PAVEMENT FORM 4 TRIAL 1 EXAMINATION 2021/2022

Kenya Certificate of Secondary Education (K.C.S.E)

321/2 – GEOGRAPHY PAPER 2 MARKING SCHEME

SECTION A:

1. (a) **Define ranching**. (2mks)
   It is the rearing of livestock on an extensive scale for commercial purposes.
   (b) **Economic factors**. (3mks)
   - Operating costs.
   - Marketing expenses.
   - Price fluctuations.

2. (a) **Differentiate between market gardening and horticulture**.
   Market gardening is the intensive cultivation of fruits and vegetables for sale while horticulture refers intensive cultivation of fruits, vegetables and flowers for sale. (2mks)
   (b) **Why market gardening is near urban centers**. (3mks)
   - Large population in urban centers offers ready market.
   - Produce perishable commodities, they should reach the market immediately after production.
   - Efficient transport found near towns.
   - Limited land for large scale farming near urban areas.

3. (a) **Land reclamation**. (2mks)
   It is the process by which unproductive land e.g. deserts, marsh or swamps is made useful for agricultural activities and settlement.
   (b) **Problems experienced by farmers at Mwea Teberre**. (2mks)
   - Water shortages during dry seasons.
   - Pests such as Quelea birds.
   - Water weeds – Rhizobia compete with rice for nutrients.
   - Incidents of waterborne diseases e.g. Bilharzia and malaria.
   - Siltation in the canals reduces the amount of water.
   (c) **Methods of land reclamation in Kenya**. (2mks)
   - Draining of swamps.
   - Control of pests e.g. tse-tse fly.
   - Afforestation.
   - Controlling soil erosion (construction of gabions).
   - Application of manures and fertilizers.

4.(a) Other than Ghana identify three countries producing cocoa in Africa. (3marks)

(b)Name two ports through which cocoa is exported from Ghana. (2marks)

5.(a) Other producers of cocoa in Africa apart from Ghana.
- Nigeria
- Ivory Coast
- Cameroon (Any 3x1=3marks)

(b) Ports through which cocoa is exported from Ghana

- Port of Takoradi
- Port of Tema
- Port of Accra (Any 2x1=2marks)

SECTION B:

6.(a)(i)

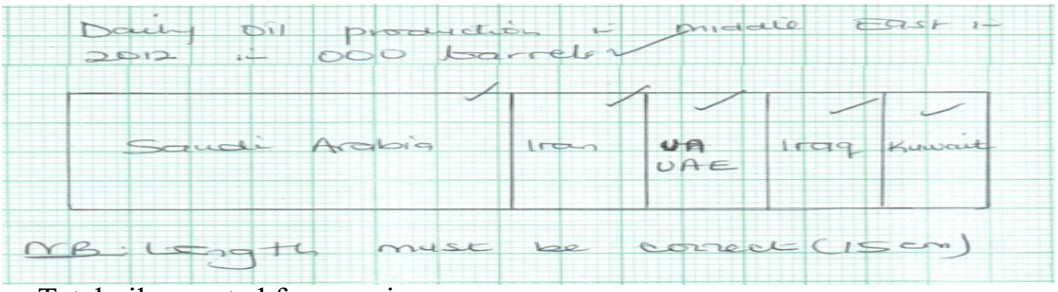
$$Iran = \frac{3589}{24312} \times 15 = 2.214$$

$$Saudi\ Arabia = \frac{11726}{24312} \times 15 = 7.23$$

$$Iraq = \frac{3087}{24312} \times 15 = 1.90$$

$$UAE = \frac{3213}{24312} \times 15 = 1.98$$

$$Kuwait = \frac{2797}{24312} \times 15 = 1.725$$



(ii) Total oil exported from region
1880+2235+2414+8865+2595=17,989,000barrels

(iii) Country with highest rate of domestic consumption.

$$Iran = \frac{1709}{3589} \times 100 = 47.6177$$

$$Iraq = \frac{852}{2989} \times 100 = 28.50$$ ✓½

$$Kuwait = \frac{406}{2797} \times 100 = 14.5155$$ ✓½

$$Saudi\ Arabia = \frac{2861}{11726} \times 100 = 24.398$$ ✓½

$$UAE = \frac{618}{3213} \times 100 = 19.2343$$ ✓½

∴ Highest rate is Iran with 47.6177% (3mks)

(b) **Benefits of soda ash mining**.

- It creates employment opportunities which raises living standards of the people.
- It provides raw materials to the manufacturing industries leading to industrialization e.g. glass making.
- It is exported earning foreign exchange which is used to develop other

sectors of the economy.
- It has led to development of transport facilities e.g. Konza – Magadi railway line/Magadi road opening up area to economic development.
- It has led to development of social amenities raising living standards of people.
- It has led to growth of Magadi Town.
- It provides revenue to the government through taxation. (any 4 x 2 = 8mks)

(c) **Negative effects of mining**.
- It causes dereliction of land due to dumping of waste materials/open mines are an eyesore/destroys natural beauty of landscape.
- Pollution of mining areas by noise/blasts/smoke water pools are all health hazards.
- Mining disrupts the water table which may lead to shortage of water.
- Mining displaces human settlements thus disrupting people and necessitating expensive resettlement processes. (3 x 2 = 6mks)

7. (a) (i) Forestry is the science of planting, caring and using trees/forests and their associated resources. (2mks)

(ii) **Factors favouring forestry on highlands in Kenya**.
- Area receives high rainfall (1000 – 2200mm) throughout the year which encourages continuous growth of trees.
- Area has deep fertile volcanic soils that allow the roots to penetrate deep into the ground to support the trees.
- The area has well drained soils thus there is no water logging which can choke plants and interfere with their growth.
- Area has moderate to cool climate which is ideal for the growth of a variety of trees.
- The area are gazetted forest reserve where settlement and cultivation are prohibited hence allowing growth of forests without interference.
- The steep slopes discourage human activities thus enabling forests to thrive. (4 x 2 = 8mks)

(b) **Forestry in Kenya and Canada**.
- In Kenya there are both hardwood forests and softwood forests while in Canada there are softwood forests.
- In Kenya forests cover small area while in Canada, a large area.
- In Kenya products are mainly for domestic market while in Canada they are for domestic and international market.
- Tree harvesting goes on throughout the year while in Canada in winter mainly.
- The logs are transported by trucks or roads while in Canada they are transported by rivers/water.
- In both countries tree felling is mechanized.
- In Kenya forest products are mainly for local use while in Canada they are mainly for export. (4 x 2 = 8mks)

(c) (i) **Hardwood tree species**.
- Meru Oak
- Mvule.
- Nandi flame.
- Camphor.
- Mahogany.
- Sandal wood. Any 3 x 1 = 3mks

(ii) **Four problems facing forestry**.
- Prolonged drought.
- Forest fires.

- Illegal encroachment of human activities.
- Illegal cultivation has led to clearing of the parts of forest.
- Increased population of forests destroys the trees.
- Overexploitation of some tree species.
- Plant pests and diseases destroy planted forests. (Any 4 x 1 = 4mks)

8. (a) (i) **Coffee varieties**.
- Robusta.
- Arabica.
- Ruiru II.

(ii) **Influence of**:
Inadequate capital to buy farm inputs – Results to low fields, low quality production and reduces the farmers profit margin.
Fluctuation of coffee market prices – This lowers the morale of the farmers and reduce the efforts they put into production of the crop.
- Other farmers have abandoned coffee farming.

(b) **Stages of coffee growing from land preparation to harvesting**.
- Clearing of vegetation.
- Coffee is propagated from seeds/cuttings in a nursery.
- The coffee seeds/cutting germinates and stays in the nursery for about six months.
- Lines of holes, three metres apart, are dug in the main field.
- When they are ready, the seedlings are transported into the holes in the main field.
- The seedlings are sheltered from strong sunlight either by trees or artificially made shades.
- Dry leaves are laid around the stem of the seedling to provide mulching/conserve moisture.
- Once planted in the field coffee plants are weeded, sprayed, manured and pruned regularly.
- The coffee trees are kept to a height of about 1.5m to 2.5m to facilitate picking.
- In some large farms, irrigation is done during the dry months.
- By the year, the year, the coffee attain, maturity and coffee beans are ready for harvesting.
- Harvesting involves manual picking of the ripe/deep red berries leaving the green ones to ripen. (6mks)

(c) (i) **Exotic dairy breeds**. (3mks
- Friesian.
- Ayrshire.
- Guernsey
- Jersey
- Alderney
- Brown Swiss
- Sahiwal

(ii) **Conditions favouring dairy farming in Denmark**. (6mks)
- The land is gently sloping which is suitable for grazing.
- The climate has warm and sunny summers/moderate temperature (10 - 17°C) that allow outdoor grazing.
- There is cool climate suitable for pasture growing.
- The moderate rainfall (500 – 1000mm) supports growth of grass/ fodder crops.
-Boulder clay soils support high quality pasture. (6mks)

(d) (i) **Two dairy products**.
- Milk
- Cheese
- Butter
- Ghee

(ii) **Ports through which beef is exported from Argentina**.
- Buenos Aires.
- Bahia blanca

9. (a) **Two types of fisheries**. (2mks)
- Fresh water fisheries.
- Marine fisheries.

(b) **Study the map**.

(i) **Fishing grounds**. (2mks)
U – North West Pacific.
S – North East Atlantic.

(ii) **Fish species in W**. (2mks)
- Cod
- Plaice
- Mackerel
- Anchories
- Herrings
- Halibut
- Sardine
- Hake
- Tuna
- Pilchards

(iii) **Explain why major fishing grounds are in the temperate in the Northern Hemisphere**. (6mks)
- 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 by 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 to upwelling of ocean waters which bring planktons from the seabed to the surface.
- The cool to cold climate in these latitudes 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 for building fishing ports/fishing landing sites.
- The large population in these areas provide a ready market for the fish and promotes the fishing industry.
- The areas are surrounded by rugged landscape which discourages other economic activities.
- The regions experience extreme winters and there shortens the growing periods for agricultural crops. (6mks)

(c) **Describe trawling fishing method**.
- Trawling method is used to catch fish in the deep seas using large ships or boats called trawlers.
- The trawl net which is bag-shaped is attached to a trawler or a ship.
- The mouth of the trawl net is kept open by otter broads or head beams.
- The upper part of the trawl net is kept a float by corks or floats.
- Weights are used to keep the lower parts at the seabed.
- The trawl net is dragged along the sea bottom by the trawler to trap fish.
- After sufficient fish are caught, the net is hauled into the trawler.

NB: Correct sequence should be followed.

(d) **Ways in which the Kenyan government is promoting the fishing industry in the country**. (8mks)
- Providing fishermen with loans.
- Encouraging fishermen to form co-operatives.
- Conducting research/restocking over fished areas with fingerlings.

- Standardising size of nets used in fishing.
- Enacting laws against water pollution.
- Seasonal restrictions in fishing in some areas.
- Encouraging fish farming/establishing hatcheries to supply fish farmers with fingerlings.

10. (a) (i) **Two non-renewable sources of energy**.
- Coal.
- Uranium
- Natural gas (2mks)

(ii) **Three conditions necessary for occurrence of petroleum**. (3mks)
- Deposition/remains of flora and fauna.
- Presence of porous rocks.
- Presence of non-porous rocks underneath the fossils.
- Non-porous rock over the fossils.
- Pressure to compress the fossils.

(b) **H.E.P power projects marked**. (4mks)
E – Aswan
F – Kainji
G – Inga
H – Cabora Bassa

(c) **Four physical factors that influence the location of H.E.P. Stations**. (8mks)
- A regular/constant supply of water to enable continuous production of electricity.
- Presence of a large volume of water from a river/ lake to provide water to drive the turbines to generate electricity.
- Hard basement rock to provide a firm foundation for the construction of a dam.
- Presence of a deep valley/river gorge to save on cost of construction of a dam to provide space for reservoirs.
- Non-porous/impervious rock to prevent water loss through seepage.

(d) **Four benefits of rural electrification**. (8mks)
- Has encouraged setting up of industries in rural areas hence decentralizing industries.
- Has led to reduced cutting of trees as electricity is available for domestic use.
- Has helped improve social amenities in rural areas which would lead to higher standards of living.
- Has boosted investment in rural areas hence higher standards of living.
- Has promoted horticultural farming as ideal storage facilitates of perishable. products.