1279
BRIDGID MUKARI

312/1 MS
GEOGRAPHY
Paper 1
MARKING SCHEME
Nov. 2019

THE KENYA NATIONAL EXAMINATIONS COUNCIL

KENYA CERTIFICATE OF SECONDARY EDUCATION

GEOGRAPHY

Paper 1

MARKING SCHEME
(CONFIDENTIAL)

THIS MARKING SCHEME IS THE PROPERTY OF THE KENYA NATIONAL EXAMINATIONS COUNCIL AND IT MUST BE RETURNED TO THE KENYA NATIONAL EXAMINATIONS COUNCIL AT THE END OF MARKING

This marking scheme consists of 21 printed pages.

© 2019 The Kenya National Examinations Council

Generated by CamScanner

MARKING SCHEME

SECTION A

Answer **all** questions this section.

1. (a)	**Distinguish between Geography and Environment** Geography refers to the study of the distribution of natural and human features/phenomenon and their interrelationship on the earth surface while environment refers to external conditions that surround an organism and has influence on its behaviour.	2 marks
(b)	**Identify the two branches of Geography** - Physical Geography - Human Geography	2 marks
2. (a)	**Name the parts marked P, Q and R.** P – Vacuum Q - Glass tube R - Mercury 3x1=	3 marks

© 2019 The Kenya National Examinations Council

Generated by CamScanner

(b)	**State three benefits of weather forecasting to human activities.** - It enables farmers to plan their farming activities. - It helps in guiding tourist activities. - It enables military personnel to plan their military activities. - It enables people to choose suitable clothing. - It guides people on sporting activities. - It guides people on fishing activities. - It helps to determine the times for air/sea travels - Planning for weather related disasters. ~~Any 3x1=.~~ Any 3x1	~~3 marks~~ 3	3
3.	**Give four proofs that support the theory of continental drift.** - Some continents seem to fit geometrically ~~and geologically into~~ a jigsaw fit along the coastal margins - There are similarities between the fossils of flora and fauna found on both sides of Atlantic Ocean. Paleontological/paleozoological - Some geological structure can be traced from one continent to another. - There are similarities in the past climate in the different parts of the world. paleoclimatological evidence - There are continuous mountain ranges made		(6)

Generated by CamScanner

	up of young volcanic rocks at the mid Atlantic. - The shores of Red Sea exhibits evidence of having undergone lateral displacement. / Sea floor spreading - Paleo-magnetic evidence/minerals with same alignment are found in different continents adjacent to one another. – Similarity of flora and fauna in different continents. Any 4x1 =	4 marks 4 4 (4)
4. (a)	**Give three factors that influence the way a river transports its load.** - The volume of water. - The gradient of the slope. - The nature of the load. - The velocity of the river. - The amount of the load. Any 3x1=	~~3 marks~~ 3 3
(b)	**Name the features marked X, Y and Z.** X – Bluff Y – Levees Z – Alluvium ~~3x1=~~	~~3 marks~~ 3 3 (6)
5. (a)	**State the two causes of vertical movement of the ocean water.** - The differences in the density. - The convergence of ocean currents.	~~2 marks~~ 2 2 (1)

© 2019 The Kenya National Examinations Council

Generated by CamScanner

(b)	**List three types of ocean tides** - Spring tides - Neap tides - Perigian tides - Apogean tides. Any 3x1=	~~3 marks~~ 3 3 5

© 2019 The Kenya National Examinations Council

Generated by CamScanner

SECTION B

Answer **question 6** and **any other two questions** from this section.

6.	**Study the map of Yimbo 1:50,000 (Sheet 115/1) provided and answer the following questions.**	
(a)(ii)	**What is the magnetic variation of the map?** - 2°28'	~~2 marks~~ 2
(ii)	**Identify two natural features found at the grid square 3597.** -Scrub -River - Meanders -papyrus swamp - Scattered Trees - Thicket - Papyrus vegetation - Gentle slope - River valley any 2X1	~~2 marks~~ 2
(iii)	**Identify two countries represented in the area covered by the map.** - Kenya - Uganda	~~2 marks~~ 2
(b)(i)	**Give the direction of the trigonometrical station at the grid square 2789 from the Air photo principal point at Nyangoma mission school** - North West. /NNW/324°±1	~~2 marks~~ 2

6

Generated by CamScanner

(ii)	**Measure the length of the provincial boundary to the North West of the area covered by the map. Give your answer in kilometres.** - ~~6.2km~~ ± 0.1	~~2 marks~~ 2
(c) (i)	**Give evidence that show the area covered by the map receives low rainfall.** - Presence of scattered trees. - Presence scrub vegetation. - Presence of seasonal rivers/swamps. - Presence of dams/water holes. Any 3x1=	~~3 marks~~ 3
(ii)	**Explain how the following factors have influenced the distribution of settlements in the area covered by the map.** - Transport - Along the roads/motorable tracks/footpaths, there is linear settlement. - At road junctions there are clustered/nucleated settlements. ~~Any 1x2~~ Vegetation - There are no settlements within the thickets/areas where there are papyrus swamp. - Most of the areas covered by	~~2 marks~~

Generated by CamScanner

	scrub/scattered trees have clustered/nucleated settlement. Any 1x2 {2} Any 1x2= 2 marks Relief - There are no few settlements on the hills/isolated islands in the lake. - There are clustered/nucleated settlements on the undulating land. Any 1x2 {2} Any 1x2= 2 marks		6 9
(d)	**Describe the drainage of the area covered by the map.** -The area has many, permanent, rivers. - There are many seasonal rivers./indefinite rivers - There are lakes – Lake Sare, Lake Victoria. -The main drainage feature is L. Victoria - There are papyrus swamps/seasonal swamps. - There are man-made reservoirs/dams. - Some rivers have tributaries - Some rivers form dendritic drainage pattern along River Yala. - Most of the rivers are draining into Lake Victoria. -The are dissappearing/vanishing rivers -There is a pond (grid 3891) -There is a waterhole (grid 2882) -The main River is R. Yala. Any 6x1= 6 marks		6 6 25

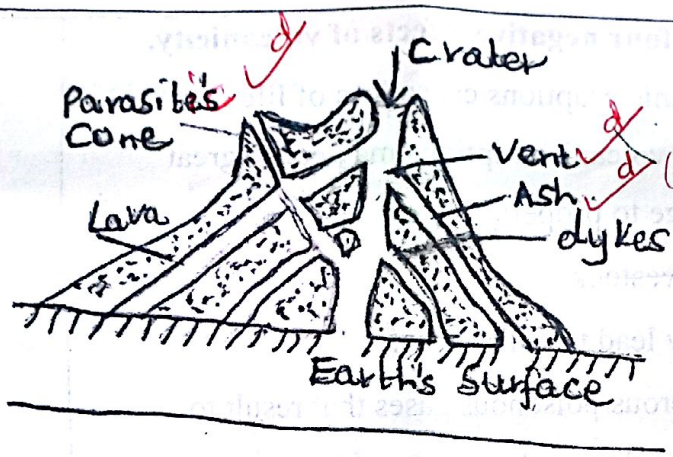
© 2019 The Kenya National Examinations Council

7. (a)	**Using examples from East Africa, describe each of the following types of volcanoes:**		
(i)	**Active volcano** - **They erupted in the recent past.** d ✓ - **They show current volcanic activities.** d ✓ - **They are likely to erupt, any time.** d ✓ **For examples, Ol donyo Lengai** g ✓ **in Tanzania.,** Shetani, Chaimu in Kenya. **Description – 2 marks** (3max 2) **Example – 1 mark** (3max 1)		~~3 marks~~ 3

Generated by CamScanner

(ii)	Dormant volcano - This is a volcano that is not active. d - It has not shown any signs of activity in the recent past. d - It erupted in the last 500 years. d - It is likely to erupt again, d example is mount Longonot ,~~Kenya~~ ,mount Kilimanjaro Tanzania, Suswa, Menengai Description – ~~3 marks~~ 4max3 Example – ~~1 mark~~ 4max1	~~4 marks~~ 4 7
(b)	**Using a well labelled diagram, explain how the following features are formed.**	
(i)	Composite volcano - It is formed as a result of ~~x~~ central volcanic eruptions. ✓t - Violent eruption forms a layer of ash. ✓t - The violence ceases and lava pours out forming a layer of lava on top of the ash. ✓t - Lava also escapes from the sides of the cone to form conelet/parasitic cone. ✓t - A volcanic cone made up of ash & lava layers ~~It is~~ built up over a long period of time as a result of many eruptions. ✓t Explanation ~~– 4 marks~~ 5t – 5 max 4 d 3 max 2	6

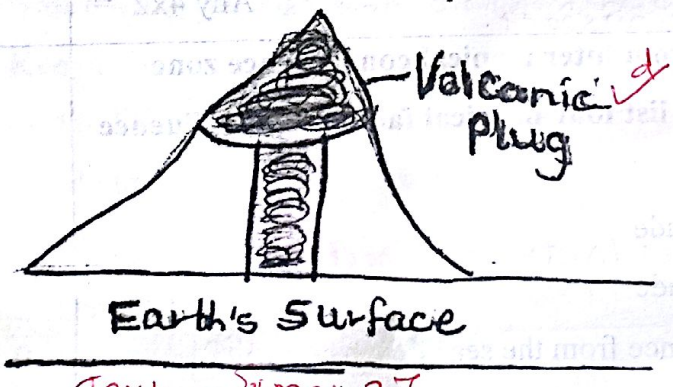
Generated by CamScanner



Diagram– 2 marks — 6 marks

(ii) Volcanic plug

- A volcano is exposed to agents of erosion and weathering over a prolonged period of time.
- This exposes a remnant of lava which had solidified inside the vent because its more resistant than erosion of surrounding rocks.
- Continued degradation leads to formation of a steep sided neck of solid lava on top of a volcano.
- The steep sided neck is called a volcanic plug.



Explanation - 3 marks

Diagram - 1 mark

Text – 4 max 3
Diagram – 1

4 | 10

Generated by CamScanner

(c)	**Explain four negative effects of vulcanicity.** - Volcanic eruptions cause loss of life/livestock - Some volcanic eruptions may cause great damage to property/infrastructure/buildings ~~and livestock.~~ - Lava flows may bury minerals. - It may lead to emission of dangerous/poisonous gases that result to death/affect environment. - It causes powerful sea waves/Tsunami that can drown ~~neighbouring~~ coastland islands. - Volcanic mountains create rain shadow on the leeward side causing dryness and this discourages agriculture. - Volcanic mountains may be barriers to construction of infrastructure, making it expensive. - The rugged nature of volcanic landscape make settlement/agriculture difficult. - Lava flows cover agricultural land - Eruption of volcanic ash and dust into the atmosphere hinders air transport. Any 4x2 = ~~8marks~~ 8	8 25
8. (a) (i)	**Apart from inter tropical convergence zone (ITCZ), list four physical factors that influence climate.** - Latitude - Relief/Altitude, Aspect - ~~Altitude~~ - Distance from the sea/continentality - ~~Aspect~~	

Generated by CamScanner

	- Ocean currents - Winds/air masses - Configuration of the coastline / Allignment of the coastline Any 4x1=	~~4 marks~~ 4
(ii)	**Give four characteristics of inter-tropical convergence zone (ITCZ)** - It is found within $23\frac{1}{2}°$ North and $23\frac{1}{2}°$ south of the Equator. / within the tropics ✓ - It experiences high temperature. ✓ - It has low pressure. / doldrums - It is a zone where South East and North East trade winds converge. - The zone migrates North and South of the equator with the apparent movement of the overhead sun. - It is associated with convectional rainfall, high rainfall - It is associated with high humidity Any 4x1=	~~4 marks~~ 4 8
(b) (i)	**Name the three equatorial climatic regions of Kenya.** - Modified equatorial climate of the Coast. - Modified equatorial climate of North Western margin. / border - Modified equatorial of Lake ~~the~~ region.	~~3 marks~~ 3
(ii)	**Describe the Tundra climate.** - It is found above $66\frac{1}{2}°$ north / Arctic circle above and ~~below~~ $66\frac{1}{2}°$	

Generated by CamScanner

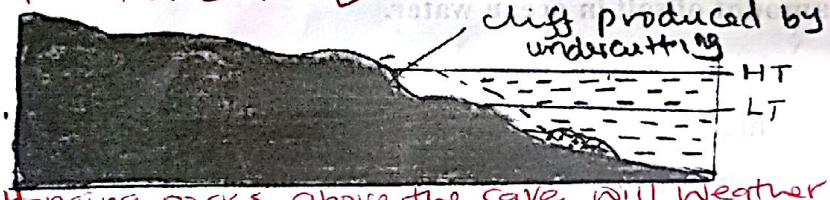
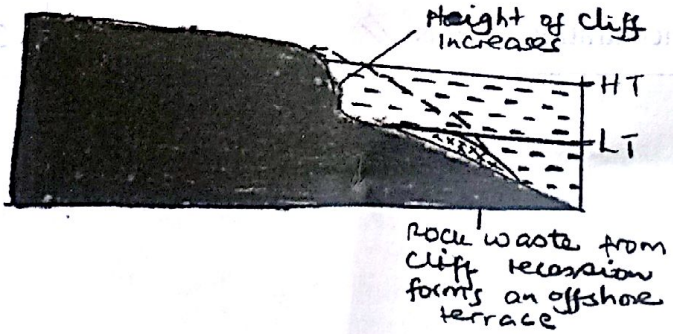
	south of the equator. / Antarctic circle. - It has cold winters with temperatures varying between –29°C to - 40°C. - It has very long winters lasting 8 months. - It has cool summers with temperatures of about 10°C - 15°C. - It has short summers lasting 3 months. - It has a very large annual range of temperature going up to 73°C. - There is permanent cover of snow and ice/permafrost. - The area is generally dry with low annual precipitation rainfall of 100 – 250mm. - During the long cold winters, polar winds are dominant. - Snow storms/blizzards are common in this region. - It is a high pressure zone - Area of low humidity Any 6x1=	6 marks 6 9
(c)	**Explain four human causes of desertification.** - Deforestation which interferes with the hydrological cycle leading to low rainfall. ✓✓ - Poor cultivation practices which has led to soil degeneration and reduction of vegetation. ✓✓ - Poor irrigation practices which lead to water logging of the soil/excessive accumulation of salts in the top soil/lowering of the water table hindering growth of vegetation ✓✓	

Generated by CamScanner

	- Overdrawing of ground water lead to lowering of the water table leading to aridity. ~~leading to aridity.~~ - Industrialization which has led to depletion of ozone layer thus leading to increased temperature and high rates of evaporation. - Overgrazing/overstocking which leads to destruction of vegetation interfering with the hydrological cycle. Any 4x2=	~~8 marks~~ 8
9. (a) (i)	**Define an ocean.** - An ocean is an extensive body of saline water occupying a large basin between continents.	~~2 marks~~ 2
(ii) (i)	**Explain the three causes of variation in the amount of salt in ocean water.** - High temperature in ocean water results to high evaporation which leaves behind higher salt concentration. - Fresh water added to the oceans through rainfall and melt ice reduces concentration of salts in the ocean. - Upwelling of water and ocean currents leads to mixing of ocean water causing variation in concentration of salts.	3 x 2 = ~~6 marks~~ 6

8 8 25

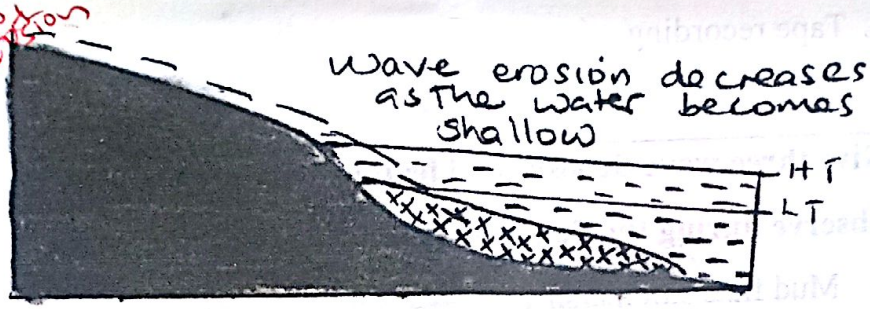
Generated by CamScanner

(b) (i)	**Identify three processes involved in wave erosion.** - Corrasion/abrasion - Hydraulic action/quarrying action - Attrition - Solution/corrosion Any 3x1=	3 marks 3
(ii)	**With the aid of well labelled diagrams, describe the processes through which a wave cut platform is formed.** - During high tides, there is undercutting at the base of the cliff by wave erosion. ✓ forming a notch ✓ - At low tide level, wave erosion is reduced at the base of the cliff. - Continued wave erosion enlarges the notch to form a cave. ✓  - Hanging rocks above the cave will weather and collapse ✓ - The fallen rocks resulting from wave erosion at the base and weathering above leads to the collapse of the upper part of the cliff to form an off-shore terrace. - When this process is repeated overtime the cliff will retreat ✓ to form a fairly flat surface on the shore called a wave cut platform. ✓	
		

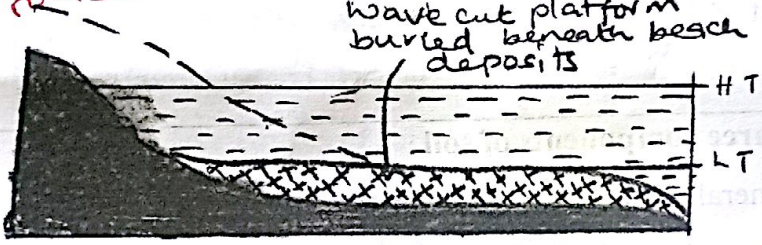
4 2
3 3

Generated by CamScanner

- The rock debris is swept backwards and forwards and deposited by breaking waves resulting to the formation of a beach.



- The cliff continues to retreat and a gently sloping bench called a wave cut platform is formed.



HT - high tide
LT - low tide

Text - 6 max 4
diagram - 4

Diagrams-4 marks

Text-4 marks 8 marks 8 11

(c) **You intend to carry out a field study on types of features resulting from wave deposition along the coast.**

Identify three methods you would use to record data.

(i) - Photographying /videos.

Generated by CamScanner

	- Field sketching/drawing diagrams. - Note taking. - Filling in questionnaires. - Tape recording. Any 3x1=	3 marks 3
(ii)	**Give three wave depositional features you are likely to observe during the field study.** - Mud flats/salt marshes - Tombolo/Bay bar/offshore bar - Beaches/beach cusps/beach ridges / beach berms - Cuspate forelands - Dune belts - Spit. Any 3x1=	3 marks 3 6
10.(a)	**List three components of soil** - Mineral particles/inorganic matter - Humus /organic matter - Water - Air - ~~Soil organisms.~~ Any 3x1=	3 marks 3 3

25

© 2019 The Kenya National Examinations Council

Generated by CamScanner

(b) (i)	Explain each of the following in relation to the classification of soil. Zonal - These are mature soils that have undergone long time of soil formation/have a well developed soil profile/~~mature soils~~.	~~2 marks~~ 2
(ii)	Intrazonal - These are soils that are formed under poor drainage conditions/waterlogged areas.	~~2 marks~~ 2
(iii)	Azonal - These are young soils that have not been affected by soil forming processes/they do not have a well developed soil profile/they are immature and skeletal.	~~2 marks~~ 2 6
(c)	**Explain three causes of soil degeneration.** - Poor agricultural practices such as burning of land/over cultivation/monoculture/over cropping cause soil to be deficient in some mineral nutrients leading to loss of soil fertility. - Excessive/wrong application of fertilizer may affect the soil pH making it too acidic interfering with soil micro-organisms. - Leaching due heavy rainfall can lead to percolation of soil nutrients to the lower horizons leading to deficiency of the top	

	soil. - Excessive drought leads to accumulation of salts in the top soil making it saline. - Soil erosion interferes with soil structure leading to loss of top fertile soil. - Other human activities such as quarrying/construction of roads interfere with soil structure leading soil degeneration. Any 6x1= Any 3x2	
(d)	**Students from Mwema School visited a nearby ranch to study types of soil.**	6 marks 6 6
(i)	Explain why they carried the following tools. • Hoes - To enable them dig up the soil samples. • Polythene bags - To help them carry soil samples. 523 523	2 marks 2 marks 4
(ii)	**Give three reasons why they would need to seek permission from relevant authorities.** - To be permitted to enter the ranch. - To enable the ranch administration to organize for a guide to take them around. - To be allowed by the Principal to be away from the school.	

Generated by CamScanner

	- To alert other teachers that their learners will be away that day. Any 3x1=	~~3 marks~~ 3
(iii)	**List three types of soil erosion they are likely to observe.** - Splash erosion - Gulley erosion - Sheet erosion - Rill erosion. Any 3x1=	~~3 marks~~ 3 10/25

Generated by CamScanner