unevenly and increase velocity.
- increase in river discharge due to increase in precipitation increase river erosive power.
- change in rock resistance when the river flow over resistance rock its erosive power is cut and when it enters the less resistance rocks its erosive power increases.

Any 3 * 2 mk

d) depositional features

- alluvial fans
- flood plain
- meanders
- ox bow lakes
- river braids/ eyot /isles
- natural levees

any 3 *1 = 3mk

ii0 formation of deltas

- River should carry a large load as it enters the sea
- River course should be free of obstacles like swamps that act as filters
- River should flow at low velocity
- Sediments should be deposited faster than they are removed by sea currents
- Any 4 * 1 = 4mk

10 a) soil catena

- Arrangement of soil sequence on a hill

2mk

ii) process of soil profile

- Podzolization
- calcification
- Ferralization
- desilication
- salinization
- gleization.

Any 4 * 1 = 4mk

b) component of soil

- soil air / atmosphere
- soil moisture/ water
- humus/ organic matter
- inorganic matter / minerals

Any 3 * 1 = 3mk

c) Living organisms

- assist in breaking down of rocks through burrowing
- Decay of plants and animals add humus thus improve fertility
- burrowing animals improve soil aeration

Any 2 * 2mk = 4mk

ii) Topography

- Valley bottoms/ gentle slopes encourage formation of deep and fertile soils
- - steep slopes encourage erosion thus slow down formation of soil/ formation of thin soils
- Slopes influence arrangement/ sequence of soil/ soil catena
- Some slopes are exposed to the sun / rain which influence weathering of parent rock.

Any 2 * 2 mk = 4mk

d) Activities

- asking questions
- photographing
- filling in questionnaire
- drawing sketches
- taking notes

Any 4 * 1 = 4mk

ii) Measures to control erosion

- afforestation programme
- construction of gabions
- planting of cover crops
- controlled grazing.
- educating farmers on modern methods of farming like crop rotation

Any 4 * 1 mk = 4mk

6 a) Districts

- Elgeyo marakwet
- West pokot
- Trans nzoia
-

Any 2 * 1 = 2mk

ii) Area of the kapolet forest

- 14.5 KM²

iii) 2° 23'

2mk

c) Cattle rearing

- presence of cattle dips that control animal diseases

Vast tract of land that provide pasture land

Permanent rivers that provide water for cattle

- high altitude that provide cool climate for cattle rearing
- presence of scrub hence natural pasture
- presence of good road network to transport animals
-

any 3 * 2mk = 6mk

d) Drainage.

- there are many permanent rivers
- rivers generally flow south ward
- there are seasonal swamps/ papyrus swamps
- some rivers have bends/ are winding
- main river is koitobos /noigameget
- Some Rivers originate from forest.
- some rivers drain their water in swamps

Any 5 * 1 = 5mk

ii) Economic activity

Evidence

- agriculture farms
- livestock farming cattle dips
- transport roads/ railway/motorable tracks.
- trading built up areas
- fishing fishing hut.

Any 4 * 1 = 4mk.

