

MARKING GUIDE
GEOGRAPHY PAPER TWO
P250/2
WORLD PROBLEMS AND DEVELOPMENT.
UGANDA ADVANCED CERTIFICATE OF EDUCATION.

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SECTION A

1 (a) Determining Dot value.

Assumed scale: let 1 dot represent 1,000,000 people.

$$\text{Angola } \frac{13936000}{1000000} = 13.9 \approx 14 \text{ dots.}$$

$$\text{Botswana } \frac{1564000}{1000000} = 1.56 \approx 2 \text{ dots.}$$

$$\text{DR Congo } \frac{54275000}{1000000} = 54.2 \approx 54 \text{ dots.}$$

$$\text{Lesotho } \frac{2076000}{1000000} = 2.07 \approx 2 \text{ dots.}$$

$$\text{Malawi } \frac{11828000}{1000000} = 11.8 \approx 12 \text{ dots.}$$

$$\text{Mozambique } \frac{18986000}{1000000} = 18.9 \approx 19 \text{ dots.}$$

$$\text{Namibia } \frac{1819000}{1000000} = 1.8 \approx 2 \text{ dots.}$$

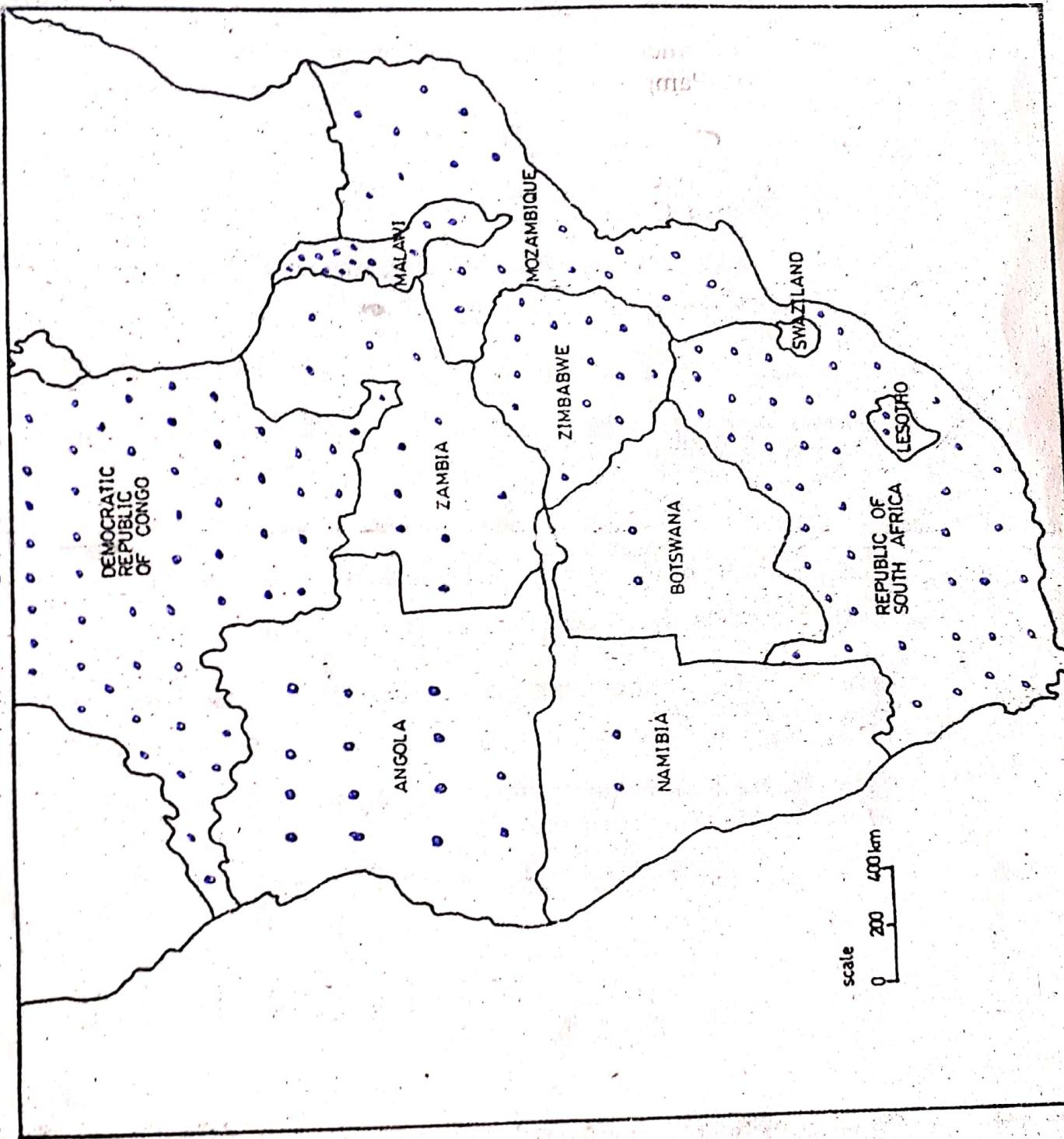
$$\text{South Africa } \frac{44203000}{1000000} = 44.2 \approx 44 \text{ dots.}$$

$$\text{Zambia } \frac{10872000}{1000000} = 10.8 \approx 11 \text{ dots.}$$

$$\text{Zimbabwe } \frac{13076000}{1000000} = 13.07 \approx 13 \text{ dots.}$$

Cut along the dotted line and attach to your answer booklet.

A DOT MAP SHOWING POPULATION SIZE OF SELECTED AFRICAN COUNTRIES



b) Demerits of using Dot map statistical method.

- It involves tedious mathematical calculations.
- Maintaining the size of the dot is very difficult.
- It consumes a lot of time.
- Too many dots may lead to overcrowding.
- In case of large amplitude, finding scale is very difficult.

(04 marks)

c) Reasons for variations in population distribution

- Difference in relief
- Difference in climatic conditions
- Difference in Mineral endowment.
- Difference in fertility of soils
- Difference in political environment
- Difference in natural vegetation
- Difference in level of industrialisation
- Difference in incidence of pests and diseases

(06 marks)

d) Implications of a large population size

Democratic Republic of Congo or Republic of South Africa

Possible implications

- Large market for industrial and agricultural goods and other services.
- Source of cheap labour
- Provides security to defend country against enemies.
- Source of government revenue.
- It's an index of development.
- Promotes maximum utilization of resources.

Negative implications

- High government expenditure
- Causes land pressure leading to land conflicts.
- Promotes overexploitation of resources like forests.
- It strains social services like roads, schools, hospitals.
- It results into food shortage hence famine.

(05 marks)

SECTION B

2 Account for the persistence of shifting cultivation in either Zambia or Brazil

Candidate should select country

Define and describe the system of shifting cultivation.

Give the factors for persistence of shifting cultivation.

It is a form of traditional subsistence cultivation which involves the clearing of small tracts of land. Fire is used to burn the bushes / trees. The farmer cultivates annual crops such as beans, maize, millet, yams, vegetables.

Once the field is exhausted and crop yields decline, the farmer moves to virgin areas, leaving the previous land to fallow and regenerate fertility. later the farmer returns when the land has regained fertility.

- farmers use simple tools such as axes, pangas, hoes, slasher, digging sticks, knives
- farmers also live in temporary settlements
- land is communally owned
- They depend natural conditions such as rainfall

factors for persistence of shifting cultivation

- Existence of vast land to carry out shifting cultivation or sparse population
- Communal ownership of land allows collective use of land and easy movement of farmers.
- Remoteness of areas of shifting cultivation / Poor accessibility limits adoption of better methods of farming.
- Cultural rigidities where farmers are not willing to adopt better farming methods.
- It requires less capital to establish and manage thus its persistence.
- It is dependent on family labour which is cheap and readily available.
- Use of rudimentary tools / low level of technology eg hoes, pangas which limit modern farming methods.

- low level of education / Ignorance of farmers limits them from adopting better methods of farming
- Poor roads (transport) limits farmers from receiving extension services which can help them adopt modern farming methods.
- High fertility of the soil in the initial years ensures high crop yields / crop harvest.
- Burning helps to control weeds which would interfere with crop growth.
- low incidence of pests and diseases due to shifting makes farmers to persist with shifting cultivation
- Availability of large pieces of land which sustains shifting cultivation thus its persistence.
- The method allows time for other traditional activities like fishing, hunting, fruit gathering hence its persistence.
- favourable climate for growing crops such as beans, maize, yams, millet thus ensuring food security.
- There is limited government interference which allows the farmers to continue with shifting cultivation
- The land is left to fallow and regain fertility for re-use thus making method of cultivation persistent.
- The system is flexible allowing growing of a number of annual crops and rearing of some animals thus its persistence.

(25 marks)

Marking by Impression:

3(a) Tropical rainforests grow near the equator where there are wet and hot conditions eg forests in Brazil, Gabon, Congo etc. Boreal forests grow in temperate areas like British Columbia, Sweden, Norway etc.

<u>Boreal forests</u>	<u>Tropical rainforests</u>
<ul style="list-style-type: none"> - Take a short period of time to mature i.e 8-20 years. - Appear in Pure stand - Have thick undergrowth - Have softwood tree species like pines, douglas fir, spruce - Have taproot system to absorb the water from underground. - Have needle shaped leaves to reduce evapo-transpiration. - Tree sheds off their leaves during the dry season. - Have no climbing plants - Trees are conical shaped 	<ul style="list-style-type: none"> - Take a long period of time to mature 60-100 years. - Appear in Impure stand. - Have little or no undergrowth. - Have hardwood tree species like Mvule, Mahogany, Ebony. - Have buttress root systems to support huge size and height. - Have broad leaves to allow to release excess water - Trees are ever green due to heavy rainfall received. - Have climbing plants such as lianas, ferns, Epiphytes. - Trees are umbrella shaped.

(10 Marks)

N.B Differences should be given in sentence form and words of comparison like "where as" "while" should be reflected in the sentence.

(b) factors for commercial exploitation of tropical rainforests in either Gabon or Brazil

Gabon

Gabon is located in central Africa and straddle the equator. 3/4 of Gabon is covered with tropical rainforests. Commercial tree species in Gabon are Okoume, Ozo, Azobe, Mukulungu, Mahogany, Ebony. Forestry is mainly developed at the coast.

Brazil

Brazil has one of the biggest tropical forests in the world and they are part of the Amazon forest. Tree species include Ebony, teak, Mahogany, Rosewood, Redheart. Major processing centres are Porto-Alegre, Sao Goncalo, Sao-Luis, Salvador.

- Presence of conducive climate ie hot temperatures and heavy rainfall which support growth of dense forests.
- Presence of fertile soils in the Congo basin which support growth of luxuriant and thick forests. (Amazon basin for Brazil)
- Presence of relatively low altitude of below 1000 metres above sea level favours growth of huge and tall trees.
- Low incidence of pests and diseases which allow growth of thick and luxuriant forests.
- Presence of drainage features eg R. Ogowe which are used to transport logs to market centres and generation of HEP.
- Presence of valuable tree species eg Ebony, Myrtle, Mahogany which are highly demanded on the world market.
- Availability of ready market for forest products
- Availability of energy sources eg HEP from R. Ogowe or R. Amazon
- Availability of well developed transport eg roads, railways or waterways like R. Amazon or R. Ogowe.
- Availability of political stability in Brazil or Gabon
- Availability of supportive government policies
- Availability of modern technology eg use of power driven saws, chain saws.
- Availability of sparse population which allows extensive forestry

Marking by Impression (15marks)

A&N QTN 4

"The development of fishing in inland fresh waters of Africa has been mainly limited by low levels of technology" Discuss.

Candidate should define fishing and give examples of inland fresh waters in Africa eg

R. Congo in DRC, R. Vaal, R. Orange, R. Limpopo in South Africa,
R. Senegal in Senegal, R. Zambezi in Zambia, R. Niger in Nigeria,
R. Nile in Egypt, R. Ogoue in Gabon etc.

Main fish species caught in Inland fresh waters like Nileperch
Tilapia, Dug fish, Mud fish, Silver fish

Major fishing methods eg gillnetting, longlining, drifting,
purse seineing, basket method, use of hooks.

Limitations as a result of low level of technology.

- Poor fishing methods eg use of hooks, baskets, poisoning
- Poor storage/preservation methods eg salting, smoking, sundrying, deep frying.
- Poor fishing gears eg use of canoes, boats.

Others factors other than low level of technology.

- Poorly developed transport routes eg marram roads.
- Inadequate capital
- Inadequate skilled labour.
- Unfavourable government policies like high taxes
- Water weed Hyacinth
- Increased pollution of water bodies.
- Profit reparation due to domination of sector by foreign investors.
- Inadequate research into fishing.
- Competition with other fishing sectors eg Norway, Finland, Japan
- High agricultural potentials in most of the African countries thus discouraging fishing
- Existence of other dominant sectors like mining, forestry limits emphasis on fishing

- Poorly indentified fishing grounds limit development of fishing ports
- Harsh climatic conditions eg hot temperatures which hinder fish breeding eg Namibia, Morocco, and fish preservation
- Political instability in some African countries eg Nigeria, DRC
- Limited commercial species / inferior fish species
- Increased number of predators eg crocodiles which feed on fish and scare away fishermen.
- Water piracy
- Accidents eg capsizing of boats due to strong winds and storms
- Overfishing which leads to exhaustion of fish / Extinction

Marking by Impression (25 marks)

QTH 5

Examine the factors limiting the development of the mining industry in Africa.

Candidate should define mining and give major mining countries of Africa like Zambia, South Africa, Liberia, DRC, Ghana

Major minerals mined in Africa are Gold, tin, Ironore in DRC, Gold, Diamond, Ironore in South Africa, Copper in Zambia, Oil in Nigeria, Ironore in Liberia

Major mining methods eg Adit mining, open cast mining

factors limiting the development of mining industry in Africa

- Over exploitation of minerals thus exhaustion of minerals eg exhaustion of Diamond in Kimberley in S-Africa.
- Poorly developed transport such as roads which limits the transportation of minerals.
- Inadequate power supplies such as HEP in countries like Nigeria.
- Inadequate skilled labour eg surveyors, geomappers.
- Competition with other well developed mining nations eg U.S.A, China, Germany.
- Profit repatriation due to the industry being dominated by foreign investors eg In Zambia, Nigeria, Liberia
- Political instability in some African countries eg DRC, Liberia, Nigeria
- Limited market for some minerals eg Uranium in S-Africa, copper in Ghana
- Unfavourable government policies eg high taxation, termination of contracts
- Inadequate capital to invest in mining sector.
- Price fluctuations of some minerals on the world market eg Cobalt in Zambia, Oil in Nigeria
- Competition from other sectors eg Agriculture, Forestry, industrialisation
- Increased accidents eg collapse of mines scare away labour.

QTN 6

Candidate should select case study

Great Lakes region of U.S.A

- Give major contributions in the region eg Southern New England, Mid Atlantic states, Pittsburgh-Erie region, Detroit region, Lake Michigan

Major industrial towns eg Boston, New York, Chicago, Philadelphia, Duluth, Detroit

Major industries eg food processing, Automobiles, Electronics, Beverages, Breweries, Engineering.

Keihin industrial region of Japan

It's formed by 3 major towns of Tokyo, Kawasaki, Yokohama. Major industries are Electronics, Engineering, shipbuilding, oil refining, cement works, glassware, iron and steel industries

Contribution of the industrial sector to the development of either U.S.A or Japan

- Provides employment opportunities for drivers, managers, engineers
 - Earned government revenue through taxation of industries, products
 - Provision of foreign exchange through exportation of industrial goods.
 - Promoted international relations
 - Economic diversification thus reducing dependence on other sectors like agriculture, mining, tourism
 - leads to development of infrastructures such as roads, railways, waterways
 - Promotes maximum utilisation of resources eg minerals, forest resources
 - Promotes urbanisation of towns like Chicago, Boston in U.S.A, Tokyo, Yokohama in Japan and their positive effects
 - Stimulates the development of other sectors eg mining, agriculture
 - Acquisition of skills by workers eg researchers, managers
- Negative contributions
- It has promoted deforestation thus causing climatic changes eg clearing forests for timber and construction of industries.

- Promotes over exploitation of minerals leading to exhaustion of minerals.
- It leads to environmental pollution through pollution which causes loss of aquatic life.
- It promotes urbanisation of towns and their negative effects eg overpopulation, high crime rate.
- It leads to displacement of people to create land for industrial construction and expansion.
- It promotes regional imbalances

Impressional Marketing (25marks)

QTN 7

Describe the measures being taken to improve inland water transport in either China or United States of America
Candidate should select country.

CHINA

China has inland navigable waters such as rivers, canals which include; Hwang-Ho, Yangtze river, Mekong, Hong kiang, si-kiang, Wei Ho.
Canals are Grand canal joining north to south China, Peh-kiansu canal joining west part to east. Both canals connect to Pacific ocean.

USA

It has well developed inland water systems eg St Lawrence sea way, Mississippi, R Sacramento, R Tennessee. Canals eg Welland canal, marie-sault canal, Mendota canal, Soo canal, Erie canal, Hudson Mohawk canal, Newyork state barge canal.

MEASURES

- Construction of canals to bypass rapids, waterfall and the unnavigable stretches of the river.
- Construction of locks in areas where there is variation in water levels.
- Construction of multiple dams to makes the river more navigable.
- Constant dredging and de-silting of the canals to keep them deep, wide and navigable for large ocean going vessels.
- Blasting and clearing of islands within the river courses to remove obstacles.
- Constant ice breaking / defrosting of river courses especially during severe winter season.
- Supplementing water transport with road and railway transport.
- Use of high level technology eg containerisation, forklifts, use of cable cars.

- Effective planning and timetabling
- Reduction in river utilisation tariffs to promote inland water transport.
- Promotion regional and international co-operation for better management of inland shared water resources.
- Promotion of economic activities in the hinterland areas to avail cargo and humans for transportation eg trade, agri, mining
- Encouraging, research and development on water transport improvement
- Enlargement of the river channels to accommodate large ocean going vessels.
- Straightening of the river courses to remove sharp bends / corners / meanders.
- Patrolling to ensure adequate security against water piracy and robberies.

Marking by Impression
(25marks)

QTN 8

Examine the causes and effects of desertification in either
California or Namibia

Desertification is the development of desert like conditions in an area. It is characterised with decreasing and unreliable rainfall, increasing temperatures, loss of water retention capacity, increasing wind and runoff of erosion, reducing relative humidity as well as increasing diurnal range of temperatures.

Causes of desertification

- Poor farming practices such as monoculture, overgrazing which destroy vegetation which is source of rainfall formation
- Deforestation which increases temperatures and eliminates source of rainfall formation
- Wetland reclamation eliminates source of vapour and leads to reduced humidity
- Industrialisation which releases fumes into the atmosphere destroying the ozone layer responsible for regulating heat.
- Drilling of bore holes and construction of valley dams drops the water table which is resource of water for growth of vegetation
- Mining and quarrying activities lead to reduction / destruction of vegetation thus reducing atmospheric vapour.
- Political instability (wars) leads to destruction of vegetation in order to eliminate rebel grounds thus reduced humidity.
- Existence of mountain barriers eg leeward side which receive dry conditions
- Influence of dry winds which cause desert conditions thus desertification
- Shortage of surface water eg lakes, rivers which could cause rain formation through process of evaporation
- Being far from the sea leads to desertification due to failure to benefit from the land and sea breeze.