

**SIAYA GEOGRAPHY ASSOCIATION JOINT  
EXAMINATION (SIGEA) 2023**

**Kenya Certificate of Secondary Education**

**312/2 –**

**GEOGRAPHY**

**– Paper 2**

**JUNE - 2023**

**2 ¾ Hours**

**MARKING SCHEME**

1.(a) Give three areas of study under practical Geography

(3marks)

- ✓ Maps and mapwork ✓
- ✓ Field work ✓
- ✓ Statistical Method ✓
- ✓ Photograph Work ✓

(b) What is the relationship between Geography and Biology

(2marks)

- ✓ Biology involves the study of living organism, (plants and animals) anatomy/ physiology/behavior and Geography is interested in the distribution of these organism/ Factors influencing this distribution. ✓
- ✓ Biology applies geographical information to explain the factors determining the distribution of species on the earth surface. ✓

2.(a) State two human reasons why fresh water fishing in Kenya is more developed than marine fishing.

(2marks)

- ✓ In Kenya there is low demand for sea fish compared to fresh water fish making fresh water fishing more preferred. ✓
- ✓ In Kenya there is stiff competition in the open sea from industrialized nations/ Japan / Korea / China whose fishermen are using modern fishing methods/ equipment this discourages local fishermen. ✓
- ✓ In Kenya there is limited technology/ inadequate capital making it difficult to develop marine fishing. ✓

(b) Give three ways in which the government of Kenya is encouraging the fishing industry.

(3marks)

- ✓ To encourage fish farming/ finances for fish farming ✓ *facilitates support*
- ✓ Restocking overfished areas by breeding fingerlings in the fish farms ✓ *Restocking overfished areas by breeding fingerlings in the fish farms*
- ✓ Licensing of fisherman to avoid overfishing ✓
- ✓ Banning of indiscriminate fishing methods/ enforcing the use of standardized nets/seasonal ban of fishing. ✓ *to allow fingerlings to mature/ regeneration of fish*
- ✓ Dredging of sited lakes. ✓
- ✓ Encourage fish eating culture/looking for external market. ✓ *Establishing fish farms*
- ✓ Control water pollution by enacting laws/ research studies on conservation/ breeding habitats and etc ✓ *Establishing/ research studies on conservation/ breeding habitats and etc*
- ✓ Establishing of fishing ministry ✓ *Establishing/ research studies on conservation/ breeding habitats and etc*
- ✓ Formation of assist fishermen. ✓ *credit fin control*

3.(a) Define plantation

(2 marks)

- ✓ Specialized commercial cultivation of cash crops in large tracks of land. ✓

(b) State three characteristics of plantation farming.

(3marks)

- ✓ Farms are scientifically managed ✓ *Employment is scientifically managed*
- ✓ Capital intensive ✓ *High capital is required*
- ✓ A single crop is usually grown ✓ *Production is high in quality and quantity*
- ✓ Production is high in quality and quantity ✓ *Introducing refrigerated containers/ vessels/trucks*

- some farms are labour intensive
- farms are labour intensive

- ✓ Farm are large /40 hectares/100 acre and above /crops are grown on extensive tracks of land.
- ✓ Land is owned by foreigners/individual/groups/companies
- ✓ Provision of social amenities to workers
- ✓ Monoculture leading to soil erosion/ growing of one crop.

4. (a) State two physical reasons why many rivers in Africa are not navigable (2marks)

- ✓ Rugged nature of landscape with steep slopes/highland
  - ✓ Shallow/narrow/fast moving water unsuitable for navigation.
  - ✓ Presence of rock obstacles/ waterfall/ out crops hindering movements of vessels.
  - ✓ Rivers are affected by siltation
  - ✓ Floating vegetation in some rivers.
  - ✓ *seasonal fluctuation of water regime*
- Inadequate economic resources in most of the areas served by the rivers*

(b) Outline three advantages of containerization. (3 marks)

- ✓ Time saving containers have large capacity making loading/ offloading of containers easier.
- ✓ Economical in terms of space/ have regular shape reducing wastage or space
- ✓ Safety/ security containers are sealed from destruction/ tempering with being stolen / weather conditions
- ✓ Containers are easier to handle, they are fitted with special devices/ hooks/ rings to assist in loading/unloading

5.(a) State three human factors favoring tourism in Switzerland. (2marks)

- ✓ Switzerland has a well-developed transport/road network/electric trains/cable cars/aerial lift.
- ✓ People handling tourist can speak in four languages/German/French/English/Latin making communication easy. *diversity of languages*
- ✓ Switzerland has very many high class hotels/ mountain chalets/ caravan sites/ camping sites. *culture - guesse houses/ taverns*
- ✓ Switzerland has abundant tourist resort/ many cities of historical importance/ *Hot* spas
- ✓ Switzerland is a center for international meeting/ *Headquarters of World Organization of agencies*
- ✓ Switzerland is highly industrialized *here* produce many types of manufactured goods some used in tourist industries *employs many people who can afford to pay for tours thus promoting domestic tourism.*
- ✓ Passage/package tours has increased travel.
- ✓ Switzerland political neutrality. *Stability is no restrictions to citizens of any country making tourists feel comfortable and safe.*

(b) Define eco-tourism. (2 marks)

- ✓ Eco-tourism is the development/ management of tourism while conserving the environment/enjoying what nature provides while protecting it.

*-Arrangement of Package tours enables tourists to travel in groups at lower affordable rates.*

## SECTION B

Answer Question 6 And Any Other Two Questions From This Section.

6. Study the photograph below and use it to answer question (a) and (b)



(a) i) What two evidence shows that this is ground general view photograph. (2marks)

- ✓ The photograph captures the broad view of the area / a broad view of the area is captured.
- ✓ The photograph focuses on many objects ✓
- ✓ The objects become progressively smaller towards background. ✓

ii) Name the type of mining shown on the photograph.

- ✓ Open cast mining ✓

(b) Describe the methods of mining in a(ii) above.

(5marks)

- ✓ Open cast mining involves the stripping off of the overburden ✓ *materials are removed by digging / quarrying*
- ✓ Unwanted material lying on top of the mineral deposit and dumping it nearby. *stripping* If the mineral bearing rock is soft, it can be removed by digging / If it is hard, explosive may be used to loosen it and then huge power shovels can be employed to dig up the mineral deposits. ✓

- ✓ The ore is then loaded into lorries/ trains/rail wagons. *Open cast method is used and transported to the factory for processing*
- to mine surface coal/ copper iron ore/quarrying rocks such as limestone/gravel/igneous rocks/clay for bricks.

(c) State four effects of dereliction of land (4marks)

- ✓ Waste of Agricultural land / *Tip-heaps. Many occupy land otherwise suitable for farming. May agricultural which would*
- ✓ Waste of industrial land/derelict may occupy industrial land which could be used for industries/housing
- ✓ Land become ugly/land loses aesthetic values. *values*
- ✓ Health/accident hazards/ *land* open mines may be filled with water creating deep *pool* breeding grounds for mosquitoes/ waterborne diseases./land may subside. Causing collapse of structures/ land may be susceptible to landslides.

d) Explain four contribution of gold mining to the economy of South Africa. (8marks)

- ✓ Gold is highly priced *thus earns foreign exchange which is used to improve other sectors of the economy*
- ✓ Gold is exported and it earns foreign exchange which is used as a means of paying international debts. *ve*
- ✓ It offers employment opportunities to many people which leads to earning income *and improving standard of living*
- ✓ It has led to widespread urbanization contributing to formation of the Witwatersrand conurbation. *creating large dd for agricultural products*
- ✓ It has formed a broad-based market for other industrial operations/ provide market for secondary industries. *expansion such as roads transport/commu.*
- ✓ It has led to development of modern infrastructure/ social amenities and improve on living conditions. *ve*

Gold mining has led to the devt of industrial mining skills that are useful in other sectors of the economy.

(e) Identify four formations in which minerals and mineral ore may occur (4marks)

- ✓ Veins and lodes
- ✓ Beds and seams *layers*
- ✓ Weathering products
- ✓ Alluvia/ place deposits
- ✓ *Evaporites*

7. (a) List four types of irrigation practiced in Kenya.

- ✓ Drip irrigation
- ✓ Furrow/canal irrigation
- ✓ Trickle irrigation
- ✓ Overhead / basin irrigation
- ✓ Flood basin irrigation
- ✓ *Lifting devices*

*Tanks irrigation*

(b) i) What is a polder? (2 marks)

*= Land reclaimed from the sea*

- ✓ This is a low lying reclaimed land / below sea level which is surrounded by dykes that protect it against high water tides and is artificially drained. *Land reclaimed from the sea*

ii) Describe the stages of land reclamation from the sea in the Netherlands

Low lying land reclaimed from the sea in the Netherlands.

Drainage pipes are laid below the soil to collect excess water.

- ✓ Construction of protective dykes/walls to enclose part to be reclaimed ✓
- ✓ Construction of ring canals to carry water from the area to be reclaimed ✓
- ✓ Pumping stations installed to pump out sea water from area enclosed by dykes ✓
- ✓ Water pumped out of the area enclosed by dykes ✓
- ✓ Reeds were sown to prevent weeds from growing/to use up any excess water in the area so the soil could dry. ✓ *W Drain more water*
- ✓ Drainage ditches were cut in land and laid /more pumping stations put up. ✓
- ✓ Area was divided into rectangular portions, using inner dykes/ring canal. ✓
- ✓ Soil treated with chemicals to lower their salinity. ✓
- ✓ Drained land was flushed with fresh water to remove salt from the soil. ✓
- ✓ Pumping out of water from the polders was continuous process. ✓

(c) State four ways in which land is being rehabilitated in Kenya (4marks)

- ✓ By filling open pit/land scaping ✓
- ✓ Constructing terraces to reduce speed of surface run off/soil erosion. ✓
- ✓ By planting trees /grass strips on degraded land ✓
- ✓ By building gabions to hold/trap soil carried by water ✓
- ✓ Bush fallowing to allow land reclaim its fertility ✓
- ✓ Controlled grazing to control erosion/allow pasture to re-grow. ✓
- ✓ Mulching/planting cover crops/cut off drains to retain moisture/add humus. ✓
- ✓ Irrigating semi-arid areas to provide water for crops (4x1=4marks) ✓

(d) Explain three problems facing Perkerra irrigation schemes (6marks)

High temperature dry season  
Inter-ethnic conflicts know land ownership leads to insecurity. The sandy alluvial soils easily get dry reduce crop prodn.

- ✓ Fluctuation in volume of R. Perkerra during dry season/R. Perkerra is a seasonal river. *Leads to shortage water to the schemes ✓*
- ✓ Dry seasons results to high evaporation causing salinization/making soil poor for farming. *High temp ✓*
- ✓ Inadequate capital, making it impossible to employ mechanization. *expand the farm ✓*
- ✓ Depletion /exhaustion of soil fertility by maize crops therefore low yield. *depletion of fert ✓*
- ✓ Monoculture has resulted to farmers abandoning other crops/seed maize is major income earner. *High cost of farm inputs reduce profit margin ✓*

8.(a) State five characteristics of coniferous forests (5marks)

- ✓ Trees are evergreen ✓
- ✓ Trees have narrow/needle-like leaves ✓
- ✓ A few /larch are deciduous ✓
- ✓ Tree species occur in pure stands/one species *same species ✓*
- ✓ There is little undergrowth. *no undergrowth ✓*
- ✓ ~~Trees can be gigantic/big/trunks with circumference of up to 15m~~ ✓
- ✓ Tree crowns are cone shaped ✓
- ✓ Trees have thick barks/with resin to protect from frost. ✓

- Trees bear cones ✓
  - Trees are soft and light in weight ✓
  - Trees have a straight trunk / tall ✓
  - ✓ The trees have shallow roots ✓
  - ✓ Trees take long to mature / 50-70 years because of extreme cold winter
- (any 5x1=5marks)

(b) Explain four factors favouring exploitation of softwood in Kenya (8marks)

- ✓ Logging can go all year because Kenya does not experience any winter which would interrupt the activity. ✓
  - ✓ Hydro-electric power is readily available to the relatively few saw-mills/paper factory in webuye for production. ✓
  - ✓ Availability of water from R.Nzoia/used in production process in the industry ✓
  - ✓ Timber/wood products demand within Kenya/COMESA region guarantees a ready market for these products. ✓
  - ✓ Availability of cheap /ample labour for cutting /processing of timber ✓
- (4x2=8marks)

(c) State four problems facing forestry in Kenya (4marks)

Illegal logging / indiscriminate cutting of trees thereby reducing indigenous tree species

- ✓ People encroach on forest land / need for agriculture / settlement.
- ✓ Increase population of game / increase in population of grazers / elephants cause damage to forest / overgrazing.
- ✓ Incidences of forest fires to the forest ecosystem / lumberjacks / poachers / charcoal burners / honey harvesters set fire deliberately.
- ✓ Outbreak of pests / aphids / diseases.
- ✓ Poor management of forests leads to shortage of forest products / delay in replanting.
- ✓ Some forests have been turned into game reserves / public utility / private land resulting to reduction.
- ✓ Forests in some areas are over exploited through charcoal burning / logging / extraction of medical plants. • Prolonged drought has led to drying of trees

(e) Explain four importance of conserving the environment (8marks)

- ✓ To reduce pollution which causes diseases to animals / plants resulting into good prolonged life / reduced global warming.
- ✓ For sustainability of resources needed by mankind.
- ✓ To ensure effective utilization of valuable resources to avoid wastage.
- ✓ To protect endangered plant / animal species
- ✓ To protect scenic value / beauty of landscape / wildlife to promote tourism.

(any 4x2=8marks)

9.(a) State five features of nomadic pastoralism in Kenya (5marks)

Reliance on the animals as source of income  
- Dwelling places are temporary  
- Exposure to cattle raids  
- Reliance on natural pasture / vegetation  
- Communal grazing of livestock

- ✓ Animals are kept as a sign of wealth / prestige / social status.
- ✓ Animals are kept to pay dowry.
- ✓ Animals are used as a source of food / milk / meat / blood.
- ✓ Animals are kept as source of income.
- ✓ It is a form of insurance against natural calamities / diseases / raids / droughts.

- Large herds are kept in a large tract of land
- Seasonal migration of animals nomads with their animals in search of water / pasture
- A wide variety of animals are kept
- Communal grazing of livestock

There is insufficient marketing system - High incidence of pests/diseases  
 - There is uncontrolled breeding  
 - Cattle are kept as sign of wealth/Prestige  
 - Land is owned communally

(b) Explain four problems facing pastoralism (8marks)

- Poor stock mgt leads to poor/low quality animals  
 - Poor means of transport in the area limits mkt for the animals  
 - The native cattle breeds yields low amount of milk/low quality of meat

- ✓ Prolonged drought leads to shortage of water /searching of pasture. ✓
- ✓ Overstocking leads to overgrazing hence poor pasture. ✓
- ✓ Pests/diseases e.g Rinderpest/East coast /nagana/Anthrax /ticks reducing quality. ✓
- ✓ Low quality of the animals. leads to low income ✓
- ✓ Animals are frequently attacked by wild animals. leading to death/losses ✓
- ✓ Inadequate veterinary services leading to low quality/production ✓

(c) Give four differences between beef farming in Kenya and Argentina (8marks)

- ✓ Kenya beef farming is carried out by both pastoralist/commercial ranches whereas in Argentina beef farming is done in extensive ranches ✓
- ✓ Kenya has inadequate/lack of adequate pasture for grazing beef animals while Argentina has extensive natural pasture in pampas ✓
- ✓ Kenya beef farming is done on a small scale/less mechanized while Argentina its heavily mechanized and on large scale. ✓
- ✓ Argentina has a high local market for beef while Kenyan market is limited. ✓
- ✓ Farmers in Argentina have more access to capital needed for beef farming while in Kenya farmers have inadequate capital. ✓ (4x2=8marks)

(d) List four communities that practice pastoral farming in Kenya (4marks)

- ✓ The maasai ✓
- ✓ The Turkana ✓
- ✓ The Borana ✓
- ✓ The Somali ✓
- ✓ The Rendile ✓
- ✓ The Samburu ✓
- ✓ Pokot ✓

(4x1=4marks)

10.(a) Name three regional trading blocks in Africa apart from ECOWAS (3marks)

- ✓ COMESA ✓ common Market for Eastern and Southern Africa
- ✓ SADC ✓ Southern African development community
- ✓ EAC ✓ East African community. (3x1=3 marks)

(b) State three objectives of ECOWAS (3marks)

- ✓ To accelerate economic integration/share development through harmonization of economic/financial policies.
- ✓ Forming a unified economic zone in west Africa.
- ✓ Creating a monetary union (3x1=3marks)

(c) State five factors that influence external trade in Kenya (5marks)

- ✓ Demand for goods/services
- ✓ Similarities/differences in the goods produced.
- ✓ Purchasing power of the people. ✓



- ✓ International trade agreement/restrictions.
- ✓ Political stability or trading partners.
- ✓ Availability of transport/communication network.
- ✓ The level of technology.

(3x1=3marks)

(d) Explain three reasons why Kenya is experiencing imbalance of trade with other trade partners (6marks)

- ✓ Semi processed goods exported earn less.
- ✓ Some the goods exported are of low quality hence generate little earnings.
- ✓ The agricultural goods exported from Kenya face stiff competition/imposed quota system to world market which leads to reduced less earning.
- ✓ Kenya exports mainly agricultural raw materials which are of low value and imported goods which are of high value.

(3x2=6marks)

(e) Discuss four significance of trade to Kenya

(8marks)

- ✓ Fostering regional cooperation/peace harmony/cooperation resulting to rapid economic growth.
- ✓ Development of banking /insurance/warehouses/settlement expansion.
- ✓ Availability of wide range of goods where consumers can choose from variety.
- ✓ Provide market for surplus, leading to economic growth.
- ✓ Creation of employment opportunities resulting to earning income and improving living standards.
- ✓ Government earns revenue/charges VAT/tariffs to protect local industries or discourage importation of some commodities which are locally available.
- ✓ Efficient/improved transport/rail/air/water/perishable goods are air lifted resulting to stimulation of airports.
- ✓ Earns foreign exchange/revenue earning from increased exportation that in turn increase revenue earned.
- ✓ Stimulates growth of industries to satisfy increased demand for goods.

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- There is a well developed <sup>addition</sup> transport network in Argentina while in Kenya roads are impassable which hinders transport to MKTs.
- In Kenya both exotic and local breeds are kept while in Argentina, most of the breeds are exotic.
  - In Argentina farmers grow crops like wheat while in Kenya farmers practice only beef farming.
  - In Kenya most of beef products are for local consumption with little for export while in Argentina most of beef products are for export with little sold for in the local MKT.
  - Pests and diseases are a major problem in Kenya while in Argentina the problem is controlled.

(prob)

### Correctum

- To encourage trade among the member states
- To eliminate trade barriers on locally produced goods in the region
- To promote free movement of goods and people in the region.
- To encourage the improvement of transport / communications in order to facilitate trade
- To encourage agricultural and industrial devt among the member states
- To cooperate on matters of research in agriculture, forestry and industrial devt.