**Kenya Certificate of Secondary Education**

312/2 ─ GEOGRAPHY ─ Paper 2

SAMIA SUB-COUNTY JOINT EXAMINATION

TIME: 2 Hrs 45Mins

DECEMBER, 2021

Marking scheme

**1. a). Define the term energy crisis (2mks)**

*Is a situation where the demand for oil is higher than the amount being supplied leading to high oil prices.*

**b) state three limitations of using solar energy (3mks)**

* *Solar energy is unable to run heavy machinery*
* *Batteries used for storing solar energy are cumbersome and are to be replaced oftenly.*
* *Quality solar panels are quite expensive to manufacture.*
* *Installation of solar panels require technical skills which are undeveloped in most people.*
* *Solar energy depends on weather patterns which makes its use unreliable.*

**2. (a) Give two problems facing river transport in Africa. (2 marks)**

*-Inadequate capital to develop waterways, ports and for the purchase of vessels.*

*-Fluctuation of water levels which makes sailing difficult as a result of rivers passing through dry areas.*

*-Presence of rapids and waterfalls which hinders the vessels’ movement.*

*-Siltation of rivers which makes their channels shallow hence hindering movement of vessels.*

*-Presence of floating vegetation or swamps which makes it difficult for vessels to sail due to narrowing of the river channel.*

*-Most rivers pass through unproductive zones hence its uneconomical to develop river transport.*

*-Rivers flow across political boundaries which may require negotiation in order for the countries involved to use them for transport.*

*-Some rivers meander through their flood plains which increase the distance.*

*-Some rivers originate/pass through areas that experience long periods of drought leading to changes in the river regime.*

**(b) The diagram below shows the Great Lakes and the St. Lawrence sea way. Use it to answer the questions below.**

Name the lakes **P**, **Q** and **R**.

*M -Lake Superior*

*Q -Lake Erie*

*R -Lake Ontario*

**3. a) Apart from tropical hardwood forests name two other types of natural forests (2mks)**

-*Temperate hardwood forests*

*-Coniferous forests /temperate softwoods*

*-Montane forests*

*-Mangrove forests*

**b) State three problems experienced in exploitation of tropical hardwood forests (3mks)**

*-Presence of tree climbers*

*-Attack by wild animals*

*-Trees are found in mixed stands*

*-Dense/thick forests making penetration into the forest hard.*

*-The roads are muddy making transport difficult/ impassable roads.*

*-The trees take long to mature.*

**4. a) Give three physical factors that favour coffee growing in Kenya highlands (3mks)**

*-Deep well drained volcanic soils.*

*-High rainfall throughout the year.*

*-Well distributed rainfall throughout the year.*

*-Gentle sloping landscape.*

*-Warm climates*

**b) State two problems facing coffee farming in Kenya (2mks)**

*-Attack by pests eg lady bird, aphids and diseases eg CBD, Leaf rust hence low yields*

*-Fluctuation of coffee prices in the world market reducing the profit margins.*

*-Delayed payments hence demoralizing the farmers.*

*-Low payments hence discouraging farmers.*

*-Mismanagement of coffee cooperatives.*

**5. a) Give three types of fish (3mks)**

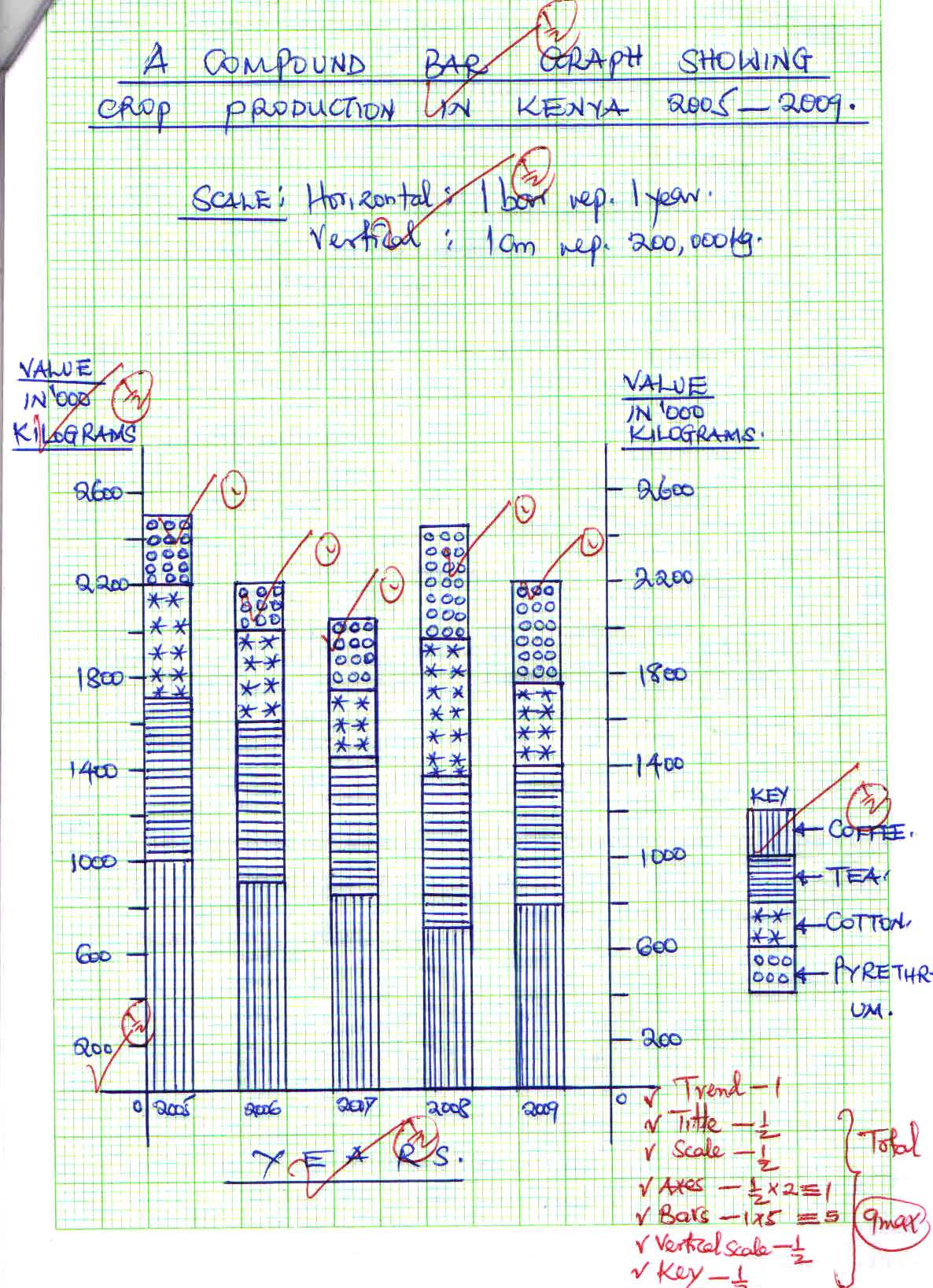
* *Salt water fish*
* *Fresh water fish*
* *Anadromous fish*

**b) List two traditional methods of fishing (2mks)**

* *Basket*
* *Spear and arrow method*
* *Barriers*
* *Herbs*
* *Lamp and net*
* *Hook and line method*
* *Use of gill nets*

SECTION B:

6. (a) (i)



**(ii) Advantages of using a compound bar graph to represent statistical data. (2 marks)**

* *Facilitates comparison of data*
* *A number of variables can be represented in one bar*
* *Changes /trend is easy to trace*
* *Good visual impression*   ***(any 2×1=2 marks)***

**(b).(i)Other than Ghana, name two countries in West Africa where cocoa is grown. (2 Marks)**

* *Nigeria*
* *Cote -de -voire*
* *Cameroon*  ***(Any 2×1=2 marks)***

**(ii) Physical conditions that favor the growth of cocoa in Ghana. (3 mks)**

* *High/ well distributed rainfall, ✓exceeding 1200mm p.a.*
* *High temperatures✓ /between 240c-300c*
* *High relative humidity✓ throughout the year*
* *Deep✓ ,fertile ✓well drained soils✓*
* *Low altitude/below 700m a.s.l. ✓*  ***3×1=3 marks)***

**(c) How cocoa is processed in Ghana (6 mks)**

* *Beans are fermented✓ for 5-6 days and dried✓*
* *The fermented beans are washed / cleaned*
* *The beans are roasted ✓*
* *The roasted beans are then crushed✓to extract cocoa butter*
* *Cocoa is blended ✓and mixed with sugar*  ***(1 mark×6= 6 marks)***

**(d) Importance of cocoa production to the economy of Ghana. (3 mks)**

* *Has contributed to development of industries which use cocoa as raw materials✓*
* *Earn the country foreign exchange since most of it exported ✓*
* *Provide employment opportunities to people working in the cocoa farms and distributing it. ✓*
* *Has contributed to development of infrastructure in the country✓*
* *Has attracted foreign investments into the country✓*   ***(Any 4×1=4 marks)***

**7. a) i) Identify the type of the photograph shown above. (1mks)**

*Ground oblique photograph*

**ii) Identify two characteristic of the photograph shown above. (2mks)**

*Taken from the ground with camera focused on general scenery*

**iii) Give three parts of a photograph. (3mks)**

* *Foreground*
* *Middle ground*
* *Background*

**b) Name the type of mining method shown above. (1mks)**

*Panning method*

**c) Explain how the method named above (b) is carried out. (6mks)**

* *The method involves digging out the sand/gravel which contains mineral particles*
* *The particles are mixed with water from the river in a shallow pan.*
* *The mixture is then whirled.*
* *The lighter particles of sand/gravel are pushed on the sides of the pan.*
* *The heavier mineral particles remain at the bottom of the pan.*
* *The minerals are easily removal by hand as the waited mineral.*

**d) Explain four negative effects of the above method of mining on the environment. (8mks)**

* + *Leaves the land with depression which are dangerous to animals and people.*
  + *Make land unsuitable for agriculture.*
  + *Breeding grounds for mosquitoes. that cause diseases such as Malaria*
  + *Makes the land susceptible to landslides etc any 3x2=6mks*

**e) Draw a sketch diagram to represent the photograph shown above.**

**(4mks)**

* *The rectangle should be of the same size as the photograph—1mk*
* *Insert the features in their exact positions-1mk*
* *Label the important features people and the deposits-1mk*
* *Give the sketch a suitable title-1mk*

1. **a) (i) Define the term land rehabilitation (2 marks)**

*This is the process of restoring land that was once productive back to its productive state.*

**ii) Apart from irrigation, name *three* other methods of land reclamation in Kenya.**

**(3 marks)**

*Draining of swamps*

*Control of pests*

*Introduction of drought resistant crops*

*Afforestation.*

*Reforestation*

*Use of manures and fertilizers.*

**b) Explain *three* problems facing irrigation farming in Kenya (6marks)**

*-Disease incidences such as bilharzia and malaria transmitted by vectors in stagnant waters.*

*-Payment of low prices to the farmers which kills morale of the farmers.*

*-High cost of production making the farmers to sell their produce at high costs*

*-Mismanagement of irrigation bodies leading to losses, lack of credit and low prices.*

*-Shortage of labour during planting, weeding and harvesting giving the farmers the burden of hiring labour at high cost.*

*-pest infestation which lowers production eg Quelea birds.*

*-low water levels in the rivers during dry season*

*-water weeds which compete with crops for nutrients*

*-siltation in the canals reduces the amount of water*

**c) Describe the stages of polderlization in the Netherlands (5 marks)**

*-Protective dykes/sea walls are constructed enclosing the part of the sea to be reclaimed.*

*- Rings canals are constructed.*

*- Pumping stations are installed to pump out sea water from the area enclosed by the dyke.*

*- Water is pumped out of the area enclosed by the dyke*

*- Drainage ditches and more pumping stations are made on the land being reclaimed.*

*- Drainage pipes are laid below the soil.*

*- The area is divided into rectangular portions using. Inner dykes and ring canal.*

*- The drained land is flushed with fresh water to remove salt from the soil.*

*- Soils are treated with chemicals to remove salinity*

*- Pumping water from the polders is a continuous process to prevent water from accumulating in the reclaimed land.*

**d) You intend to carry out a field study on irrigation farming in MweaTebere irrigation scheme**

**i)Identify the two types of hypothesis you would develop for the study (2mks)**

*-Null hypothesis*

*-Alternative hypothesis*

**ii) Name five crops grown in the scheme that you are likely to identify (5mks)**

**-***Maize*

**-***Rice*

**-***Beans*

**-***Tomatoes*

**-***Vegetables*

**iii) Give two reasons why you need to sample the area of study (2mks)**

-*To save on time spent during fieldwork.*

*-To minimize biasness during the study.*

*-To reduce cost of the study*.

1. **(a) i) Define the term industrial inertia (2mks)**

*It is the tendency 0f an industry to remain in a particular area even when the locational factors no longer exist*

**ii) Give three causes of industrial inertia (3mks)**

* *availability of experienced workers*
* *availability of well developed transport and communication system already in place*
* *It is expensive to move to a new site*
* *Industrial independence.*

**b) Name three agricultural non-food processing industries in Kenya (3mks)**

* *leather industry*
* *sisal industry*
* *pyrethrum industry*
* *textile industry*
* *timber industry*
* *tobacco industry*

**c) i) What is cottage industry (2mks)**

*is an industry located in villages and people’s homes using locally available raw materials, simple tools and skills to produce valuable items.*

**ii) List four ways in which Jua Kali industries is important to the Kenyan economy (4mks)**

* *creates employment opportunities*
* *Source of income to many Kenyan raising their standards of living.*
* *Saves on foreign exchange earned*
* *Earns the country foreign exchange through exports.*
* *Produce cheaper goods.*

**d) i) State three problems facing cottage industry in India (3mks)**

* *Inadequate funds among people in rural areas*
* *Stiff competition for the market.*
* *High danger of exploitation from middlemen*
* *Production of similar goods*
* *Competition from manufactured goods.*

**ii) Explain four factors that led to the development of iron and steel industry in the Ruhr region of Germany (8mks)**

* *Availability of coal which is the main source of energy*
* ***Availability*** *of limestone* ***and iron ore as raw materials***
* ***Availability of energy***
* ***Availability of adequate water from river Rhine***
* ***Centrality of Germany in Europe/Accessibility of Germany***
* ***Availability of capital***
* ***Availability of ready market***
* ***Availability of skilled labour***

1. **a) i)What is environmental management (2mks)**

**-***These are the measures /controls taken to ensure sustainable utilization of resources in a given environment.*

*-This is the planning and implementation of effective and proper utilization of the available resources in the environment.*

**ii) Give four reasons why it is necessary for Kenya to conserve her environment (4mks)**

**-** *To maintain source of food supply/ to maintain soil fertility..*

**-** *For modification of climate.*

**-** *For keeping air clean.*

**-***To prevent desertification.*

**-***Protect water catchment areas.*

**-***For its aesthetic value.*

**-***To sustain the sources of raw materials.*

**-***For maintaining natural habitat for wild animals.*

**b) Explain four measures that can be taken to combat pollution (8mks)**

**-***Control of soil erosion to reduce the amount of silt getting into rivers, wells, lakes and other water bodies.*

**-***Treating of sewage and industrial effluents before being released into the environment.*

*-Carrying out regular inspections of factories to ensure that toxic fumes are not released into the atmosphere.*

*-Use of unleaded fuel to promote a cleaner environment as well as to reduce pollution released by the cars.*

*-Establishing recycling plants to recycle the different categories of wastes and make them user friendly to the environment.*

*-Setting up proper garbage collection and management programmes.*

**c) i) Name five types of wastes found in urban areas (5mks)**

- *Industrial wastes*

*- Biomedical/clinical wastes.*

*-Household wastes*

*- Agricultural wastes*

*- Commercial/business waste*

*- Construction wastes*

*- Sewage/sludge waste.*

*- E-waste/Electronic waste*

**ii) Explain three ways in which wastes in urban centres can be managed (6mks)**

- *By recycling wastes so as to produce useful products from the wastes.*

*- By asking companies /firms to treat wastes prior to disposing it off to the local surrounding.*

*- Discourage the use of plastic bags that are non-biodegradable and thus a serious pollutant to the land.*

*- Place many waste collection bins so as to reduce haphazard manner of disposal of waste.*

*- By creating awareness on the significance of sound waste management practices by the urban population.*

*- By ensuring that the county government do not allow accumulation of waste in the urban centres.*