312/1
GEOGRAPHY
PAPER 1
FORM 4

Kenya Certificate of Secondary Education

END OF TERM II EXAMINATION
MARKING SCHEME

1.(a)What is natural vegetation 2 marks

It refers to the plant cover growing wildly of the earth's surface without interference by man 2 marks

(b)State three characteristics of the Mediterranean type of vegetation 2 marks

Some plants have small/thick skinned/leatherly spiny leaves

Some plants have long nuts

Some plants have thick barks

Some plants have large fleshly bulbous roots

Some plants have shiny/waxy leaves

Some plants are evergreen

Some plants have fleshy leaves

Scrubs/thickets/thicky bushes are common Any 3*1=3 marks

2.(a)What is solar system 2 marks

Soalr system refers to the composition of the sun,planets and other heavenly bodies related to the sun

(b)(i)Solar eclipse 1 mark

(ii)Features marked

L-Moon 1 mark

M-Shadow 1 mark

3.(a)What is an isobar?

It is a line connecting places with the same atmospheric pressure

(b)What is the effect of the International Date Line on time?

On crossing this longitude while going to the west a day is lost while a day is gained while crossing to the east
2*1=2 marks

4.(a)Name the features marked

P-Horst/Block mountain

Q- Rift valley

R-Scarp/Ecarpment 3 marks

(b)Differentiate between a normal and reverse fault 2 marks

A normal fault is caused by tension inclined plane with inclination of the fault plane while reversed fault result from compression forces where one block is pushed upwards in relation to the other 2 marks

5.(a)Describe carbonation as a process of chemical weathering

Rain water mixes with carbon(iv) oxide to form weak carbonic acid

The acid rain falls on joints in limestonr rocks

Chemical reaction results in formation of calcium bicarbonate

The Calcium Carbonate formed is easily by a solution a process called carbonation

(b)Give two reasons why there are few settlements in a Karst landscape

Rock has thin soils which discourage agriculture

Presence of inadequate surface water for domestic use

The surface is rugged and unstable for building houses
Any 2*1=2 marks

SECTION B

6.(a)(i)What type of map is Kitale

Topographical map 1 MARKS

(ii)Convert the scale used to draw the map of Kitale into a statement scale

50,000*1 km=0.5 km

100,000 1 cm to 0.5 km
2 marks

(iii)Height in metres of the trigonometric station in the grid square 2311

1919 m (1901-1919m) 2 marks

(iv)What is the latitude extent of the map? 2 marks

1°00’N-1°12’N 2 marks

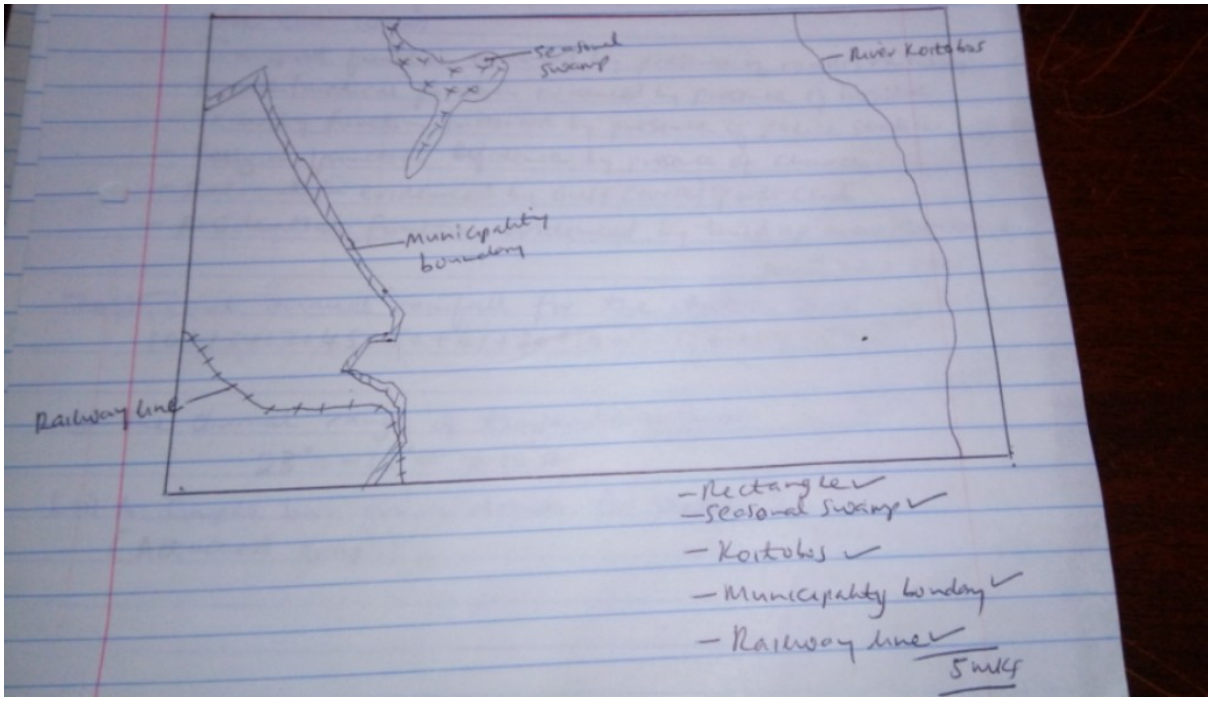
(v)Measure the length in Kilometres of R.Koitobos from Mc.Call’s bridgeto the grid point 304110 2 marks

14.4 km+-0.1 (14.3-14.5 Km) 1*2=2 marks

(vi)What is the bearing of the trigonometric station at grid square 2823 from the Air photo principal point at grid square 2918 2 marks

345°(+-1°) (344°-346°) 1*2=2 marks

(b)Draw a rectangle enclosed by Easting 23 and 31 and Northing 11 and 16



(c)Describe the drainage of the area covered by the map of Kitale 5 marks

There are many permanent rivers

The main river is R.Koitobos

Some of the rivers are disappearing

Most of the rivers are flowing from N.E generally towards the South

Most of the rivers have formed dendritic drainage pattern

Most of the rivers in the N.E are in their youthful stage

There is presence of seasonal swamp to the western side of the map

There is presence of papyrus swamp along River Koitobos

(d)Citing evidence from the map,state two functions of Kitale town 4 marks

Transport function evidenced by presence of road/railway

Health/medical function evidenced by presence of hospital

Security function evidenced by presence of police station

Religious function evidenced by presence of church

Recreation evidenced by golf course/sports club

Residential function evidence by built up areas/settlement

7.(a)(i)Total annual rainfall for the station 2 marks

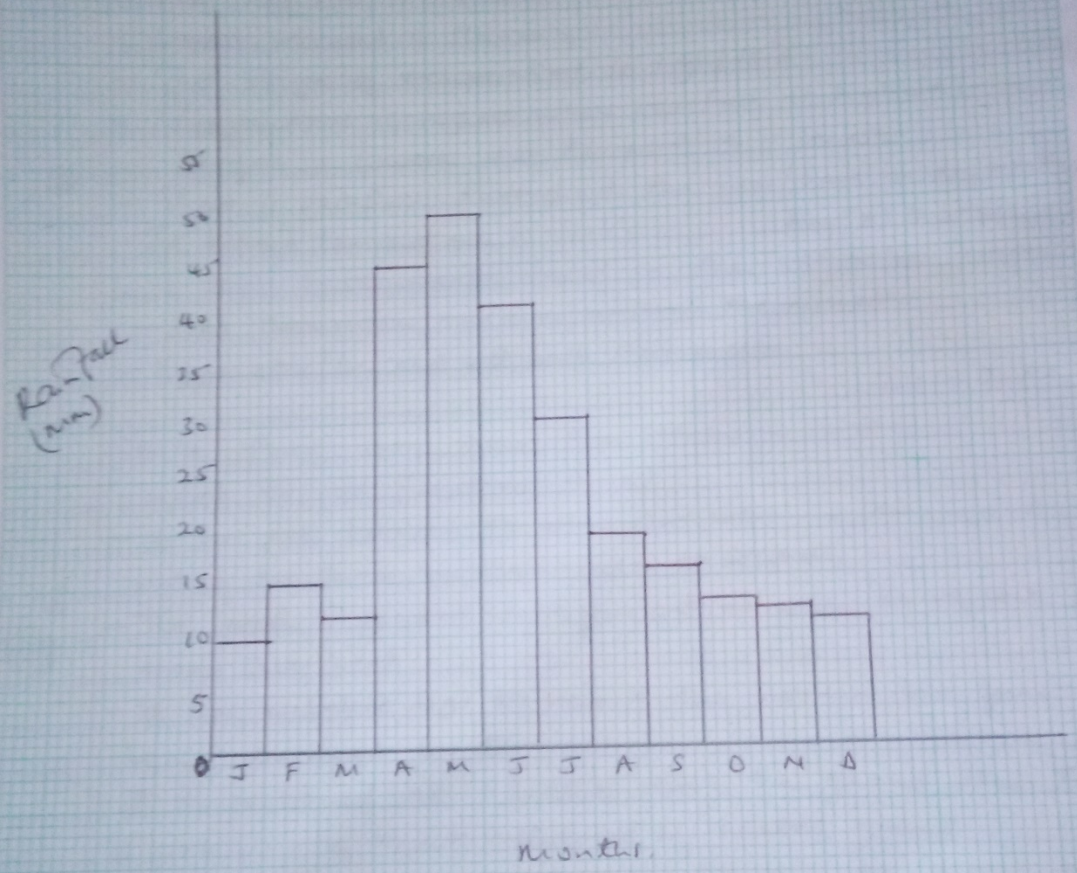
10+15+12+45+50+41+30+19+16+13+12+11=274 mm

(ii)The diurnal range of temperature 2 marks

23°c-13°c=10°c

(b)(i)A simple bar graph drawn for station W

A SIMPLE BAR GRAPH SHOWING RAINFALL FOR STATION W.



- Title 1mk
- Labelled axis 2mks
- Lowest bar 1mk
- Highest bar 1mk

5mks.

(ii)Describe the climate of station W 5 marks

The highest amount of rainfall falls in the month of May/lowest is reached in January

Total annual rainfall is 274 mm/station receives low rainfall

The highest temperature was recorded in May/lowest recorded in January

The range of temperature is high/14°c

Temperature is highest when rainfall is highest/rainfall is lowest when temperature is lowest

There is rainfall throughout the year/have no dry month

The average temperature is 16.6°c Any 5*1=5 marks

(iii)List two instruments found in the Stevenson's Screen 2 marks

Six's thermometer/maximum/minimum thermometer

Hygrometer/Dry and wet bulb thermometer 2*1=2 marks

(iv)State four ways how the Stevenson Screen is adapted to its functions 4 marks

It has got louvers to allow circulation of air in and out of the screen for the thermometer to be accurate

It has metallic legs to prevent the wooden box from being destroyed by termites

It is positioned at1.2 metres above the ground where there is free flow of air,not influenced by heated ground

The roof is made of double boarding to allow free flow of air 4*1=4 marks

(v)Give five reasons for carrying out weather forecasting 5 marks

It is carried out for the farmer to organise their farming calendars effectively

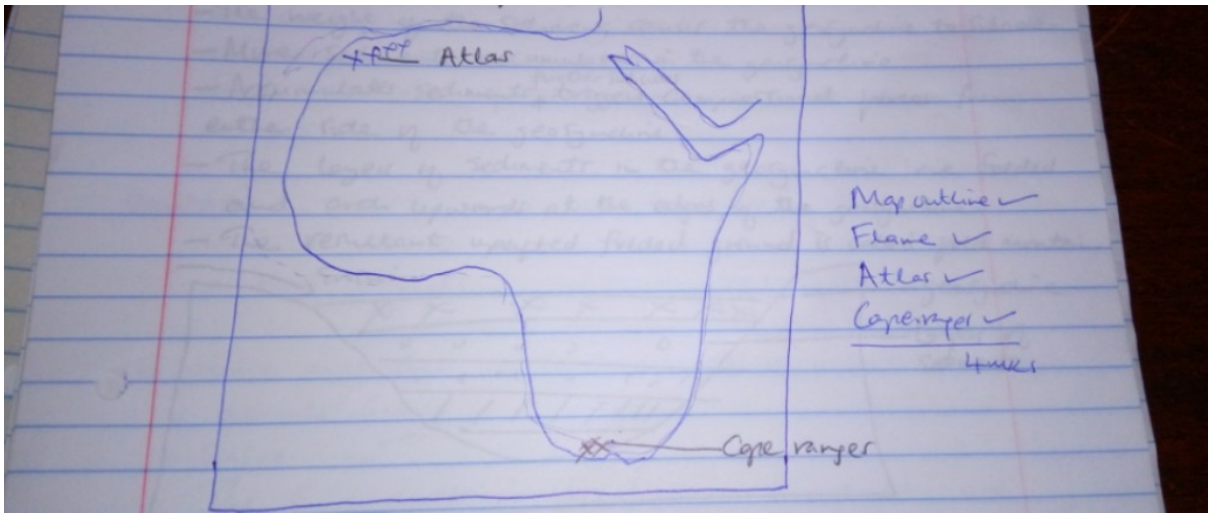
Helps travellers to know the type of dressing to have in a day

Assist in the aviation industry to establish when a plane is to land/take off

Helps the military personnel to plan when to conduct military activities

Helps to cope with natural calamities related to weather by taking precautionary measures 5*1=5 marks

8.(a)(i)0utline map of Africa



(ii)Name for types of fuels

Simple/Symmetric fold/isoclinal

Asymmetric fold

Over fold

Recumbent fold

Overthrust/fold thrust/Nappe

Anticlinorium synclinorium complex Any 4*1=4 marks

(b)(i)Name the parts marked

X-limb 1 mark

Y-Syncline 1 mark

(ii)Name the force marked Z

Compressional force 1 mark

(c)While using a well labelled diagram, describe the formation of Fold Mountain 8 marks

An extensive shallow depression/geosyncline develops on the earth

Prolonged erosion in adjacent land causes accumulation of sediment in the geosynclines, in great thickness

The weight of the sediment causes the geosyncline to subside

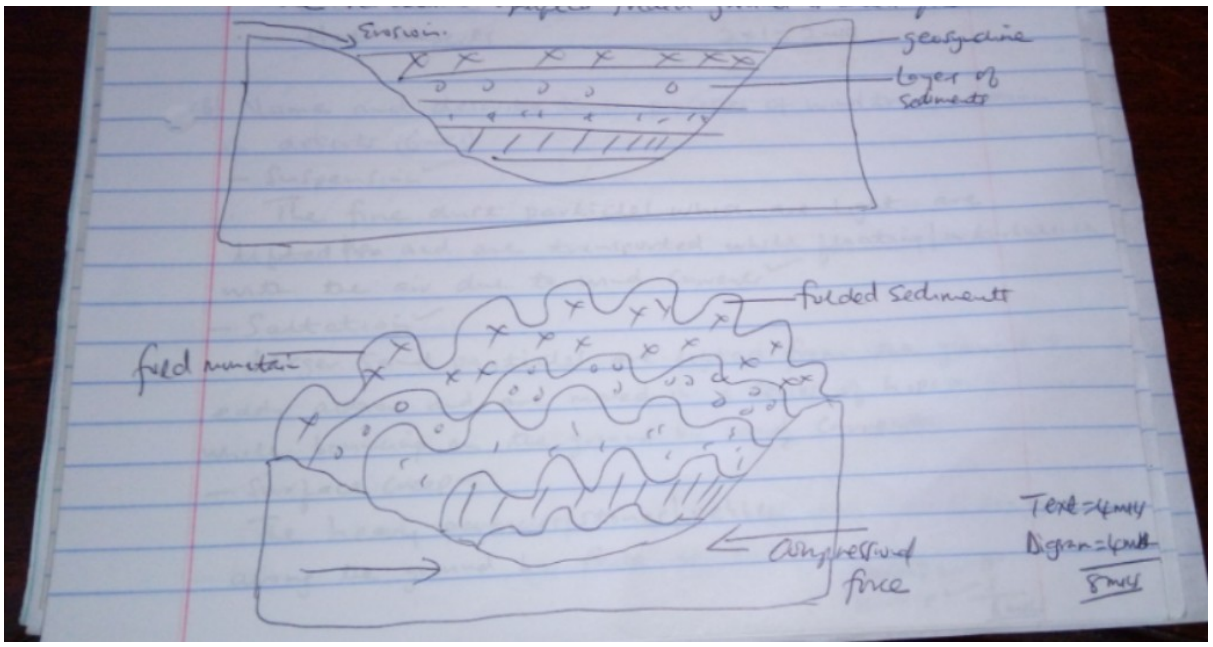
More sediments accumulates in the geosyncline to subside

More sediments accumulates in the geosyncline

Accumulates sediments further subsides triggers compressional forces from either side of the geosyncline

The layers of sediments in the geosyncline are folded and arch upwards at the edges of the geosyncline

The resultant u



plifted folded grounded is called fold mountain

(d)Explain three positive ways in which fold mountains influences human activities

Fold mountains are water catchment areas which help feed rivers providing water for domestic/industrial/irrigation use

Fold mountains are often forested and provide valuable timber used in construction and building industry

Fold mountains are beautiful hence attract tourist hence a country earns foreign exchange

Some fold mountains have valuable mineral deposits like coal which is brought closer to the surface for easier exploitation

Fold mountains influences transport system ad passes
Any3*2=6 marks

9.(a)(i)Name two types of deserts 2 marks

Cold deserts

Hot deserts 2*1=2 marks

(ii)Name and describe three process of wind transportation in deserts 6 marks

Suspension

The fine dust particles which are light are lifted and are transported while floating/in turbulence with the air due to wind currents

Saltation

Large sand particles are lifted from the ground by eddy action and are moved in a series of hops and jumps/while bouncing on the ground by wind currents

Surface creep

The heavy particles/stones/pebbles are rolled/dragged along the ground by force of wind

While using a well labelled diagram,describe how the following features are formed

(i)Zeugen

The desert has alternating horizontal layers of hard and soft rocks

The top layer of hard rock has cracks

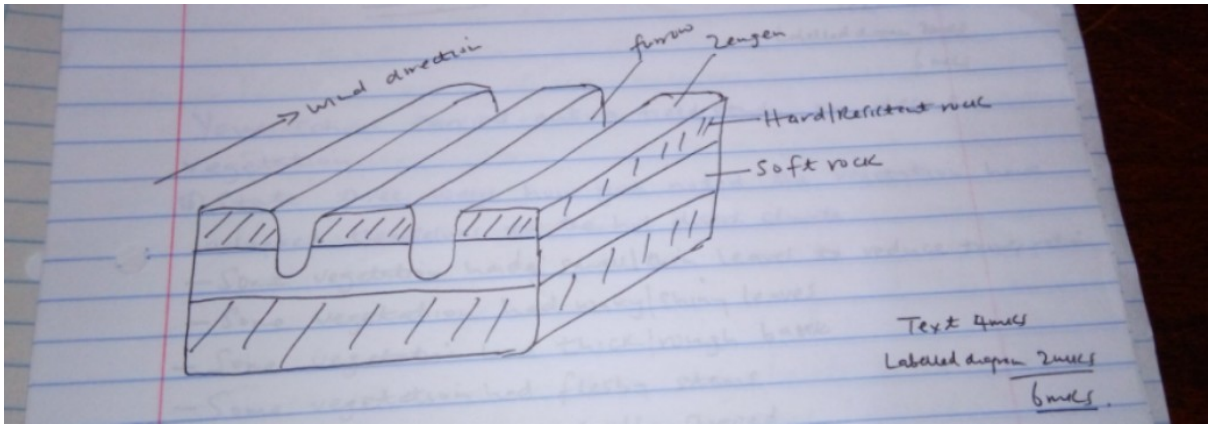
Weathering process open up the joints/cracks

Wind abrasion erodes the joints/cracks deepening them to reach the soft layer of rocks

As abrasion continues, farrows are formed and gradually widened

The hard/resistant rock form ridges separating the fallows called zeugens

The process creates a ridge and farrow land scape



(ii)Rock pedestal

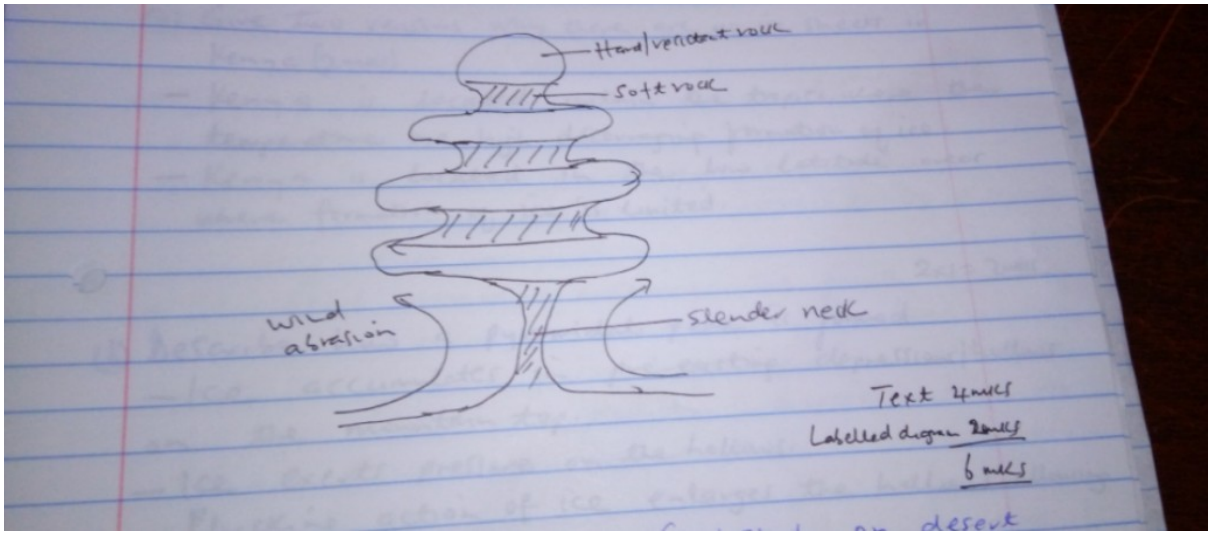
A rock outcrop made of alternating hard and soft layers

Wind abrasion attacks the rock outcrop

The soft layers are eroded faster than the hard layers

Wind abrasion is greatest near the ground level

This results into a rugged sloped rock feature called rock pedestal



Your school carried out a field study on desert vegetation

(i)State three ways how you noted the vegetation have adapted themselves to the hot desert climate

Some vegetation had small/thin leaves to reduce transpiration

Some vegetation had waxy/shiny leaves

Some vegetation had thick/rough bark

Some vegetation had fleshy stems

Some trees were umbrella shaped

2 marks

Advocating planting of more trees

Carrying out irrigation

Construction of gabions to reduce erosion Any other relevant 2*1=2 marks

10.(a)(i)What is an ice sheet? 2 marks

An ice sheet is a large continuous mass of ice which covers vast/extensive areas of lowland 1*2=2 marks

(ii)Give two reasons why there are no ice sheets in Kenya 2 marks

Kenya is located within the tropics where the temperatures are high discouraging formation of ice sheet

Kenya is located in the low latitude areas where formation of ice is limited

2*1=2 marks

(b)Describe how a pyramidal peak is formed

Ice accumulates in the pre-existing depressions/hollows on the mountain top

Ice exerts pressure on the hollows

Plucking action of ice enlarges the hollows allowing more ice to accumulate

Freeze-thaw action leads to expansion of hollows making them large basins

Mivation eats into the back wall of the basins making them recede into the mountain side

A steep knife edge ridge are formed separating the basins

Three or more of these ridges meet at the mountain top forming a rough pean called pyramidal peak
5*1= 5 marks

(i)Name the type of moraine formed

S-Medial moraine 1 mark

T-Lateral moraine 1 mark

V-Terminal moraine 1 mark

(ii)Explain four effects of glaciated features in upland areas 8 marks

Glacial upland areas form magnificent/beautiful features like pyramidal peak which attract tourists/encourage ice skiing and ice skating

Glaciated mountains encourage the growth of forests which encourage lumbering supporting the building industry

Waterfalls formed in glaciated uplands provide suitable sites for hydroelectric power production for domestic/industrial use

Flooded coastline form deep well sheltered harbour/suitable fishing grounds

U-shaped valleys in upland areas form natural route ways for the society to us e

The upland glaciated landscape valleys are utilised for livestock farming Any 4*2=8 marks

(d)(i)Give reasons why it would be difficult to undertake the field study on glaciated features on the mountain

Climbing the mountain to access the features would be difficult due to rugged terrain

Time needed to do so would be inadequate

Harsh weather condition/sudden rain/extreme low temperatures may hinder their work

The thick vegetation in the lower slopes may hinder movement

Attack by wild animals may make it difficult to access the area

It would be difficult to conduct a previsit Any other relevant 4*1=4 marks

(ii)How the students would us e a photograph of Mt.Kenya to identify the glaciated features on the mountain

By dividing it into parts

By observing and identifying the features in each part of the photograph

By recording the features observed

By labelling the features observed 3*1=3 marks