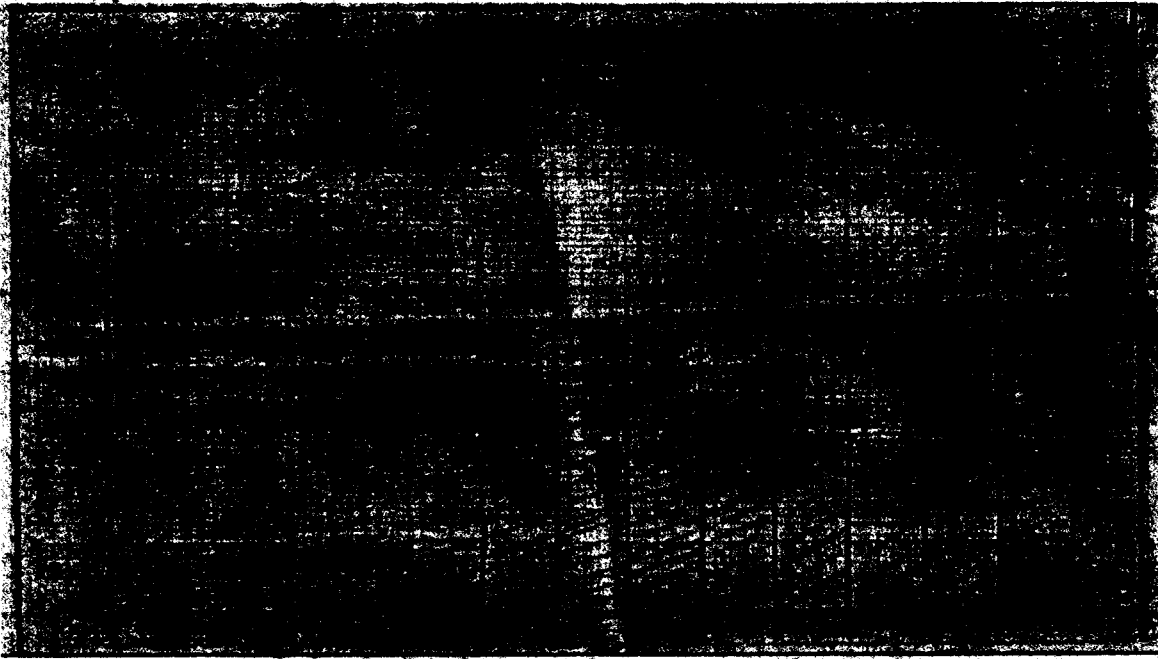


**KANDARA SUB-COUNTY SECONDARY SCHOOLS FORM 2 2015  
JOINT EXAMINATION**

**(312) GEOGRAPHY  
October/November 2015  
MARKING SCHEME**

1. a) It is a wooden levered box that contains the instrument of weather measurement.  
*1 x 2 = 2mks*
- b) - Louvered to allow free air circulation  
- Coated white to reflect light  
- To reduce temperature  
- Insulated roof to prevent overheating  
- Raised about 121 cm to prevent it from direct radiation from the earth surface.  
*Any 3 x 1 = 3mks*
- c) - It is an area of low-pressure belt/drums  
- The region receives heavy convectional rainfall and thunderstorms.  
- It is characterised with high temperature / associated with high temperature  
- It is a zone of convergence of N. E and South East winds.  
- It influences the area to get double maxima.  
- A zone within the tropics (between 23½N and 23½S)  
*Any 3 x 1 = 3mks*
2. a) - Centripetal force  
- Centrifugal force  
- Force of gravity  
*3 x 1 = 3mks*
- b) Meteor is a streak of light that is seen in the sky on a clear night while a meteorite is a meteoride which has not completely burnt up and managed to reach the surface of the earth.  
*2mks*
3. a) A - atmosphere  
B - Mantle  
C - Gutenberg discontinuity *3mks*
- b) - The outer part is elastic, solid while the inner part is viscous fluid.  
- The outer part is rich in periodocities while the inner part is rich in Olivine  
- Has high temperatures (higher than crust)
- Has a higher density than the crust  
- Extends to a depth of approximate 2900km  
*Any 3 x 1 = 3mks*
4. a) - Troposphere  
- Stratosphere  
- Mesosphere  
- Thermosphere  
- Exosphere  
*Any 3 x 1 = 3mks*
- b) - Photographs taken from the outer space show that the curvature of the earth is curved.  
- During eclipse of the moon, the earth casts a spherical - shaped shadow on the moon.  
- The earth horizon is curved as evidence by approaching ships whose funnels and masks appear on the horizon before the rest of the ship is seen from the coast.  
- Circumnavigation of the earth along a straight path will bring one back to the same starting point from opposite direction.  
- All other planets including the moon are spherical, so the earth being one in the solar system must be of similar shape.  
- The rising and setting of the sun in the east, earlier than those to the west.
5. a) Mining is the process of extracting valuable minerals from the earth's crust  
*1 x 2 = 2mks*
- b) - Development of infrastructure  
- Development of related industries  
- Improvement of social facilities  
- Earns Kenya foreign exchange  
- Employment /source of income  
- Urbanization /settlement

6. a) Graph



Title = 1mk  
Trend - 2mks  
Bar - 1mk  
V.S - 1mk  
H.S - 1mk  
6mks

**b) Climatic characteristics of station X**

- Temperature are below the freezing point most of the year.
  - The area receives some rainfall all year round
  - Little rainfall is received when temperature are below the freezing point ie the higher the rainfall the higher the temperature and vice versa.
  - The annual temperature range is large ( $55^{\circ}\text{C}$ )
  - Total annual rainfall is low - 418mm
  - Mean monthly rainfall is low ie the month with the highest rainfall is August (93mm)
  - The mean annual temperature is very low ( $-11.5^{\circ}\text{C}$ )
  - August has the highest rainfall with 93mm
  - January has the lowest rainfall (7mm) and the lowest temperature of  $-45^{\circ}\text{C}$ .
  - The area has one rainy season between July and October
  - The area receives very little rainfall from November to June.
  - The area has summer from June to October and winter from December to around May.
- Any 5 correct = 5mks*

**c) Advantages of representing data using a combined bar and line graph.**

- Data for rainfall can be viewed alongside that of temperature.
- The relationship between the temperature and rainfall can be read off the graph.
- Easy to make conclusions/describe the climate from the graph.
- Prominent values stick clearly. e.g month with the highest rainfall or temperature
- Easy and simple to construct since it does not require calculations
- The line graph is suitable for representing data that is continuous eg temperature values
- Easy to study the trend of a given quantity eg temperature changes over the year.

*Any 5 correct = 5mks*

**d) i) Preparation for the study**

- formulate objective and hypotheses
- read more on weather and climate from available textbooks
- conduct a reconnaissance
- seek permission from relevant authorities eg chief, school administration
- collect the required equipment and materials for the study
- prepare a table for recording data

- prepare a work schedule
- prepare questionnaires
- hold class discussions
- divide the class into groups.

*Any 2 x 1 = 2mks*

**ii) Methods of data collection used**

- direct observation
- interviewing
- use of questionnaires
- content analysis reading relevant textbooks

*Any 3 x 1 = 3mks*

**iii) Factors that may lead to inaccurate data collection**

- inconsistent reading
- inaccurate reading
- inaccurate recording
- inaccuracy in manipulation of raw data in converting it into standard/refined form
- faulty equipments /instruments

*Any 2 x 1 = 2mks*

**iv) Problems**

- unfavourable weather conditions
- fatigue
- uncooperative respondents
- language barriers

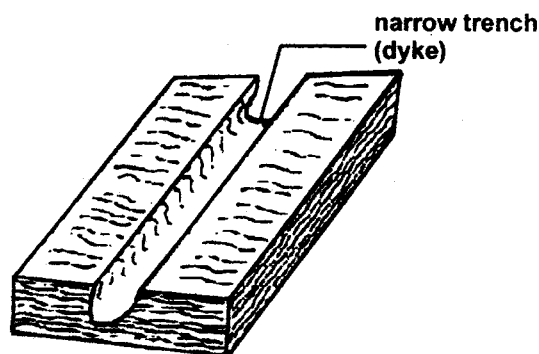
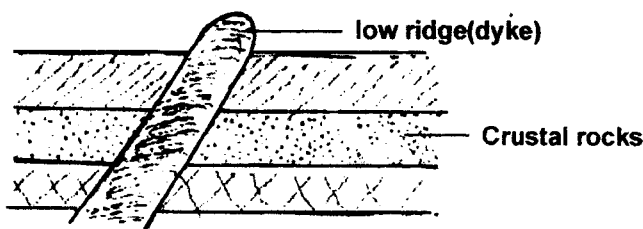
*Any 2 x 1 = 2mks*

**7. a i) Vulcanicity**

- is the process through which molten rocks, ashes, steams and gaseous material are forced out by pressure from the interior m of the earth to the surface of the earth.

*Any 1 x 2 = 2mks*

**b) i) Formation of a dyke**

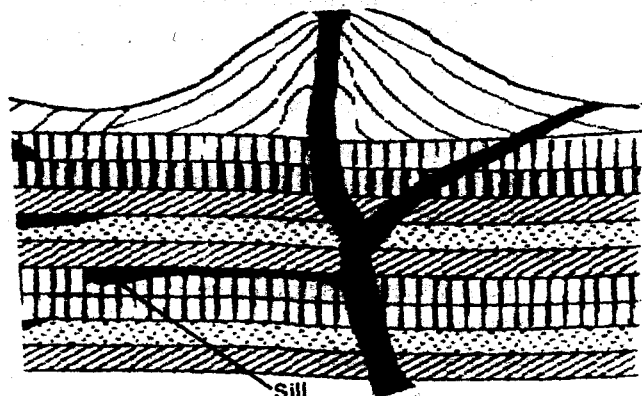


- is a vertical or inclined mass of intrusive rock that cuts across a bedding plane of rock strata
- can be eroded to form an elongated, narrow trench if it softer than the surrounding rock.
- if harder than the surrounding rock it forms a low ridge.

*Diagrams 2mks*

*Explanation 3 marks*

**ii) Formation of a sill**



- is an intrusive feature formed when magma flows along a bedding plane. Sill becomes exposed by denudation to form ridges low escarpment.

*Diagram 2mks*

*Explanation 2mks*

- 8. a) i)** is a science of planting, caring and using trees/forests and their associated resources. / is the practise of managing and using trees/forests and their associated resources.

**ii)** The area receives high rainfall /1000mm - 2200mm throughout the year which encourages continuous growth of trees.

- The area has deep fertile volcanic soil that allow the roots to penetrate deep into the ground to support the trees.
- The area is a gazetted reserve prohibiting cultivation and settlement hence allowing growth of trees.
- The steep slope discourages settlement thus forests thrive.
- The government policy of degazettement has allowed illegal cultivation and settlement in forest areas/shamba system.
- Increased population of elephants that destroy trees
- Prolonged droughts have caused drying up of some trees.
- Plant diseases and pests destroy some trees in the forest.

- Outbreak of forest fire destroy parts of the forest
  - Over exploitation of certain species of trees.
- Any 4 x 1 = 4mks*

- b) - Afforestation and re-afforestation programmes**
- Legislation aimed at curbing encroachment in the forested areas.
  - Encouraging the public to participate in conservation of forests.
  - setting up of buffer zones to hinder human encroachment into forested areas. (e.g Nyayo Tea Zones)
  - Creation of forests reserves
  - Encouraging agro-forestry
  - Setting up presidential commission with the mandate of rehabilitating destroyed forested areas.
  - Establishment research centres and tree nurseries.
- Any 2 x 2 = 4mks*

**9. i) Definition of rocks**

- A rock is an aggregate of minerals forming the solid part of the earth crust. *1mk*

- ii) Plutonic rocks forms when magma solidifies beneath the earth crust while volcanic rocks forms when magma solidifies on the earth surface.**
- Any 2 x 2 = 4mks*

**iii) Classification of sedimentary rocks**

- Mechanically formed sedimentary rocks
  - Chemically formed sedimentary rocks
  - Organically formed sedimentary rocks
- Any 3 x 1 = 3mks*

**iv) Types of rocks metamorphism**

- Dynamic metamorphism
  - Thermo metamorphism
  - Thermo -dynamic metamorphism
- Any 3 x 1 = 2mks*

**10. i) Factors influencing vegetation distribution**

- climate
  - aspect
  - altitude
  - soils
  - human activities
  - drainage
- Any x 1 = 3mks*

**ii) Characteristics of equatorial forests**

- variety of tree species
  - forest have dense canopy
  - trees are tall
  - trees have huge trunks and buttressed roots
  - trees have broad leaves
  - trees are mainly hardwood
  - trees species include, camphor, mvuli, mahogany etc
- Any 5x 1 = 5mks*

**iii) Name s of temperate grasslands**

- North America - Prairies
  - South Africa - Velds
  - Europe/Asia - Steppes
  - South America - Pampas
- 4 x 1 = 4mks*