KITUI COUNTY MOCK
END OF TERM II FORM FOUR EXAMINATION, 2017
Kenya Certificate of Secondary Education (K.C.S.E)
312/2
GEOGRAPHY PAPER 2
MARKING SCHEME

1. a) **Two underground mining methods**
   - Drift / adit mining
   - Slope mining
   - Shaft mining
   - Solution mining
   - Drilling mining
        (Any 2 x 1 = 2 marks)

   b) **Negative effects of mining on the environment**
   - Leads to land dereliction
   - Leads to loss of biodiversity
   - Leads to pollution of environment
   - Lead to soil degradation
   - Encourages mass wasting
   - Pits left after mining are filled with water that form breeding ground for mosquitoes
   - Leads to disruption of water table
        (Any 3 x 1 = 3 marks)

2. a) **List down three human factors that favour wildlife conservation**
   - Establishment of game reserve / national parks / game sanctuaries
   - Translocation of animals where they are in excess
   - Ban on game hunting
   - Creation of ant-poaching units
   - Protection of endangered species e.g. rhinos
   - Non-governmental initiatives like WWF
   - Establishment of KWS
        (Any 3 x 1 = 3 marks)

   b) **State two advantages of domestic tourism**
   - Promote national unity as Kenyans of diverse origins meet in parks
   - It is a source of government revenue / additional of revenue
   - Utilization of tourist's facilities during off-peak seasons
   - Kenyans are able to learn more about natural gifts of nature
   - Creates to the citizens a sense of responsibility to conservation
        (Any 2 x 1 = 2 marks)

3. a) **What is floods?**
   - Floods are unusual covering of an area by water through a temporary rise of the level of a river lake or sea   (Any 1 x 2 = 2 marks)

   b) **Three rivers that cause large scale flood in Kenya**
   - River Tana
   - River Yala
   - River Ewaso Nyiro
   - River Nyando
   - River Kuja
        (Any 3 x 1 = 3 marks)

4. a) **Define the following terms**
   i) **Fertility rate**
   - It is the total number of children / births that a woman would have between the ages of 15 – 49 years
        (1 x 1 = 1 mark)

   ii) **Mortality rate**
   - This is the average number of deaths per 1000 in a given population   (1 x 1 = 1 mark)

   b) **Types of information that may be derived from an age sex pyramid**
   - Sex ratio
   - Dependency ratio
   - Age
   - Life expectancy

(Any 3 x 1 = 3 marks)
5. **a) Towns marked**
   - P – Tanga
   - Q – Arusha
   - R – Dodoma
        (3 x 1 = 3 marks)
   b) Two major functions of the town marked S
   - Mainly an agricultural collection centre
   - Industrial centre with too many light industries
   - Administrative centre
        (Any 2 x 1 = 2 marks)

SECTION B

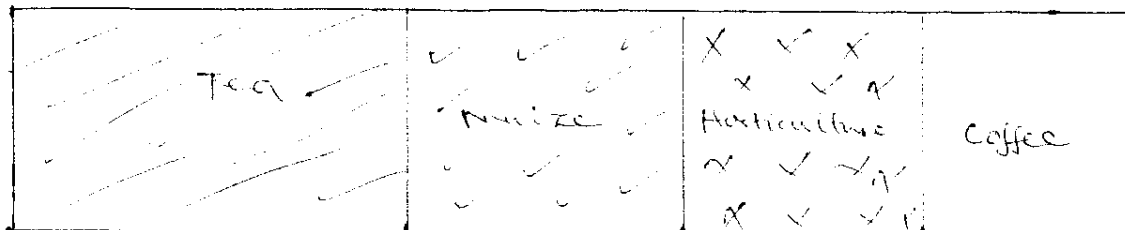6. **Answer question 6 and any other two questions from this section**

a) i)
$$Maize = \frac{224,000,000}{902,000,000} \times 15 = 3.7\, cm$$

$$Coffee = \frac{168,000,000}{902,000,000} \times 15 = 2.8\, cm$$

$$Tea = \frac{320,000,000}{902,000,000} \times 15 = 5.3\, cm$$

$$Horticulture = \frac{190,000,000}{902,000,000} \times 15 = 3.2\, cm$$

A DIVIDED RECTANGLE SHOWING VALUE OF EXPORT CROPS FROM KENYA IN 1995

Calculations	1 mark x 4 = 4 marks
Title	1 mark
Segments	1 mark x 4 = 4 marks
Total	= 9 marks

   ii) State three advantages of divided rectangles
   - It is easy to draw or construct
   - It is easy to compare the components
   - It gives a clear visual impression
   - Each component proportional to the total can easily be such at a glance
        (Any 3 x 1 = 3 marks)

b) State four physical conditions that favour coffee growing in Kenya highlands
- Cool temperature ranging between 14°C – 26°C
- High rainfall well distributed throughout the year between 1000 – 2030 mm p.a
- Gently sloping landscapes
- Deep, well drained volcanic soils
- High altitude of about 1000 – 2300 a.s.l
- Well sheltered against strong sunlight
        (Any 4 x 1 = 4 marks)

c) Processing of coffee form harvesting to marketing
- Ripe berries are picked by hands
- Berries are transported to the factories
- Berries are sorted out and weighed

- Berries are squeezed to remove the outer cover and graded
- They are put in troughs to ferment and are washed
- They are put on trays for drying in the sun and turned frequently and unwanted particles are removed / sorted out
- The dry beans are weighed
- Dry beans are put in bags and transported to the coffees mills
- Dry beans are put in machines where the inner husks are removed / peeled off
- Dry beans are winnowed and graded
- The dry beans are then forwarded to coffee board for marketing
        NB: Sequence must be followed
        (6 x 1 = 6 marks)

d) List three ways in which planted coffee is taken care by farmers
- Watering of young plants
- Mulching to reduce water loss
- Constant weeding
- Manure to maintain soil fertility
- Spraying with herbicides
- Pruning to regulate quality
        (Any 3 x 1 = 3 marks)

7.

a) i) Identify the irrigation schemes marked X, Y and Z and in each case the main crop grown
   - **X** – Bunyala – Rice
   - **Y** – Perkerra – Onions
   - **Z** – Mwea Tebere – Rice
        Irrigation schemes 3 x 1 = 3 marks
        Crops 3 x 1 = 3 marks

ii) Explain four factors that have led to the location of irrigation scheme Y
- To control the seasonal floods of rivers perkerra this was used to devastate the area
- To utilize the excess water of river perkerra this was used to go to waste
- The fertile loamy soils, most of which are deposited by floods, reduces use of fertilizers
- Presence of flat and gentle sloping terrain which enable easy flow of water by gravity, which made it cheap to start the project because expensive pumping was not required
- The dry / high temperature of the area necessitated use of irrigation as the only way to make food production possible / multiple cropping
- The area was sparsely populated hence reduced expenses of resettlement of people
        (Any 4 x 2 = 8 marks)

iii) State four problems experienced in the irrigation project marked Z
- Siltation of the canals which interfere with the flow of water
- Quelea Quelea birds destroys the crop
- Presence of water borne diseases
- Shortage of water during dry seasons
- Inadequate labour during planting
- Clogging of the canals by water weeds
        (Any 4 x 1 = 4 marks)

b) What is a polder?
- It is a reclaimed piece of land form the sea in the Netherlands   (1 x 2 = 2 marks)

c) Give five benefits of the Zuyder Zee project
- Lake Yssel provide fresh water for irrigation / domestic / industrial purposes
- Risk of flooding was reduced through the use of dykes
- Reclaimed land has increased arable land for crop cultivation
- The construction of roads connecting north Holland and Friesland province has shortened distance
- Degrees of soil salinity has reduced / lowered form Lake Yssel
- Reclaimed areas are used for settlement, recreation and construction of industries
        (Any 5 x 1 = 5 marks)

8.

a) i) **The two types of fishing grounds in Kenya**
   - Marine / salty water fishing grounds
   - Inland / fresh water fishing grounds
         (2 x 1 = 2 marks)

ii) **Give two types of fishing methods**
   - Pelagic fishing
   - Demersal fishing
   - Inshore fishing
   - Freshwater fishing
         (Any 2 x 1 = 2 marks)

iii) **Four reasons why marine fishing industry is not well developed in east Africa**
   - The warm tropical waters do not favour large scale breeding of fish species
   - The narrow continental shelf limits widespread growth of planktons for fish
   - There is a limited market at the coast due to low purchasing power
   - Inadequacy of capital and poor technology hamper the development of the industry
   - There is steep competition from industrialized nations which have better equipment
   - Rough sea wave limiting deep sea fishing
         (Any 4 x 1 = 4 marks)

b) **Explain four ways in which marine fisheries are being conserved in Kenya**
   - To increase fish number or restock overfished areas there is breeding of fingerlings in fish farms and then release them into the sea
   - Restricting disposal of untreated waste the sea to ensure the water remains clean for survival of fish
   - Standardizing the size of fish nets used in fishing to ensure that only the mature fish are caught
   - Enforcing the international conventions in order to protect the endangered fish species
   - Licensing fishermen to control their number and ensure that there is no overfishing
   - Restricting fishing to specific season to allow for breeding and maturing of fishing / ensuring natural regeneration of fish
         (Any 4 x 2 = 8 marks)

c) i) **Methods of fishing used in the shaded area**
   - Purse seining
   - Drifting
   - Trawling
   - Lining / hook and line
   - Trap method
         (Any 1 x 1 = 1 mark)

ii) **Name ocean currents marked Q and R**
   - **Q** – Warm Gulf Stream
   - **R** – Cold Labrador
         (Any 2 x 1 = 2 marks)

d) **Explain why major fishing grounds of the world are located in the temperate latitudes of the northern hemisphere**
   - The areas have cool waters that have abundant supply of Plankton which is the main food for fish
   - The areas have extensive / wide continental shelves which allow light to penetrate to the sea bed hence encouraging the growth of micro-organisms used as food for fish
   - The cool waters experienced in most of the coastal areas in these latitudes encourage thriving of numerous fish species
   - The areas experience convergence of cold and warm currents that results in upwelling of ocean waters which bring planktons form the sea bed to the surface
   - The cool to cold climate in these latitude help in the preservation of fish
   - Most of the coastal areas have numerous sheltered bays which provide secure breeding grounds for fish
   - The sheltered bays found in some coastal areas provide suitable sites a for building fishing ports / fishing-landing sites
   - The land-derived minerals nourish the planktons which are food for fish
   - The large population in these areas provide a ready market for fish hence promoting the fishing industry

(Any 3 x 2 = 6 marks)

9.

a) Distinguish between manufacturing and tertiary industries
- Manufacturing industries change raw materials into semi-finished / processed products while tertiary industries provide services   (1 x 2 = 2 marks)

b) i) Name four agricultural food processing industries in Kenya
- Milk processing
- Fruit processing
- Coffee processing
- Sugar processing
- Cooking oil
- Grain milling
- Meat processing / canning

        (Any 4 x 1 = 4 marks)

ii) Explain four factors that influenced the location of the iron and steel industries in the Ruhr region of Germany
- Availability of iron ore / coal / limestone form the Rhine valley provided raw materials needed in the industries
- Availability of water form rivers Rhine / Ruhr / Lippe / Wupper / Emscher for cooling machines / industrial use
- Navigable rivers e.g. Rhine / Ruhr canals e.g. Dortmund – Ems / Rhein – Herne provided cheap transport for bulky raw materials and finished products
- Coal from the Ruhr region / imported provided power required in the industry
- Rich merchants / families e.g. Krupp family and Ruhr Kohle provided capital for the industry
- Availability of local skilled labour formed foundation of iron and steel industry
- Dense population of central Europe / Germany provided ready market for iron and steel

        (Any 4 x 2 = 8 marks)

c) Give five reasons why the government of Kenya encourages the development of Jua Kali industries
- It creates employment for the growing labour force
- It requires less capital to establish since it's made up of small units
- Produces relatively cheap products that are affordable to many people
- They require simple machinery to start
- Some of the products are exported thus earning foreign exchange
- They save the country's foreign exchange
- Facilitates decentralization of industries hence reducing rural-urban migration
- Uses locally available raw materials hence conserving the environment
- It operates at grassroots level these use locally available skills

        (Any 5 x 1 = 5 marks)

d) Field study in a coffee factory near your school

i) State three reasons why you would visit the area of study in advance
- To be able to formulate appropriate objectives for the study
- To help in identifying methods of data collection
- To help estimate the cost of the study
- To seek permission
- To determine the appropriate routes
- To help in preparing the working schedule
- To identify problems likely to be encountered
- To estimate the time required for study
- To determine the suitability of the area of study
- To determine appropriate tools for the study

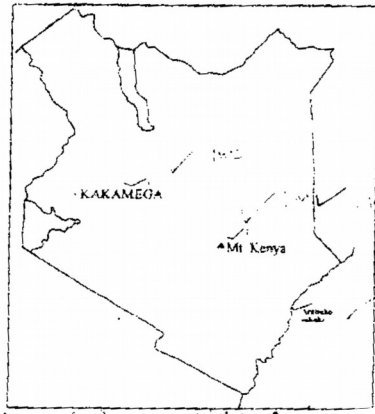   (Any 3 x 1 = 3 marks)

ii) You have prepared a work schedule for the study, state three items you would include in your schedule
- The time for departure
- Time to spend in the study
- Time for lunch
- Time for end of the study

        (Any 3 x 1 = 3 marks)

10.
a) Draw an outline map of Kenya

b) On the map indicate
   i) Kakamega forest   ii) Mt. Kenya forest   iii) Arabuka sokoko forest

c) i) Natural causes of forest depletion
- Climatic hazard such as drought
- Pests and diseases
- Over population of wildlife leading to destruction
          (3 x 1 = 3 marks)

ii) Describe four problems facing forests in Kenya
- Forest fires caused by hunters destroy large section s of forests
- Pests and diseases destroy trees and lower their quality
- Excessive logging which in most cases is illegal
- Human encroachment resulting from high population growth
- Adverse climatic conditions such as drought or floods destroy sections of the forests
          (Any 4 x 2 = 8 marks)

d) i) State three factors favouring production of soft wood forests in Canada
- High precipitation that favours tree growth
- Rugged relief discourages any form of agriculture
- Many waterfalls used to generate H.E.P for use in paper mills
- Presence of many rivers providing transport for the logs and also providing water for use in pulp industry
- Valley bottoms provide suitable sites for paper mills
          (Any 3 x 1 = 3 marks)

ii) Explain three reasons why the Kenyan government should conserve her forests
- Provide utility products e.g. timber which is used in construction
- Forests are habitat for a wide range of animals and micro-organism hence helps in conserving and maintaining bio-diversity
- Forests are rich reservoirs of research materials e.g. scientist carry research studies on medicinal plants which help cure certain diseases
- Forests create micro-climate hence regulate climate of the surrounding areas
- Forests support agriculture and H.E.P production by being water catchment areas and preventing soil erosion
- Forests regulate carbon dioxide hence helps reduce global warming
- Presence of forests and forest activities has led to development of infrastructure which opens up remote areas
- Forestry as an industry provides more employment opportunities e.g. as forest guards and carpenters, this raises the standards of living
- Flora and fauna of the forests have an aesthetic appeal hence attracts tourists who bring foreign exchange
- Forests and its products have medicinal value which helps treat a variety of diseases
          (Any 2 x 2 = 6 marks)