

SCHEME OF WORK

WEEK	TOPIC
1	REVISION OF LAST TERM'S WORK/SETTLEMENT
2	GEO-POLITICAL ISSUES (LAND RECLAMATION): AFFORESTATION, CONSTRUCTION OF BARRIERS, SAND FILLING, CONSTRUCTION OF DRAINAGE AND CONTROL OF EROSION
3	GIS (GEOGRAPHIC INFORMATION SYSTEM)
4	AFRICA: LOCATION, POSITION, SIZE AND POLITICAL DIVISION
5	AFRICA: RELIEF AND DRAINAGE
6	AFRICA: CLIMATE AND VEGETATION
7	LUMBERING IN EQUATORIAL AFRICA (ZAIRE AND NIGERIA)
8	IRRIGATION AGRICULTURE IN NILE BASIN AND THE NIGER BASIN
9	PLANTATION AGRICULTURE IN WEST AND EAST AFRICA
10	FRUIT FARMING IN THE MEDITERRANEAN REGIONS OF AFRICA
11	REVISION
12	EXAMINATION

REFERENCE

Essential Geography for Senior Secondary Schools by O.A. Iwena

WEEK ONE**REVISION/SETTLEMENT INTERACTIONS****INTER-DEPENDENCE BETWEEN RURAL AND URBAN SETTLEMENTS**

Urban and rural settlements depend on each other for their continuous existence

A. Dependence of Urban Settlement on Rural Settlement

The rural areas perform the following functions for the urban centres.

- (1) Provision of Food: Urban areas like cities and large towns depend on rural areas for food stuff like yam, plantain beans, cassava, tomatoes etc.
- (2) Unskilled Labour Supply: So many unskilled labour in urban areas are supplied by the rural areas due to the low level of most people in the rural area.
- (3) Medicinal herbs: Pharmaceutical companies in cities depend on the rural areas for the supply of medicinal herbs and roots.
- (4) Industrial Raw Materials: Raw materials like latex, cocoa, cotton etc. Needed by manufacturing industries are supplied from rural areas to the industries in urban areas:

However, some problems that limit the performance of the rural areas to perform these functions include:

- (i) Rural – Urban Migration
- (ii) Increasing literacy level by rural dwellers.
- (iii) Lack of agricultural lands to farm
- (iv) Technological development which makes the whole world a global village.
- (v) Natural disaster like soil erosion, flooding etc.

B. Ways the Rural Settlements depend on Urban Settlements

The urban centres perform the following functions for the rural areas:

- (1) Manufactured good such as the supply of processed food like milk, sugar, bread, drugs etc.
- (2) Market: Urban areas like Lagos and Ibadan provide markets for agricultural products from rural areas
- (3) Employment e.g. to skilled and unskilled labour from rural areas.
- (4) Higher Education: Rural areas depend on urban areas for higher education such as universities polytechnics etc.
- (5) Capital Flow: There is always a flow of capital from urban to rural areas e.g. the flow of currencies, trade and commerce including shares and stocks.
- (6) Information: Radio, television, news papers etc usually disseminate information from the urban areas to the rural areas.
- (7) Medical Services: Rural areas enjoy medical services from urban areas such include: the services of Teaching and Specialist Hospital, General Hospitals etc.
- (8) Administrative Function: Most of the administrative headquarters are in the urban areas. Rural areas therefore depend on the urban areas for effective governance.

- (9) Diffusion of innovation and ideas: e.g. social and education ideas flow from the urban areas to the rural areas e.g. Internet facilities, satellite and cable network, styles and fashion, resort centres, hotels etc.

However, some major problems may limit the performance of the above functions by urban area;

- (i) Political discrimination
- (ii) Nepotism and Tribalism
- (iii) Inadequate communication facilities between the two areas.
- (iv) Storage problems due to seasonality of products.
- (v) Tribal /inter-tribal wars and other social unrest.

EVALUATION

Mention two ways the urban areas depend on the rural areas.

GENERAL EVALUATION QUESTIONS

1. What is a rural area?
2. State the types of rural area.
3. Mention the types of urban area.
4. Explain the interdependence between rural areas and urban centres.
5. What are the problems hindering the performance of the urban centres?

READING ASSIGNMENT

Essential Geography, O.A. Iwena. Pages 204-205.

WEEKEND ASSIGNMENT

1. A settlement developed at the meeting point of road is (a) confluence town (b) port town (c) nodal town (d) gap town
2. conurbation can best be described as (a) a large village with thousands of people (b) two or more towns joined together (c) a large area with big cities (d) an area with few settlements
3. Rural settlement types include all the following except (a) linear (b) dormitory (c) nucleated (d) dispersed
4. Which of the following is not a major type of migration? (a) rural-urban (b) international (c) inter-community (d) urban-rural
5. One effect of rural-urban migration on the source region is (a) rapid urbanization (b) intensive pressure on land use in rural areas (c) rural depopulation (d) urban depopulation

THEORY

1. State five effects of rural-urban migration on the source region.
2. Mention five causes of rural–urban migration.

WEEK TWO

GEO-POLITICAL ISSUES: LAND RECLAMATION

Land reclamation also known as **land fill**. It is the process of creating new land from ocean, riverbeds, or lake beds. The land reclaimed is known as **reclamation ground** or **land fill**.

The term "reclamation" also refers to returning disturbed land to an improved state. It is the process of reconvertng disturbed land to its former or other productive uses. This can also be referred to as land rehabilitation.

Methods of Land Reclamation:

- Afforestation
- Sand Filling
- Construction of Drainage
- Control of Erosion
- Construction of Barriers

Land reclamation can be achieved with a number of different methods. The most simple method involves filling the area with large amounts of heavy rock and cement, then filling it with clay and dirt until the desired height is reached. The process is called "infilling" and the material used to fill the space is generically called "infill".

Also, draining of submerged wetlands is often used to reclaim land for agricultural use.

A related practice is the draining of swampy or seasonally submerged wetland to convert them to farmland. While this does not create new land exactly, it allows commercially productive use of land that would otherwise be restricted to wildlife habitat. It is also an important method of mosquito control.





Disadvantages of Land Reclamation

1. It leads to loss of some organisms and plants due to the destruction of their habitat.
2. It changes the drainage pattern.
3. It leads to subsidence of the land.
4. It can also lead to flooding.
5. It makes the land prone to soil liquefaction especially during earthquake.

GENERAL EVALUATION QUESTIONS

1. What is land reclamation?
2. How can a land be reclaimed?
3. State the advantages of land reclamation.
4. Mention the disadvantages of reclamation.
5. Explain afforestation.

READING ASSIGNMENT

Essential Geography, O.A. Iwena Pages 259-263.

WEEKEND ASSIGNMENT

Write on places in Nigeria that may require land reclamation or where land reclamation has already taken place.

WEEK THREE

GEOGRAPHIC INFORMATION SYSTEM (GIS)

A **geographic information system (GIS)** is a system designed to capture, store, manipulate, analyze, manage, and present all types of spatial or geographical data.

The acronym GIS is sometimes used for **Geographical Information Science** or **Geospatial Information Studies** to refer to the academic discipline or career of working with geographic information systems and is a large domain within the broader academic discipline of Geoinformatics.

In general, GIS describes any information system that integrates, stores, edits, analyzes, shares, and displays geographic information. GIS applications are tools that allow users to create interactive queries (user-created searches), analyze spatial information, edit data in maps, and present the results of all these operations. Geographic information science is the science underlying geographic concepts, applications, and systems.

Data representation

GIS data represents real objects (such as roads, land use, elevation, trees, waterways, etc.).

Real objects can be divided into two abstractions: discrete objects (e.g., a house) and continuous fields (such as rainfall amount, or elevations).

Traditionally, there are two broad methods used to store data in a GIS for both kinds of abstractions mapping references: raster images and vector.

GENERAL EVALUATION QUESTIONS

1. What is GIS?
2. Mention two features that can be represented with GIS.
3. State three cultural features.
4. Mention five physical features in your environment
5. Define geography.



READING ASSIGNMENT

Essential Geography, O.A. Iwena Pages 190-195.

WEEKEND ASSIGNMENT

1. Real objects can be divide into (a) continuous and circulatory (b) discrete and continuous (c) circulatory and discrete
2. Raster images are used to (a) analyse data (b) interpret data (c) store data
3. All are physical objects except (a) road (b) mountain (c) river
4. Which of these is a socio-cultural feature? (a) airport (b) trees (c) lake
5. 'Geo' refers to (a) description (b) space (c) earth

THEORY

1. State two uses of GIS
2. Write three features within the school that can be represented with GIS

WEEK FOUR

AFRICA: LOCATION, POSITION, SIZE AND POLITICAL DIVISION

LOCATION: Africa is located between latitudes 37° N and 35°S of the equator and 17°W and 51°E of the Greenwich Meridian.

POSITION: Africa is the second largest continent in the world after Asia. It is bounded in the north by the Mediterranean sea which separates Africa from Europe, in the south by the Atlantic ocean, in the East by Indian ocean and in the north-east by the Suez Canal, the Red Sea and the Gulf of Aden which separates Africa from Asia.

SIZE: Africa is the second largest continent in terms of land area after Asia. It occupies $\frac{1}{4}$ of the total land area of the world. The total land area of Africa is approximately 30 million Sq km stretching for about 8000km from north to south and 7,500km from east to west.

POLITICAL DIVISIONS OF AFRICA: Africa consists of about 48 mainland countries and several islands. Some islands in the Indian Ocean include Madagascar (the largest island) Zanzibar, Comoro, Mauritius, etc. While some islands in the Atlantic ocean include Sao Tome, Cape Verde, Principe, Canary and Equatorial Guinea.

EVALUATION

1. Describe the location of Africa.
2. Explain the size of Africa.



LANDLOCKED COUNTRIES

These are countries that do not share boundaries with the coast or oceans.

The landlocked countries in Africa include Mali, Niger, Burkina Faso, Chad, Central Africa Republic, Uganda, Rwanda, Zambia, Malawi, Zimbabwe, Botswana and Sudan.

PROBLEMS OF LANDLOCKED COUNTRIES

- (1) They experience high freight cost.
- (2) They depend economically on other countries.
- (3) They depend politically on other countries.
- (4) There is always insecurity of goods.
- (5) There is also political instability.

GENERAL EVALUATION QUESTIONS

1. What are landlocked countries?
2. Mention some landlocked countries in Africa.
3. Describe the political division of Africa.
4. What is the size of Africa?
5. State problems affecting landlocked countries.

READING ASSIGNMENT

Essential Geography, O.A. Iwena Pages 472-474.

WEEKEND ASSIGNMENT

- (1) The latitudinal extent of Africa is _____. (a) 37° (b) 35° (c) 2° (d) 72°
- (2) Africa is bounded in the north-east by one of the following
(a) Gulf of Aden (b) Suez Canal (c) Gulf of Guinea (d) Red sea
- (3) Africa has a total land area of _____.
(a) 40million sq km (b) 30million sq km (c) 35million sq km (d) 20million sq km
- (4) Which of these islands is found on the Atlantic Ocean _____?
(a) Victoria Island (b) Mauritius (c) Canary (d) Zanzibar
- (5) The largest Island in Africa is _____. (a) Principe (b) Sao Tome (c) Zanzibar (d) Madagascar

THEORY

Draw the map of Africa showing all the African countries.

WEEK FIVE

AFRICA: RELIEF AND DRAINAGE

Africa can be grouped into the following relief regions

- The east (made up partly of mountains)
- The west (made up partly of highlands)
- The south (made up mainly of plateaux)
- The north (made up mainly of ranges)

EAST AFRICA: There are many mountains found in this part of Africa. They include Kilimanjaro Mountain (5,895m) which is the highest mountain in Africa, Cameroun mountain, Ethiopia mountain, Mountain Elgon, Mountain Ruwenzori and Mountain Kenya.

WEST AFRICA: The highlands found in this area include the Fouta Djallon, Guinea, Adamawa highland and Jos plateau.

SOUTH AFRICA: This area is mainly made up of plateaux. There is a continuous escarpment, highest in the Drakensberg Mountains in South Africa.

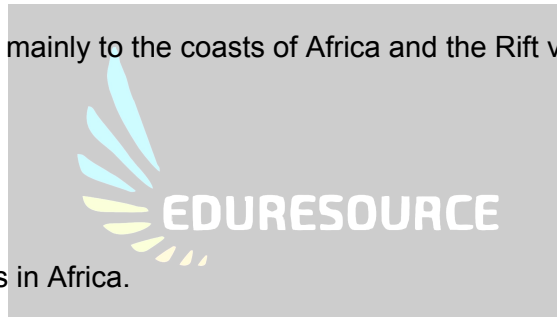
NORTH AFRICA: The ranges include Ahaggar, Tasilli, Tibesti, Darfur and Atlas Mountain

AREAS OF LOWLAND

The areas of lowlands are restricted mainly to the coasts of Africa and the Rift valley of East Africa.

EVALUATION:

1. Describe the relief of Africa.
2. Mention some areas of lowlands in Africa.



THE EAST AFRICA RIFT VALLEY SYSTEM

LOCATION: It stretches from the Red sea to the River Zambezi in Zambia through Ethiopia, Kenya, Uganda, Tanzania and Malawi. It is about 5000 – 6000 km long.

ORIGIN / FORMATION: Due to block faulting, there was subsidence of land between two Parallel faults caused by tension.

NATURE OF THE FLOOR / DEPTH: It has a narrow flat floor with lakes some of which fell below sea level. The valley has steep walls. It contains some lakes like Tanganyika (the 2nd deepest lake in world) and Lake Malawi.

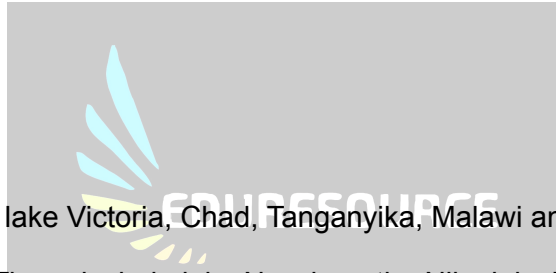
IMPORTANCE: The rift valley system is important for the following

- (i) Tourism
- (ii) Fishing
- (iii) Salt mining
- (iv) Rich agriculture land.

DRAINAGE IN AFRICA

Africa has a large number of important rivers. Out of all the rivers, only four are really outstanding as a result of their length and volume. These are.

- River Nile (6,600 km) the longest
- River Niger (4,200 km)
- River Zambezi (2,400 km)
- River Orange (1,600km)



LAKES IN AFRICA

1. Natural lakes: These include lake Victoria, Chad, Tanganyika, Malawi and Turkana.
2. Artificial / Man made lakes: These include lake Nassir on the Nile, lake Volta on River Volta, lake Kanji on the Niger and lake Kariba (the largest man – made lake in Africa) on the Zambezi river.

GENERAL EVALUATION QUESTIONS

1. What is relief?
2. What is drainage?
3. Describe the drainage of Africa.
4. Mention the natural lakes in Africa.
5. Mention some important rivers in Africa.

READING ASSIGNMENT

Essential Geography, O.A. Iwena Pages 475-478.

WEEKEND ASSIGNMENT

- (1) The highest mountain in Africa is the ____ (a) Cameroun mountain (b) Kilimanjaro mountain (c) Ethiopian mountain (d) Mountain Ruwenzori.
- (2) The largest artificial lake in Africa is ____

- (a) Lake Chad (b) Lake Volta (c) Lake Tanganyika (d) Lake Kariba
- (3) The longest river in Africa is_____
- (a) River Nile (b) River Congo (c) River Senegal (d) River Niger
- (4) The rift valley is known for the following except_____
- (a) Fishing (b) Salt mining (c) Farming (d) Lumbering
- (5) Which of these lakes is found on River Zambezi_____? (a) Chad (b) Volta (c) Kariba (d) Kanji

THEORY

Draw an outline map of Africa, on it, show the following rivers

- (a) River Nile (b) River Niger
- (c) River Orange (d) River Zambezi

WEEK SIX

AFRICA: CLIMATE AND VEGETATION

Climate is the atmospheric condition of a place over a long period of time.

Factors affecting the climate of Africa are:

1. Latitude
2. Altitude
3. Distance from the sea or ocean
4. Ocean currents
5. Planetary winds and pressure belts
6. Slope and aspect
7. Cloud cover
8. Vegetation

TYPES OF CLIMATE IN AFRICA

1. The Equatorial Hot Climate: This is found in the Zaire Basin of Central Africa and in the coast of West Africa (except Ghana).
2. The Tropical Continental (Sudan) Climate: It is found in West Africa and curves southwards into East Africa and Southern Africa.
3. The Mediterranean Climate: It is found in the horns or tips of Africa in South Western part of South Africa(Cape Town) and in the North Western part of Africa(Morroco, Algeria and Tunisia).
4. The Hot Desert Climate
5. The Warm Temperate Eastern Margin
6. The Temperate Continental (Steppe) Climate

EVALUATION

1. Define climate.
2. State the elements of climate.
3. Mention the types of climate in Africa.



VEGETATION OF AFRICA

The vegetation of Africa include the following

1. Tropical rain forest
2. Tropical savanna(grassland)
3. The mediterranean vegetation
4. Desert vegetation
5. Temperate grassland
6. Montane vegetation

GENERAL EVALUATION

1. What is climate?
2. Mention four elements of climate.
3. Mention the vegetation types in Africa.
4. State the features of tropical rain forest.
5. Mention three features of grassland vegetation.

READING ASSIGNMENT

Essential Geography, O.A. Iwena Pages 481-484.

WEEKEND ASSIGNMENT

1. Lines joining places with equal degree of cloudiness is (a) isotherm (b) isohel (c) isoneph (d) isoyet
2. Trees in savanna region develop the following adaptations to enable them survive the long dry season except (a) shallow roots (b) long taproots (c) thick barks (d) thin leaves
3. Isotherm is to temperature as _____ is to pressure (a) isohaline (b) isohel (c) isobar (d) isoneph
4. The Sahel savanna vegetation is predominantly found in (a) Cote d'ivoire (b) Mauritania (c) Morocco (d) Sierra Leone
5. Xerophytic plants are usually associated with (a) regions of heavy rainfall (b) water logging (c) areas of low rainfall (d) windward part of a highland

THEORY

On the map of Africa, locate the different climatic types.

WEEK SEVEN

LUMBERING IN EQUATORIAL AFRICA (ZAIRE AND NIGERIA)

Lumbering is defined as the felling of economic trees in the forest for domestic, industrial or commercial purposes.

Lumbering is practiced in Equatorial Africa regions like Zaire (around Kinshasa, Ituri etc) and in Nigeria (around Benin City, Sapele, Port-Harcourt etc).

Favourable Factors For Lumbering in Zaire and Nigeria are:

- (i) The presence of dense tropical rainforest.
- (ii) Presence of economic trees.
- (iii) Presence of wide market for the products.
- (iv) High demand for hardwood in foreign countries.
- (v) High demand for timber as fuel.
- (vi) Efficient sawmill industries to process the raw timber.
- (vii) Efficient transport like rivers and roads to move logs to sawmills or to ports.
- (viii) Favourable equatorial climate.

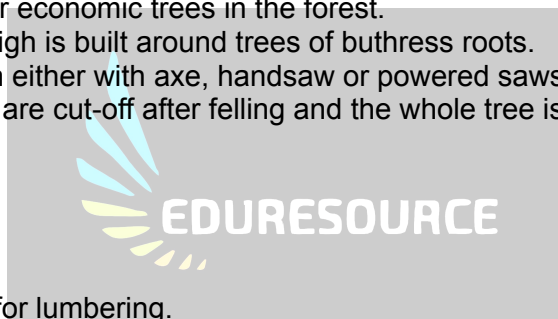
Methods of Lumbering

In the regions;

- (i) the lumbermen search for economic trees in the forest.
- (ii) A platform of about 2-3 high is built around trees of buttress roots.
- (iii) The tree is then cut down either with axe, handsaw or powered saws.
- (iv) The branches of the tree are cut-off after felling and the whole tree is cut into logs for easy transportation.

EVALUATION

- 1. Define lumbering.
- 2. State the favourable factors for lumbering.



Economic Importance of Lumbering

Economic trees like Iroko, Obeche, Opepe, Mahogany, African Walnut, Okoume and Limber are of great importance such as:

- (1) Lumbering provides foreign exchange through export of timbers.
- (2) It provides employment to many people e.g. to sawmillers, lumbermen etc.
- (3) It provides ply-woods and planks.
- (4) Plywoods and planks are used in the construction of houses and furniture.
- (5) Timber is used for the construction of canoe and boats.
- (6) It provides income to the government through the license and permits given to timber contractors.
- (7) Trees in forest help to control soil erosion as well as wind break.

Differences in lumbering between Nigeria and Zaire

- 1. The Forest area (necessary for lumbering) of Zaire is more than the total land area of Nigeria. That is, the forest area of Zaire is seven times the forest area of Nigeria.
- 2. The forest areas in Nigeria are closer to the coast than in Zaire. While in Zaire, the forest area is about 1500km from the coast.

3. Transportation of timber is quite a serious problem in Zaire than in Nigeria because of the long distance from the coast. Besides, major rivers in Zaire do not flow directly to the sea.
4. In Zaire, vast areas are still virgin forest but in Nigeria the original tropical rain forest has largely disappeared, giving way to secondary growth.

Problems of Lumbering

Problems associated with the exploitation of timber in both Nigeria and Zaire include:

1. It causes soil erosion.
2. It also leads to the depletion of natural forest products.
3. It can lead to leaching of soil.
4. Most trees are not in pure stand, this makes lumbering difficult.
5. It can lead to flooding.
6. It can lead to disappearance of wild life
7. Presence of buttress roots in some trees makes felling very difficult and dangerous.

Solutions to the Problems

- (i) Forest guards should be employed to check the illegal felling of trees and ensure planting of new ones.
- (ii) Roads should be constructed round lumbering areas for easy transportation of logs.
- (iii) Afforestation or planting of two trees when one is cut down should be encouraged.

EVALUATION QUESTIONS

- (i) What is Lumbering? Mention any two areas it is practiced in Africa.
- (ii) Mention any four factors that favour Lumbering.
- (iii) Mention any two problems facing Lumbering.

GENERAL EVALUATION QUESTIONS

1. What is lumbering?
2. Explain the methods of lumbering.
3. Describe factors that favour lumbering.
4. List the areas of lumbering in Africa.
5. State the economic importance of lumbering.

READING ASSIGNMENT

Essential Geography, O.A. Iwena Pages 490-491.

WEEKEND ASSIGNMENT

1. The artificial felling of trees is called ____ (a) deforestation (b) afforestation
(c) lumbering
2. One of these is not an economic tree in Nigeria ____ (a) Iroko (b) Opepe (c) Baobab

3. One of these regions in Zaire is known for lumbering activities.
(a) Ituri (b) Bening City (c) Port-Harcourt
4. One of the problems of lumbering is that ____ (a) It can lead to growth of towns (b) It can kill the lumber man during felling (c) the trees are in pure stand
5. The forest area of Zaire is about _____ times bigger than that of Nigeria. (a) 3 (b) 5 (c) 7

THEORY

1. Describe the steps involved in Lumbering.
2. Outline any three differences between lumbering in Zaire and in Nigeria.

WEEK EIGHT

IRRIGATION AGRICULTURE IN THE NILE AND NIGER BASIN

Irrigation agriculture is the type of agriculture which involves the artificial application of water to soil or land for farming purposes. Irrigation is practiced in areas where rainfall is insufficient like Egypt and Sudan in the Nile Basin (using River Nile) and Mali and Northern Nigeria in the Niger Basin using River Niger.

Irrigation makes farming possible throughout the year. River Nile is so important to Egypt hence the popular saying "No Nile, No Egypt".

Needs for Irrigation

- (i) Rainfall is low and unreliable in both Nile and Niger basins.
- (ii) Both areas are dry and arid.
- (iii) High rate of evaporation in the areas.

Factors that favour irrigation agriculture

- (i) Presence of rivers like River Nile and Niger.
- (ii) Presence of fertile alluvial soils.
- (iii) Incidence of low rainfall.
- (iv) Incidence of high rate of evaporation.

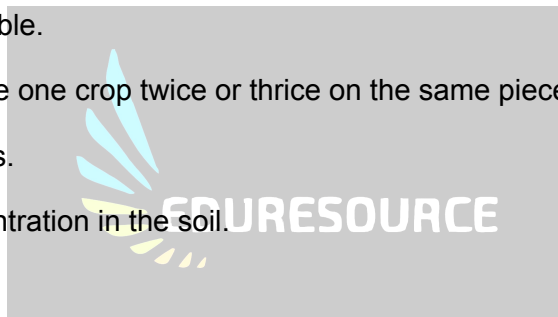
- (v) The need to control flooding.
- (vi) Resourcefulness of the people.
- (vii) Presence of large population.
- (viii) The quest to increase food production.

EVALUATION

- (i) What is irrigation?
- (ii) Mention two reasons for irrigation Agriculture.
- (iii) Outline any four (4) factors that can favour irrigation agriculture.

IMPORTANCE OF IRRIGATION

- (i) It makes farmers to be less dependent on rainfall.
- (ii) It makes early planting possible.
- (iii) It enables farmers to cultivate one crop twice or thrice on the same piece of land in a year.
- (iv) It increases the yield of crops.
- (v) It helps to reduce salt concentration in the soil.



Areas Covered by Irrigation

Irrigation agriculture is practiced in areas such as:

- (a) In the Nile Basin
 - (i) The Nile Delta
 - (ii) The Nile Valley
 - (iii) The Gezira plain or the managil extension
 - (iv) The Lakeshores
 - (v) Aswan (Egypt)
 - (vi) Khasimel Girba (Egypt)
 - (vii) Sennar and Kenena regions of Sudan
- (b) In the Niger Basin
 - (i) Inland Niger Delta in Mali
 - (ii) The Niger Valley
 - (iii) The Lakeshores e.g. Kainji Lake

Similarities between the Nile and Niger irrigation practices:

- (i) Both irrigation practices depend on large dams.
- (ii) Both practices are perennial in nature.
- (iii) Both use canals to channel their waters.
- (iv) Manual method is used in both areas.
- (v) They both grow food crops e.g. cereal and vegetations /cash crops e.g. cotton & sugar.
- (vi) Both have small and large farms.
- (vii) Both could be owned by both government and individuals.

Reasons why irrigation is more important in the Nile Basin than in the Niger Basin

- (1) The Nile Basin (especially in Egypt) occupies more desert area than the Niger basin.
- (2) There are richer alluvial plains in the Nile than in the Niger Basin.
- (3) There is higher population in the Nile basin than in the Niger basin (This leads to greater demand for food production).
- (4) The Nile basin is used for more cash crop (e.g. cotton) production.

EVALUATION QUESTIONS

- (i) Mention any two areas in the Nile basin where irrigation is practised.
- (ii) Mention any two similarities and two differences between irrigation practiced in both Nile and Niger basins.

CROPS CULTIVATED

- (a) **In the Nile Basin:** Crops cultivated include cotton, sugar cane, millet, wheat, maize and rice.
- (b) **In the Niger Basin:** Crops cultivated include groundnut, maize, guinea-corn, onions, sugar cane and rice.

Methods of Irrigation in use

The methods employed in both Nile and Niger Basins are the same. They include:

- (i) Basin irrigation method:

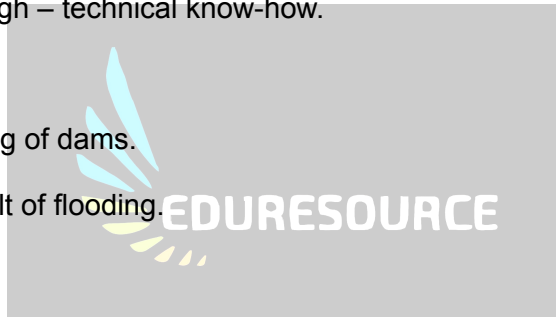
This occurs during the annual flooding of rivers which occurs between August and October as a result of the heavy summer rain. As the river overflows its banks basins are created on the farmland to trap the waters and soak the farmland, to form alluvium. The method is ancient and almost obsolete because, it delays the farming process.
- (ii) Shaduf Irrigation: This involves a hand operated lever lifting buckets of water from the river to the narrow channels running along ridges or patches of irrigation.
- (iii) Sakia Irrigation: This is the use of animals such as oxen, donkeys, Buffalo or camels to bear containers around the body to deposit water to nearby farms.

- (iv) The use of pumps: It involves the use of generators or pumping machines to get water out of the rivers or wells to farmland. This sometimes is also referred to as “Sprinkler irrigation”.
- (v) Manual methods: This is the method where the local farmers use buckets and other water containers to fetch water from the river and pour them on farmland.
- (vi) Perennial method: This involves the use of dams, barrages and canals to store water and the water is released to farmlands during farming season. It promotes the growth of crop all year round.

Problems of Irrigation

Some of the problems associated with irrigation include:

- (1) Fluctuation in the volume of water in rivers can result to low yield of crops.
- (2) Irrigation equipment are expensive to purchase.
- (3) The construction of dams has led to the displacement of people from their original home lands.
- (4) Irrigation scheme requires high – technical know-how.
- (5) Most dams may collapse.
- (6) These is the problem of silting of dams.
- (7) Disaster can occur as a result of flooding.



EVALUATION QUESTIONS

- 1. Mention any two methods of irrigation and briefly explain any one of them.
- 2. Mention any four problems of irrigation.
- 3. Name any two crops that are cultivated both in the Nile and Niger basins.

GENERAL EVALUATION QUESTIONS

- 1. Mention any two methods of irrigation and briefly explain any one of them.
- 2. Mention any four (4) problems of irrigation.
- 3. Name any two crops that are cultivated both in the Nile and Niger basins.
- 4. Outline three reasons why irrigation is more important in the Nile Basin than the Niger basin.
- 5. Describe any two methods of irrigation practices in the Nile or Niger basin.

READING ASSIGNMENT

Essential Geography, O.A. Iwona Pages 493-495.

WEEKEND ASSIGNMENT

- (1) The Nile Basin depends on River _____ for irrigation? (a) Nile (b) Benue (c) Niger
- (2) Irrigation is practiced because ____ (a) Rainfall is in abundance (b) Rainfall is scarce (c) the grass are scarce
- (3) One areas of irrigation in the Niger Basin is ____ (a) Mali (b) Egypt (c) Sudan
- (4) Irrigation makes food ____ (a) Scarce (b) Plenty (c) costly
- (5) Irrigation in Egypt and Sudan is popular because the countries are located in
(a) the forest regions (b) the mediterranean regions (c) the desert regions

THEORY

- (1) What is irrigation? Give three reasons why it is practiced in the Nile valley.
- (2) Outline five (5) factors that favour irrigation agriculture.

WEEK NINE

PLANTATION AGRICULTURE IN WEST AND EAST AFRICA

Plantation agriculture can be defined as the cultivation of certain crops (usually Cash crops) on a large area of land.

CROPS INVOLVED IN PLANTATION AGRICULTURE

It involves the planting of perennial crops such as Cocoa, Rubber, Oil palm, Tea, Coffee etc.

CHARACTERISTIC OF PLANTATION AGRICULTURE

- 1 It requires a large area of land.
- 2 It requires a large labour force.
- 3 It involves the cultivation of one type of Crop only on a piece of land (MONOCULTURE).
- 4 Crops produced are mainly exported.
- 5 All farm operations are mechanized.
- 6 It requires large capital to operate.
- 7 They are mainly owned by government and large foreign or local companies.

FACTORS FAVOURABLE FOR PLANTATION AGRICULTURE

- 1 Sub equatorial type of climate with adequate rainfall.
- 2 Fertility of the soil especially the volcanic soil in East Africa.

- 3 Availability of cheap labour and adequate capital.
- 4 Availability of good transport network.
- 5 Presence of large Markets to consume or use the products.

EVALUATION

1. What is plantation agriculture?
2. Mention crops that are cultivated in this system of agriculture.

IMPORTANCE OF PLANTATION FARMING

- 1 Crops produced provide raw materials for Industries.
- 2 It is a source of income to the farmers.
- 3 It provides employment to many people.
- 4 Farmers learn and acquire new skills.
- 5 They are centers of Agricultural research.
- 6 Cash crops like coca, rubber, tea, coffee when exported, yield foreign exchange for the country.

PROBLEMS OF PLANTATION AGRICULTURE

1. Difficulties in acquisition of large expanse of land.
2. It leads to education of land for town development.
3. Inadequate capital and labour (skilled and unskilled).
4. Price fluctuation. i.e. unstable price of crops in the world market.
5. Pest and diseases-diseases spread fast because of the monocultural nature and the permanent location of the farms.

SOLUTIONS TO THE PROBLEMS

1. Provision of loans or credit facilities.
2. Government participation.
3. Provision of roads and other infrastructures.
4. Proper management to prevent outbreak of diseases.

AREAS OF PLANTATION

In East Africa

1. Tea and tobacco plantation in Kenya
2. Coffee plantation in Uganda
3. Sisal in Tanga District and Coastal area in Tanzania
4. Sugar cane in Tanzania and Uganda

In West Africa

1. Cocoa plantation in Ibadan and Akure in Nigeria, Kunasi in Ghana
2. Rubber in Benin, Howbel (Liberia)
3. Oil plantation in Aba, Okitipupu

EVALUATION

1. Mention problems of plantation agriculture.
2. State three characteristics of plantation Agriculture.

GENERAL EVALUATION QUESTIONS

1. Mention four crops produced in plantation Agriculture.
2. State three problems of plantation Agriculture and in what ways can these problems be solved.
3. Mention some areas of plantation agriculture in Africa.
4. State the economic importance of plantation farming.
5. Highlight factors favourable for plantation farming.

READING ASSIGNMENT

Essential Geography, O.A. Iwena Pages 501-502.

WEEKEND ASSIGNMENT

1. Which of the following West Africa Countries is the largest producer of groundnut (a) Burkina Faso (b) Mali (c) Ghana
2. Monoculture is a term associated with (a) Grable farming (b) Mixed farming (c) Plantation Agriculture
3. The most important cash crops grown in the Nile Basin is (a) Barley (b) Cotton (c) Groundnut.
4. All of the following are true of plantation Agriculture in West Africa except that (a) It involves the planting of food crops (b) Required modern technology (c) Involves large areas of food
5. Which of the following is not a crop grown on plantation farm (a) Cocoa (b) Sisal (c) Maize

THEORY

1. State three characteristics of plantation Agriculture.
2. Mention four crops produced in plantation Agriculture.

WEEK TEN

FRUIT FARMING IN MEDITERRANEAN REGIONS OF AFRICA

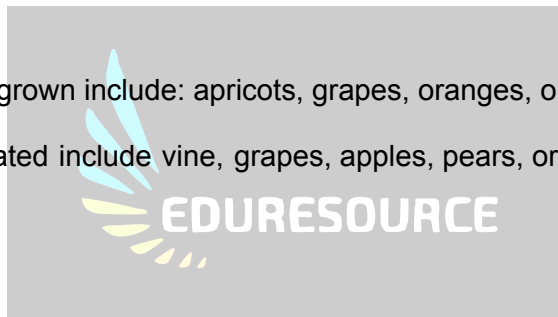
Definition: Fruit farming is defined as the type of farming in which farmers cultivate mainly fruit crops for domestic, industrial or commercial purposes. It is sometimes called orchard farming.

Favourable Factors of Fruit Farming

- i. The presence of Mediterranean climate favours fruit farming in the regions.
- ii. Presence of bright, sunny, weather with hot, dry summers and wet winters.
- iii. Presence of dry-warm summer temperature of 21°C-27°C.
- iv. Abundance of rainfall in winter of 25-75cm per annum.
- v. Prominence of local sirocco and mistral winds in Mediterranean region.
- vi. Availability of local and foreign markets for the products.
- vii. The use of irrigation schemes to support insufficient rainfall.
- viii. Government assistance in fruit farming.
- ix. The use of advanced method and modern technologies to cultivate fruits.
- x. Presence of fertile volcanic crystalline and terra rossa soils which encourage fruit farming.

Types of fruits produced

- a. In North-West Africa: Fruits grown include: apricots, grapes, oranges, olive, lemon, limes and tangerines.
- b. In South Africa: Fruits cultivated include vine, grapes, apples, pears, oranges, pineapples, peaches, apricots etc.



Importance of Fruit Farming

Some of the importance of Fruit Farming in south and North-West Africa include:

1. Provision of foreign exchange through export of wine.
2. It provides employment to many people.
3. It provides raw-materials for fruit canning and processing industries.
4. It provides wine that is consumed locally and internationally.
5. Viticulture, the cultivation of grape fruit promotes specialization.

EVALUATION QUESTIONS

1. What is Fruit Farming?
2. Mention three (3) importance of Fruit Farming.

Major Areas of Fruit Farming

- a. In South Africa: Areas here include: Elgin in Cape Town, Natal, Orange Free State.
- b. In North-West Africa: Areas here include Tunisia, Algeria, Libya and Morocco.

Major Problems of Fruit Farming

- i. Rainfall is unreliable in the Mediterranean region. This affects the growth of fruits.
- ii. Improper storage and processing can lead to poor quality of fruit products.
- iii. There is the problem of competition in quality with other wines produced in Europe.
- iv. Soil erosion during the summer season affects.
- v. Fruits are highly perishable. Over production of them can lead to spoilage and loss.

Note: Fruit Farming is more popular and lucrative in South Africa than in North-West Africa because:

- 1. Massive Government Assistance.
- 2. The High demand of fruits in Europe in winter, when it is unable to produce fruits. This is summer time in South-Africa when harvest is taken place.
- 3. South Africa is closer to Europe. This location advantage increases the sales of fruits in South Africa.
- 4. There is higher demand of fruits in South-Africa.

EVALUATION QUESTIONS

- (i) Mention any three factors that favour the cultivation of fruit farming in the Mediterranean region of Africa.
- (ii) Highlight any two major problems facing fruit farming in the region.

GENERAL EVALUATION QUESTIONS

- 1. Mention the areas of fruit farming in Africa.
- 2. State the crops that are commonly cultivated.
- 3. What are the problems facing fruit farming?
- 4. How can these problems be solved?
- 5. State the economic importance of fruit farming.

READING ASSIGNMENT

WEEKEND ASSIGNMENT

1. Fruit farming is sometimes called ____ farming. (a) pastoral (b) Arable (c) Orchard
2. One of these favours fruit farming. (a) Heavy rainfall (b) Presence of harmattan (c) Presence of dry-warm summer temperature
3. One of these is not a major fruit in Mediterranean region of Africa.
(a) Apricots (b) Orange (c) Kolanut
4. Viticulture is the cultivation of (a) grapes (b) cereals (c) tubers
5. One of these is a major problem of fruit farming. (a) Soil erosion (b) Deforestation (c) Tse-tse flies

THEORY

1. Highlight any three factors that favour fruit farming in Mediterranean Africa.
2. Why is fruit farming more popular in South Africa than in North Africa?

