Term 2 - 2023
GEOGRAPHY

MARKING SCHEME FORM TWO

TERM TWO

1. a) Define the following terms;
   (i) Geography (2 marks)

- ***Geography is the scientific study of the earth as a home of humankind.***
- ***It is also the study of the distribution and interrelationship of natural and human phenomena on the earth's surface.***

   (ii) Habitat (2 marks)

- ***This is the natural home of living organisms***

   b) What is the relationship between Geography and Agriculture? (2 marks)

- ***Agriculture involves cultivation of crops and rearing of animals. Geography is occupied with studying farming systems, their distribution and factors affecting farming activities.***

   c) List **two** areas studied under Practical Geography. (2 marks)

- ***Statistical methods***
- ***Maps and map work.***
- ***Fieldwork.***
- ***Photograph work***

   d) State **two** reasons for studying Geography in Kenyan Secondary Schools. (2 marks)

- ***To gain knowledge about our environment and how to control it for both the present and the future generations.***
- ***To understand and explain how man interacts with his surroundings.***
- ***It helps us to be aware of the physical features within our environment, how they are formed, the benefits we get from them and the threats they pose.***
- ***It is a career subject. "Geography provides useful skills for becoming a teacher, surveyor, planner, geologist and environmentalists, so as to earn a living."***
- ***Geography teaches us the basic principles and geographical methods of studying and solving problems of national development.***
- ***Geography also helps us to acquire positive attitudes and values which enable us to become useful members of the society. During fieldwork, an individual is able to develop respect for work especially group work.***
- ***Studying geography of other regions in the world creates international awareness which facilitates good relations among people.***

2. a) (i) What is meant by the term 'Solar System'? (2 marks)

- ***Solar system refers to the grouping of heavenly bodies comprising the sun and nine planets.***

   (ii) Name **two** planets without satellites. (2 marks)

- ***Mercury***
- ***Venus***

b) (i) Describe origin of the solar system according to the Passing Star Theory. (4 marks)

- ***The theory was advanced by jeans and Jeffrey's.***
- ***The theory states that the sun existed earlier than the planets.***
- ***A big star with greater gravitational pull than that of the sun passed nearby and attracted large quantities of materials in form of gases from the sun.***
- ***The materials split into portions as they cooled and condensed to form planets.***
- ***They were then set into orbits around the sun.***
- ***The smaller materials formed the heavenly bodies like the moon and asteroids.***
- ***As cooling continued, heavier materials collected at the center and formed the core of the earth. The less dense materials collected around the core to form the mantle, then the crust.***

(ii) State **two** weaknesses of the Passing Star Theory. (2 marks)

- ***The origin of the star and sun are not explained***
- ***The collected materials would disperse rather condensing***

3. a) (i) What do we call the shape of the earth? (1 mark)

- ***oblate spheroid/geiod***

(ii) Highlight the forces responsible for the earth's shape. (3 marks)

- ***Centripetal force***
- ***Centrifugal force***
- ***Force of gravity***

b) Explain **three** proofs that the earth is Spherical. (6 marks)

- ***Circumnavigation. Anybody traveling at constant direction, from any point on the earth's surface will eventually come back to the same starting point.***
- ***If the earth was flat, the sun would rise and set at the same time over its entire surface. However, the sun rises east and sets west, with the rays angle varying from 0 to 90 degrees, proving a curved surface.***
- ***The horizon of the earth is always circular to an observer. It continues to expand with increasing height. These are features of a sphere.***
- ***In lunar eclipses, the earth's shadow on the moon is always seen to be circular and the only object which casts a circular shadow is a sphere.***
- ***All other planets of the solar system are spherical. Since the earth is one of the planets, it may be assumed to be, like the rest, spherical in shape.***
- ***f) Examining photographs taken in space from rockets at very high latitude-320km and more- shows the earth's horizon as a curved linea)***

(i) Distinguish between Earth's Rotation and Earth's Revolution. (2 marks)

- ***Earth rotation refers to the spinning of the earth on its axis taking exactly twentyfour hours while earths revolution is the orbiting of the Earth around the Sun taking 365.26 days to complete one cycle..***

(ii) Give **two** Effects of Earth's Revolution? (2 marks)

- ***It causes 4 seasons***
- ***Varying length of day and night***
- ***Changes in position of midday sun***
- ***It results in the solstices and equinoxes.***

b) What is the time at Kitale 35^0E when the time at Mogadishu 39^0E is 1pm. (2 marks)

Longitudinal difference 39^0-35^0=4^0

1^0=4mins

4^0

4x4=16mins

1pm- 16 mins= 12:44pm

4. a) The diagram below represents the structure of the earth. Use it to answer question (a)

(a) Name: (i) the parts marked

P - ***Atmosphere***

Q - ***Asthenosphere*** (2 marks)

(ii) the discontinuity marked **R** (1 mark)

- ***Moho discontinuity***

(b) Outline **two** characteristics of the mantle. (2 marks)

- ***Earth's Mantle extends to a depth of 2,890 km***
- ***It is the thickest layer of the Earth.***
- ***The mantle is composed mainly of olivine-rich rock.***
- ***The temperature of the mantle increases with depth.***
- ***The average density of the mantle is 3.0gms/cc – 3.3gms/cc.***
- ***Rocks in the upper mantle (region of the mantle within 1000km of the surface) are cool and brittle enough to break under stress, while rocks in the lower mantle are hot and soft (but not molten) and flow when subjected to forces instead of breaking.***

(c) State **three** reasons why the interior of the earth is hot. (3 marks)

- ***Pressure of the overlying materials generates high temperature.***
- ***During formation of the earth, the interior cooled slowly that the outer part, retaining the original temperature.***
- ***Radioactivity/breaking down of nuclear of atoms release a lot of energy which generates heat.***

SECTION B

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Answer all Questions in this Section.

5. The photograph below shows cattle rearing in an area in Kenya. Use it to answer the following questions;

a) (i) Name the type of photograph shown above (1 mark)

- ***Ground general view photograph***

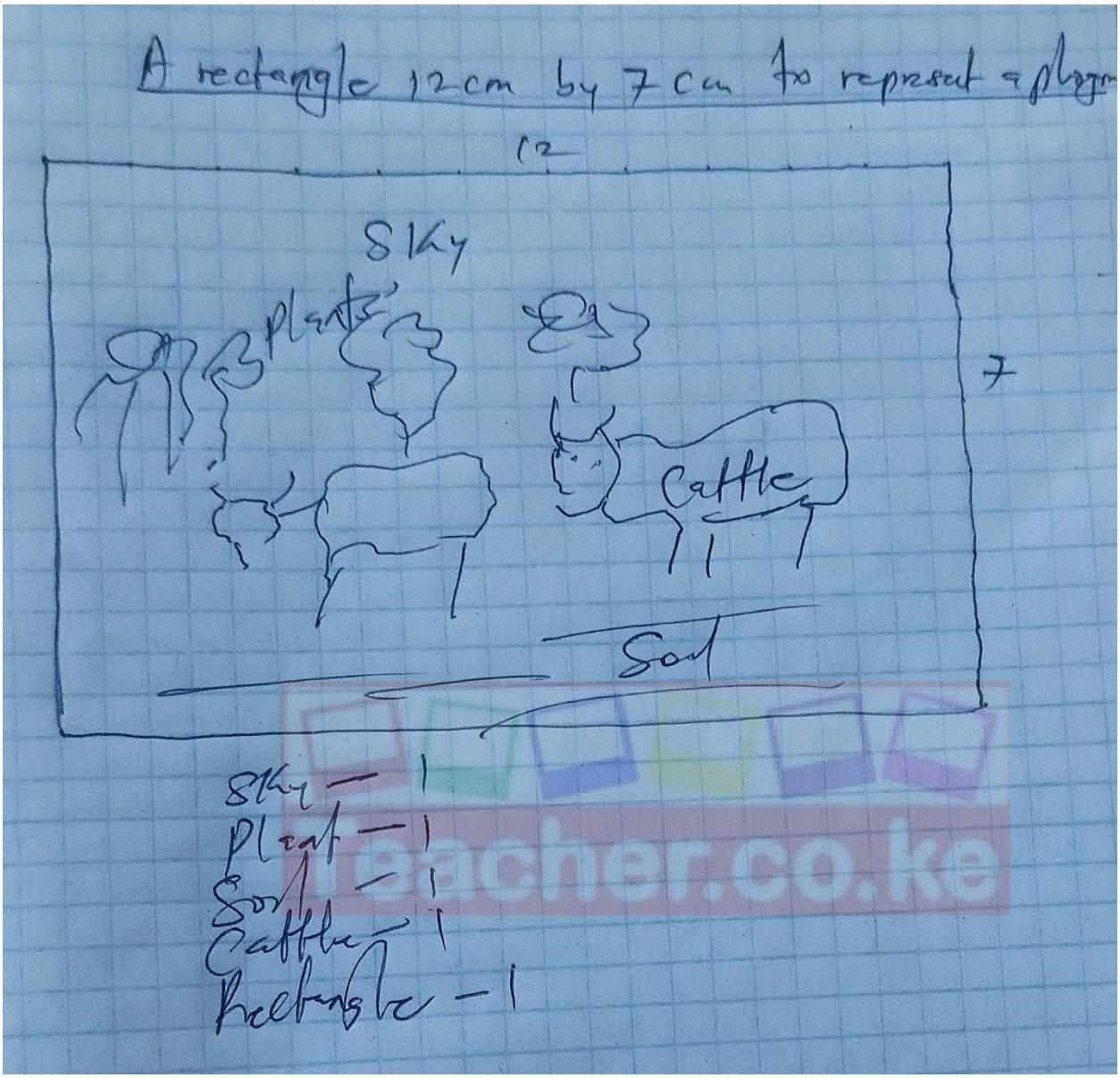
(ii) What economic activity is carried out on the area shown by the photograph? (1mark)

Livestock keeping

(iii) Give **one** reason for your answer in a (i) above (1 mark)

- ***The sky is visible***
- ***Images are reducing in size backwards***
- ***General scene is captured***

(iv) Draw a rectangle measuring 12cm by 7cm to represent the area of the photograph. On it sketch and label the main features shown on the photograph (5 marks)



7. (a)(i) Distinguish between a mineral and a rock. (2mks)

- Mineral refers to inorganic substance which occur naturally at or beneath the Earth surface while a rock is an aggregate of mineral particles forming the Earth's crust.

(ii) Give three examples of energy mineral. (3mks)

- Coal

- Natural gas

- Petroleum/ Crude oil

- Uranium

(b)(i) Give the two types of extrusive igneous rocks. (2mks)

- Lava flows

- Volcanic ejectas/ Volcanic materials.

(ii) Describe how the following types of rocks are formed;

Chemically formed sedimentary rock. (4mks)

- ***Minerals of pre-existing rocks are dissolved during rains and carried away in solution by rivers, lakes and surface run-offs.***
- ***The solution mixture may evaporate due to high temperatures.***
- ***Particles begin to precipitate.***
- ***The particles re-crystallize and settle s deposits.***
- ***Overtime, the deposits accumulate in layers where they compress, compact and harden to solids.***
- ***These solids are called the chemically formed sedimentary rocks.***

Dynamic metamorphic rock. (3mks)

- ***Pre- existing rocks are subjected to intense pressure due to the overlying burden/ internal compressional forces.***
- ***The pressure leads to change in rock structure/ grain alignment/ leading to formation of new rocks.***
- ***These rocks are called dynamic metamorphic rocks.***

Thermal metamorphic rock. (3mks)

- ***During volcanic eruptions, hot magma/ gas/ liquid intrudes into pre-existing sedimentary rocks.***
- ***The rock grains crystallize due to heat from magma thus forming new mineral.***
- ***The new minerals consolidate/ harden/ compact to form thermal metamorphic rocks.***

(a) You intend to carry out field study on rocks around your school.

(i) Give two economic reasons for conducting such a field study. (2mks)

- ***To identify various features formed from rocks as tourist attraction sites.***
- ***To find out rock with water reservoirs.***
- ***To find out the effect of quarrying to the environment.***
- ***To find out rocks that can be exploited for sale, constructions and for pottery.***

(ii) State two reasons for preferring direct observation to administering interview during the field study. (2mks)

- ***It promotes visionary skills.***
- ***It creates a vivid picture of what is studied thus lasting memory.***
- ***It widens learner's problem-solving skills through being in the field.***

- ***It invokes the virtue of co-operation/ oneness/ patience.***

(b) Give two physical importance of rocks. (2mks)

- Volcanic rocks may weather down forming soils.

- Some permeable rocks store water as reservoirs.

- Some rocks with nitrate and potash minerals produce fertilizers and dyes.

- Some rocks are unique/ spectacular/ creates aesthetic beauty to the environment.

- Some rocks are sources of / contain minerals.

8.(a) What is a fold? (2mks)

- A fold refers to a bend of the crustal sedimentary rocks due to compressional forces.

(b) Describe plate tectonic theory. (4mks)

- The Earth's lithosphere/ Sima and Sial is a series of semi rigid blocks called tectonic plates.

- The plates float on the semi-molten mantle.

- The plates are distinctively separated from one another by margins/ boundaries.

- Due to the high concentration of the convectional current within the mantle, the plates are forced to move relative to each other; either away from each other, towards each other or past each other.

(c)(i) Name any two features that formed at the extensional boundary. (2mks)

- Submarine volcanoes/ islands

- Rift valley/Depressions.

- Oceanic ridges.

- Fault blocks/ block mountains.

(ii) Using well labelled diagrams describe the formation of Fold Mountain .(9mks)

- Extensive geosyncline/ depression/ hollow is formed on the Earth surface.

- The geosyncline is filled with water forming a sea.

- Prolonged and extensive erosion occur on the surrounding higher grounds/ county rocks/ landmasses.

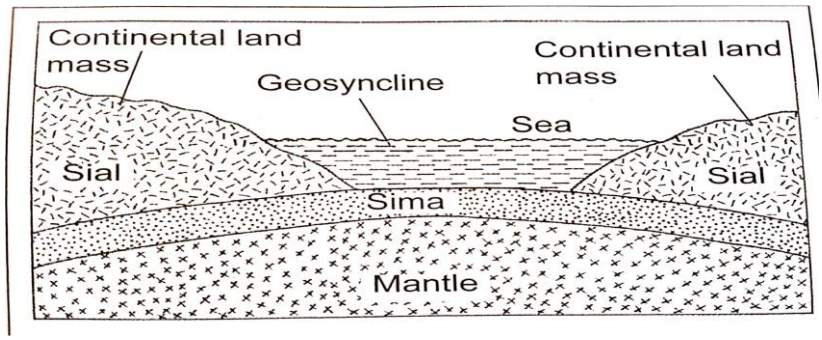
- The eroded materials are transported and deposited in the geosyncline forming thick layers.

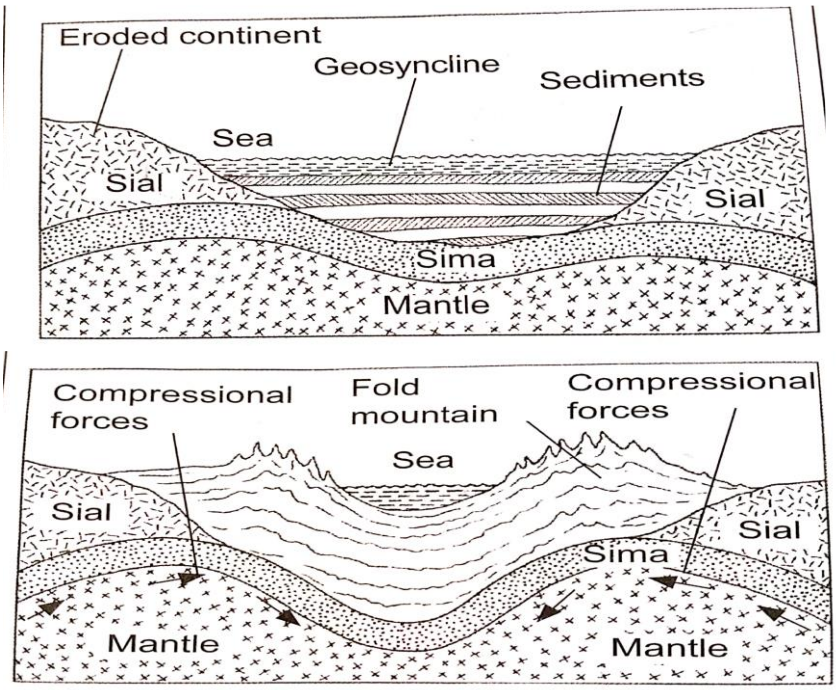
- Increased weight of the sediments causes subsidence/ sinking of the geosyncline leading to accumulation of more sediments.

- Further subsidence of the geosyncline triggers off compressional forces which draw the higher grounds/ continental masses/ county rocks closer.

- As a result, the sediments are compressed to form upfolds and downfolds/ folds.

- The upfolds form fold mountains.





(d)(i) Give the major fold ranges in the following countries in Africa;

South Africa (1mk)

- ***Cape ranges***

Morocco (1mk)

- ***Atlas***

Ethiopia (1mk)

- ***Ethiopian highlands.***

(ii) State any five effects of Fold Mountain to the environment. (5mks)

- Some fold mountains have valuable minerals for mining.

- Most fold mountains are unique thus attract tourists.

- The windward slopes of fold mountains influence high rainfall due to orographic effect.The high rainfall encourages agriculture/ forestry, settlement

- Fold mountains reduce pressure with increasing altitude.

- The slopes facing the sun are warmer than the opposite sides facing away from the sun that tend to be cool.

- The rugged nature of some fold mountains are barriers to transportation/communication/ settlement.

- The orographic effect of the fold mountains lowers the temperatures thus influencing ice and snow formation.

- Some fold mountains with snow covered slopes encourages mountaineering and skiing/ sporting activities.