**AA-14**

**FORM ONE GEOGRAPHY**

**MARKING SCHEME**

1. Relationship between Geography and;

(i) History- Geography uses historical knowledge to explain origin of continents, land marks.

(any1x2=2mks)

(ii) Civil engineering – civil engineers require knowledge of soils, rocks and relief to constructing

airports, roads, railways. (any1x2=2mks)

(iii)Physics – Geography uses geographical knowledge of physics on energy and pressure systems

to explain occurrence of sea and land breezes . (any1x2=2mks)

(N/B – Relationship must come out very clearly to score)

2. (a)Sun – it is a heavenly body which emits its own light and it is at the centre of the solar system (any 2x1=2mks)

(b) Three characteristics of the sun

- Temperatures are about 6000oC

- The sun is at the centre of the solar system

- Produces light of its own

- All other heavenly resolve around it (any 3x1=3mks)

(c) The passing star theory

- a star with greater gravitational pull than the sun passed close by the sun drawing off

a steam of material in form of gases though material later cooled, condensed and dispersed

to form the present members of the solar system. (any 4x1=4mks)

(d) Weaknesses of the theory – passing star

- chances of another star approaching the sun one minimal

- high temperature materials drawn from the sun or star would disperse neither than condense

The theory does not explain where the sun and the passing star came from 9any 3x1=3mks)

(e) effects of rotation

* rotation causes day and night
* Rotation causes variation in the speed of air masses
* Rotation causes the rise and fell of ocean tides
* Rotation causes the rise and fell of ocean tides between longitudes 15o apart
* Rotation causes deflection of wind and ocean currents (any 2x1=2mks)

3. (a) **V** – sun **W** – moon

(b) – Photographs taken form outer space

- the earth’s horizon is curved

-All other planets are spherical, the earth is planet

-The rising and setting of the sum at different times

-The shadow of the earth on the moon during the lunar eclipse

-Surveying with poles on the level ground (any 2x1=2mks)

( c) - Extends to a depth of 2900km

* it is three times denser than the crust
* consists of iron and silicate rocks
* the upper layer is solid
* the inner layer is semisolid/molten
* temperatures of about 5000oC (any 3x1=3mks)

(d) Minerals of the crust are silica and aluminium (2mks)

4. (a) Difference between weather and climate

* weather is the condition of the atmosphere at a given place over short period of time while climate is the average weather conditions of a given place over a long period of time usually 3 to 35years. (any 2x1=2mks)

(b) Two factors influencing climate

* altitude
* nearness to water bodies
* aspect
* cloud cover
* humidity
* latitude
* inter tropical convergence zone (ITCZ) (any 2x1=2mks)

(c) Three reasons why it is necessary for people to have knowledge on weather changes

* farmers calendar
* sporting activities
* fishing habitats
* suitable clothing
* guiding air and sea travels /navigation (any 3x1=3mks)

(d) (i) factors for inaccurate weather records

* obsolute /faulty/defective instruments
* poor observation/measuring skills
* extreme weather conditions
* poor siting/ location of the station
* interference by animals e.g. smokes / frogs, dogs (any 3x1=3mks)



(ii)



* warm moist air rises towards a relief feature
* moisture in it condenses to form clouds
* the clouds become saturated and form small tiny pesticides that fall as rainfall on the wind ward side of the relief feature.
* Dry moisture less winds descend down the relief feature on the lee ward side

(1x1max 3mks)

(iii) Three characteristics of Troposphere

* this is the lowest part of the atmosphere
* the layer extends up to 8km at the poles and 13km at the equator.
* The layer has a concentration of cloud cover
* The layer experiences high moving winds and air masses
* Weather conditions experienced on the earth occurs in this layer
* There is a general decrease in temperature with increasing altitudes, called normal diabatic rat e (3x1=3mks)

(iv) Two areas in Kenya experiencing convecional rainfall

* Coastal areas e.g. Mombasa, Kwale
* Areas around lake Victoria e.g. Kisumu, Rongo Migori, Homabay (any 2x1=2mks)

5. (a) (i) Three types of field work

* Field work
* Field research
* Field excursion (any 3x1=3mks)

(ii) Two characteristics of data

* Discrete
* Continuous (any 2x1=2mks)

(iii)Advantages of observation

* Method provides first hand data
* Method provides reliable data
* Method is fast ad cheap
* Minimal chances of data distortion
* It saves time as observed data is recorded immediately (any 3x1=3mks)

(b) (i) Definition of a map

* A map if a representation of part of the earth or the whole of the earth on a flat piece of paper usually show to scale (any 1x1=1mk)

(ii) Three marginal information on the map

* The serial and index number
* Compass direction
* The scale
* The key
* Magnetic variation
* Publisher
* Grid coordinates
* Latitudes and longitudes
* Copyright (any 32x1=3mks)

(iii) Three types of scale

* Statement scale
* Linear scale
* Representative scale (any 3x1=3mks)

(iv) conversion to statement

Divide by 100000

100000

RF is 1: 100000 Or 1/100000

As statement scale 1cm represent 1km

1cm to 1km (any 1x1=1mk)

5. (a) (i) Characteristics of minerals

* Minerals have different degrees of hardness
* Minerals differ in texture
* Minerals have specific colours
* Minerals have texture
* Minerals have different degrees of tenacity
* Some minerals aggregate into distinct crystal shapes
* Minerals differ in steak
* Minerals differ in chemical composition
* Minerals differ in specific gravity/weight
* Minerals differ in taste
* Minerals differ in cleavage (any 4x1 = 4mks)

(ii) four significance of minerals

* Minerals are a base for industrial development e.g. limestone
* Creation of employment
* Generation of foreign exchange when minerals are exported e.g soda ash
* Establishment of urban centres e.g. Magadi
* Minerals encourage trade
* Social amenities are established e.g. hospitals
* Minerals lead to improvement f infrastructure e.g roads (any 4x1=4mks)

(iii) mode of rock formation

* Igneous
* Sedimentary
* Metamorphic (any 2x1=2mks)

6. A – sea breeze

* B- Land breeze N/B – no interchange of these answers

(b) (i) A rock is a naturally occurring agglomeration of mineral properties forming part of the

earth’s crust (any 1x1=1mk)

(ii) Thermal –dynamic – Rocks hanged due to both heat and pressure changing the rock to other forms of metamorphic rock (2x1=2mks)

- Contact metamorphism - Rocks change physically and chemically as a result of great heat originating from molten rock or magma. The rocks from that melt cool and solidify changing into different rocks (any 2x1=2mks)

- Dynamic / kinetic /regional – Rocks change due to heat and gases due to pressure triggered by earth movements/ pressure changes (any 2x1=2mks)

(iii) An example of ;

Plutonic rocks – granites, diamite, gabbro, syenite and peridolite, dolerite, Hypabyssal

Porphyry, Dolerite, quartz, lamprophyre, diabase, granophyres, porphyrite

* Volcanic rocks – Basalt, Rhyolite, Trachyle, Andesite Obsidian, Scoria, pumice, tuff
  + (any 3x1=3mks)

(iv) text books, maps, geological eports, news papers, journals, magazines (any 2x1=2mks)

(b) activities involved in;

* collecting samples/breaking rocks
* Taking photogrpahs
* Interviewing guides
* Sketching different rocks
* Carrying rock samples to schools (any 2x1=2mks)

(c) Two problems experienced

* + - bad weather e.g heavy rainfall
* Lack of adequate information on rocks
* Dishonest respondents
* Uncooperative respondents
* Celetrote respondents
* Fatigue due to working (ay 2x1=2mks)

7. (a) (i) Four ways in which minerals occur

* Veins and lodes
* Beds and seams
* Weathering
* Alluvial or places deposits (any 4x1=4mks)

(ii) Four methods of mining

* Open cast
* Under ground mining
* Alluvial mining
* Submarine mining (any 4x1= 4mks)

(iii) Two problems facing mining

* Inadequate capital
* Poor transport systems/network
* Insufficient skilled personnel
* Minerals occur in small quantities
* Risks of deaths during mining
* Pollution by excavation
* Inadequate power
* Remoteness
* Control by foreign (multinational) companies
* Land use conflicts

(iv) Four significances of soda ash to Kenya

* A major export thus earning foreign exchange
* Employment to many Kenyans
* Used as a raw material in the production of glass
* Used in the manufacture of paper, textiles, detergents
* Used in the manufacture of sodium compounds e.g. caustic soda
* Has led to the development of an urban centre-Magadi
* Has led to provision of social amenities e.g. schools, roads
* Provision of adequate supply of fresh water for both domestic and industrial use
* Improved standards of the local people (any 4x4 = 16mks)