MARANDA HIGH SCHOOL

Kenya Certificate of Secondary Education
PRE-MOCK EXAMINATIONS 2023

312/1   **GEOGRAPHY**   **Paper 1**

April 2023

MARKING SCHEME.

1. (a)	**Name two heavenly bodies that from part of system apart from planets.** · asteroids · sun · comets · meteors · meteorites · natural satellites/moons		2×1=2 marks
(b)	**State three characteristics of planets.** · planets revolve around the sun · some planets have satellites/moons revolving around them · planets are kept in their orbits by strong gravitational pull from the sun · each planet has its own gravitational force · planets reflect light from the sun		3×1=3 marks
2. (a)	**The diagram below shows six's thermometer. Use it to answer question (a).** **Identify the parts labeled A, B and C** · A – vacuum · B – alcohol · C – mercury		3×1=3 marks
(b)	**State two ways through which latitude influence the temperature of a place.** · at the equator sun rays strike the surface at right angles leading to high temperature due to small surface area · at higher latitudes sun rays strike the surface at acute angles leading to low temperatures due to large surface area		

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		· sun rays cover short distance to reach the surface around equator leading to high temperature · sun rays cover a longer distance in high latitudes to reach the surface causing low temperature	2×1=2 marks
3.	(a)	**Give two types of magma.** · acid magma · intermediate magma · basic magma	2×1=2 marks
	(b)	**Name three lava plateaus found in Kenya.** · Yatta · Laikipia · Athi-Kapiti · Uasin Gishu	3×1=3 marks
4.	(a)	**Identify two lakes formed through erosion process.** · cirque/corrie/tarn lakes · ribbon/finger lakes · oasis/wind-eroded lakes	2×1=2 marks
	(b)	**Give three reasons why some lakes are salty.** · some lakes lack outlets to drain away salts · lakes in hot and dry areas experience high evaporation rates · some lakes lack fresh water inlets · some lakes are fed with underground water with a lot of salts · the rocks over which lake water is in contact with may contain soluble salts · inlets may dissolve a lot salts which are deposited in the lake	3×1=3 marks
5.	(a)	**What is weathering?** · mechanical breakdown or chemical decay of rocks at or near the earth's surface without movement/in situ	1×2=2 marks
	(b)	**State three ways through which living organisms cause weathering.** · organic acids released from decaying plants and animals aid in chemical reactions · plant roots penetrate into the rocks causing them to widen and disintegrates · plants absorb minerals from the rocks weakening them · hoofed animals trample on rocks breaking them · animals release uric acid on rocks which chemical reactions · human activities such as quarrying break up rocks	3×1=3 marks
6.	(a)	**Study the map of Kisumu East (1:50,000), sheet 116/2 provided and answer the following questions.** **(i) Convert the ratio scale of the map to into a statement scale.** · convert 50,000 cm to km → $\frac{50,000 \times 1}{100,000} = 0.5$ km · 1 cm rep 0.5 km	2×1=2 marks
		(ii) Give six figure grid reference of the trigonometrical station 1154 SKP 21 in the southern part of the area covered by the map. · 039832	1×2=2 marks

		(iii) Calculate the bearing of Rabuor market from Air photo Principal point in GR 0986?	
		▪ 249 ± 1^0	1×2=2 marks
		(iv) What is the length of the section of railway line west of the easting 00 to Kisumu station? Give your answer in kilometres.	
		▪ 6.6±0.1 km	1×2=2 marks
		(v) Identify three drainage features in the area covered by the map.	
		▪ lake ▪ rivers ▪ seasonal swamps ▪ papyrus swamps ▪ waterhole	3×1=3 marks
	(b)	**Describe the relief of the area covered by the map.**	
		▪ there are steep slopes in the north western part ▪ there is Kano plain in the eastern part ▪ in the north eastern part there is Nyando escarpment ▪ northern part has dissected landscape due to numerous rivers ▪ there are many river valleys ▪ the highest point is 1872 metres in the Nyando escarpment and lowest point is 1140 metres in the southern part	4×1=4 marks
	(c)	**Citing evidence from the map, give two factors that favour cultivation of sugarcane in the area covered by the map.**	
		▪ presence of Agricultural Sugar Research Station/Government experimental farm which extension services to farmers ▪ few settlement in the plantation area making large tracts of land for cultivation ▪ network of road (C 543/1) facilitating transportation of sugarcane	2×2=4 marks
	(d)	**Identify three social activities carried out within Kisumu municipality. Give evidence.**	
		▪ medical care – hospital ▪ education – school ▪ administration – DO ▪ security – police line/police station ▪ sports – stadium ▪ religion – church	3×2=6 marks
7. (a)		**(i) Define the term folding.**	
		▪ the process by which crustal rocks bend upwards or downwards due to compressional forces.	1×2=2 marks
		(ii) Give three features formed through folding other than fold mountains.	
		▪ escarpments ▪ valley and ridge landscape ▪ intermontane plateau ▪ intermontane basin ▪ cuesta ▪ rolling plains	3×1=3 marks
	(b)	**The map below shows the distribution of fold mountains in the world.**	

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	(i) Name the mountains marked D and E.
	    • **D –** Andes
	    • **E -** Himalayas
		2×1=2 marks

	(ii) Identify the orogenies during which the mountains marked F and G were formed.
	    • **F** – alpine orogeny
	    • **G** – charnian orogeny
		2×1=2 marks

(c)	**With the aid of well labeled diagrams, describe the formation of the following types of folds.**
	(i) Asymmetrical folds.
	    • crustal rocks are subjected to unequal compressional forces
	    • one limb is steep while the other is gentle
	    • limbs dip in opposite direction
	
	Text – 3 marks
	Diagram – 1 mark	

	(ii) Nappe fold.
	    • great pressure due to compressional forces within the fold may cause a fracture along the axis of the fold.
	    • this may make the upper limb of the fold to be pushed/thrust over the lower limb, resulting in horizontal displacement along the thrust plane.	

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Text – 3 marks
Diagram – 1mark

(d)	**Explain four positive influence of folding to human activities.** ・ folding brings minerals like copper close to the earth's surface making their extraction easier ・ fold mountains receive heavy rainfall on their windward sides which encourage agriculture and settlement, growth of dense forest providing timber, ・ fold mountains receive heavy rainfall on their windward sides giving rise to rivers used to generate hydroelectric power, provide water for industrial/agricultural/domestic use ・ features due to folding such as fold mountains attract tourists who bring foreign exchange.		4×2=8 marks
8. (a)	**What is derived vegetation?** ・ plant cover that is growing/recovering after human or animal destruction		1×2=2 marks
(b)	**Explain how the following factors influence the distribution of vegetation** **(i) Winds** ・ strong winds may destroy plants or retard their growth ・ winds helps in seed dispersal and pollination process		2×2=4 marks
	(ii) Rainfall ・ areas receiving high rainfall have thick forests ・ areas receiving low rainfall have scattered trees and grasslands		2×2=4 marks
(c)	**(i) Give two other major types of vegetation in the world other than forests.** ・ grasslands ・ desert vegetation ・ mountain/montane vegetation		2×1=2 marks
	(ii) Describe the characteristics of tropical rainforests. ・ trees grow in mixed stands/species ・ trees are mainly hardwoods ・ trees form three distinct canopies ・ the trees are evergreen ・ trees have buttress roots for support ・ trees have broad leaves ・ there is little undergrowth		6×1=6 marks
(d)	**Your class is planning to carry out a field study on vegetation around the school.** **(i) Give three sources of information you are likely to use before the study.** ・ textbooks		

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		· journals/magazines/newspapers · internet · photographs/video tapes · forest officers	3×1=3 marks
		(ii) Identify four challenges you are likely to encounter during the study. · attack by wild animals · heavy rainfall stopping/delaying the study · thick vegetation hindering movement · fatigue due to walking long distance · inadequate data · uncooperative respondents · accidents leading to injuries	4×1=4 marks
9.	(a)	**Differentiate between a river confluence and interfluve.** · confluence is a point where tributaries join the main river while interfluve is a high area between tributaries	1×2=2 marks
	(b)	**Explain three types of river erosion.** · headward erosion – the river cuts back at its source upstream increasing the length of its valley · lateral erosion – wearing away of the river banks widening the channel · vertical erosion – down cutting of the river bed deepening the channel	3×2=6 marks
	(c)	**(i) A part from waterfalls, give three other features of river erosion.** · V – shaped valleys/ Stream-cut valley · Gorges/ canyon · Interlockin g spurs · Rapids · Potholes	3×1=3 marks
		(ii) State four ways through which waterfalls may be formed. · When a resistant rock lies horizontally/vertically upstream · Where a river descends over a sharp edge of a plateau · Where a river descends over a fault scarp · Where a river enters the sea through a cliff · Where a river descends a hanging valley into a glacial trough · At a point where river rejuvenation takes place	4×1=4 marks
	(d)	**Describe how the following features are formed.** **(i) Flood plain** · meandering river widens its valley due to lateral erosion · erosion removes interlocking spurs to form low cliffs/bluffs · deposits forming slip-off slopes merge to form continuous alluvial deposits · during floods a lot of alluvium is spread in the river valley to form a plain covered by alluvium known as flood plain	5×1=5 marks
		(ii) Arcuate delta · a river drains its waters into a sea/lake · low gradient or stagnant sea reduces the speed of the river forcing it to deposit its load · large and heavy materials are deposited first, light and fine materials are carried further into the sea water · accumulation of materials build up making the water shallow	

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		• the deposits are divided by numerous distributaries, the seaward edge is surrounded and smooth. • a triangular or fan-shaped feature is formed	5×1=5 marks
10. (a)		**Give four components of the soil.** • inorganic components • organic matter/humus • soil water/moisture • soil air • living organisms	4×1=4 marks
(b)		**Explain how the following factors influence soil formation.** **(i) Living organisms** • microorganisms such as fungi and bacteria assist in the decay of organic matter • worms/termites aerate and mix the soils • human activities such as cultivation/construction/mining causes weathering	2×2=4 marks
		(ii) Relief • Steep slopes are eroded resulting into thin soils • Gentle slopes have mature and well drained soils • Soils on top of hills are heavily leached • Flat areas have soils which are poorly drained and immature due to slow rate of mass wasting	2×2=4 marks
(c)		**Explain four causes of soil erosion.** • deforestation exposes the soil to agents of erosion making it possible for the soil to be easily carried away • overgrazing/overstocking removes vegetation cover and loosening it hence easily carried away • poor farming methods/cultivation along steep slopes/monoculture loosen the soil encouraging soil erosion • steep slopes encourages surface run-off which a lot of soil to lowlands • mining/quarrying loosen the ground hence the soil is easily carried downslope	4×2=8 marks
(d)		**State five significance of soils.** • soils are sources of valuable minerals such as alluvial gold • clay is a source of raw materials for making pots/ceramics/bricks • sand is used in building and construction • loam soil used for agriculture • soils give physical support for the rooting system of plants • soils are habitat for micro-organisms such as bacteria	5×1=5 marks

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