# GEOGRAPHY

*FOR*

## Senior Secondary School

# 3


# SS 3
# FIRST TERM NOTES ON GEOGRAPHY

# TABLE OF CONTENT

## FIRST TERM

# WEEK 1

**Geography, SS 3**

**Topic**: **Irrigation**

**Content**:

1. Definition of Irrigation
2. Reasons for irrigation
3. Factors affecting irrigation
4. Areas covered by irrigation
5. Importance of irrigation
6. Similarities between the Nile and Niger Irrigation practices

**Definition of Irrigation Agriculture**

**Irrigation** agriculture is the type of agriculture which involves the artificial application of water to soil or land for farming purposes. Irrigation is mainly practiced in areas where there is insufficient rainfall which makes the use of water from river Nile and in Mali, northern Nigeria (Niger basin)

**Reasons for Irrigation**

1. Rainfall is low and unreliable
2. High rate of evaporation creates water deficit in the soil
3. Some areas where irrigation takes place are dry and arid

**Factors affecting irrigation in agriculture**

1. Presence of rivers like River Nile in Egypt and Sudan and Niger in west Africa
2. Presence of fertile alluvial soil (or plains)
3. Incidence of low rainfall or unreliable rainfall
4. The need of agriculture for raw materials
5. The need o control flooding

**Importance of irrigation**

1. It makes the farmers to be less dependent on rainfall
2. Irrigation makes early planting possible
3. It increases yield of crops
4. Irrigation enables farmers to cultivate one crop twice or thrice on the same piece of land in a year

**Areas covered by irrigation**

(a) In the Nile Basin are:
(i) The Nile Delta (ii) The Nile Valley
(iii) The Geriza plain (iv) The lake shores
(v) Aswan (Egypt) (vi) Kenena (Sudan)

(b) In the Niger Basin
(i) Inland Niger Delta (ii) Th Niger Valley
(iii) The Lake shores

**Similarities between the Nile and Niger irrigation Practices**

1. Both Nile and Niger irrigation practices depends on large dams
2. Both practice perennial irrigation
3. Both use canals to channel water to the farm
4. Manual method is used in both areas
5. Both have small and large farms

**ASSESSMENT**

1. Define Irrigation
2. What are some of the reasons for irrigation?
3. List 5 factors affecting irrigation in agriculture.
4. List 4 importance of irrigation

# WEEK 2

**Geography, SS 3,**

**Topic**: **Lumbering**

**Content**:

1. **Definition of Lumbering**
2. **Favourable factors for lumbering**
3. **Methods of lumbering**
4. **Economic Importance of lumbering**
5. **Problems and solution of lumbering**

**Definition of Lumbering:** It is defined as the felling of economic trees in the forest, which can be used in domestic, industrial or commerce purpose.

**Favourable factors for Lumbering**

1. The presence of dense tropical forest provides ready sources of valuable timber
2. Presence of many economic trees
3. Presence of wide market for timber products within the country
4. High demand for hardwood in foreign counties
5. High demand of timber as fuel
6. Efficient saw mill industries to process the raw timber

**Economic Importance of Lumbering**

1. Lumbering provides foreign exchange through the export of timber to overseas countries
2. Lumbering provides employment for people who are involved in lumbering and related activities
3. Lumbering provides raw materials like timber for timber processing industries
4. Timber is used for the construction of canoe and boats
5. Timber serves as a source of income to government by licenses and permits given to the timber construction

6. Trees in the forest helps to control soil erosion as well as serving as wind breaks

**Problems of Lumbering**

1. Exploitation of timber causes soil erosion
2. It leads to the depletion of natural forests product
3. It results in the high cost of transporting forest products
4. It results in the leaching of soil
5. Deforestation can cause flooding
6. There is problem in high cost of foreign goods
7. It also leads to the disappearance of wild life

**Solutions to Lumbering**

1. Roads should be constructed round lumbering areas for easy transportation of logs
2. Bush fallowing should be discouraged
3. Bush burning should be discouraged
4. Forest guards should be employed to check illegal felling and ensure planting of new trees
5. Afforestation that is the policy of planting of two trees in an area where one tree is cut should be encouraged
6. Re – Afforestation; that is the practice of clearing the bush of bad tree and planning valuable ones to replace them should also be encouraged

**ASSESSMENT**

1. Define Lumbering
2. List 5 favourable factors for lumbering
3. List 5 economic importance of lumbering
4. List 5 problems facing lumbering
5. List 5 solutions for lumbering

# WEEK 3

**Geography, SS 3**

**Topic: Bush Fallowing**

**Content**

1. **Definition**
2. **Favourable conditions necessary for bush fallowing**
3. **Features of bush fallowing**
4. **Types of crops grown**
5. **Advantages and disadvantage of bush fallowing**
6. **Trends in bush fallowing**

**Definition of Bush Fallowing**

**Bush fallowing** is a system of farming cultivation of one piece of land for some years and leaving it for some years with the aim of restoring the fertility to the soil naturally but during this fallow period, the farmer cultivates another piece of land

**Favourable conditions for bush fallowing**

1. Abundance of large area in farm lands
2. Low population in the area
3. Low level of education for farmers
4. Use of crude tools and implements
5. Low level of technology

**Features of bush fallowing**

1. Farming is done on subsistence level
2. It involves the use of crude implements like cutlass and hoe
3. It is common in rural areas with abundant farmlands
4. It involves small holding of farmlands
5. Food crops like yam, maize, cassava etc are grown
6. Farmlands are left to fallow after one or two years of cultivation

7. It uses slash or burn method for land preparation
8. It uses family labour
9. Bush fallowing is practiced where population is very low
10. Pests and disease are not controlled

**Types of crops grown**

a. Root and Tuber crops e.g yam, cassava, cocoyam etc
b. Cereals (grain) crop eg rice, millet, maize, sorghum etc
c. Berry e.g tomato
d. Cash crops e.g cotton, groundnut etc

**Advantages of bush fallowing**

1. It aids the natural restoration of soil nutrients during the fallow period
2. It helps to control plant and diseases and pests
3. It uses cheap family labour
4. It requires low farm input like cutlass and hoe
5. It ensures continuous sustenance during periods of crop failure
6. It check soil erosion, leaching and weed growth
7. It is easy to practice as low technology as required

**Disadvantages of bush fallowing**

1. It leads to wastage of land which could have been used by allowing it to lie fallow
2. It leads to soil erosion when soil is exhausted
3. It destroys valuable forest resources like timber
4. It leas to land fragmentation due to increase in population
5. It does not leads to mechanization of farms

**Currents trends in Bush Fallowing**

1. The population is fast increasing, hence a reduction in the size of farmlands

2. The land is also becoming scarce due to increase in population
3. The practiced of mechanized agriculture now discourages bush fallowing
4. There is no increase in the use of technology
5. There is no intensive use of fertilizers and manures

**ASSESSMENT**

1. Define Bush fallowing
2. List 5 favorable conditions for bush fallowing
3. List 8 features of bush fallowing
4. list 5 advantages and disadvantages of bush fallowing

# WEEK 4

**Geography, SS 3**

**Topic: Fruit farming in Mediterranean region**

**Content**

1. **Definition of fruit farming**
2. **Major areas in fruit farming**
3. **Factors favourable for fruit farming**
4. **Types of fruit produced**
5. **Importance of fruit farming**
6. **Problems of fruit farming**

**Definition of Fruit Farming**

**Fruit farming** is defined as the type of farming which farmers cultivate mainly fruit crops either for domestic, industrial or commercial purposes. It is also regard to as orchad farming

**Major Areas of Fruit Farming**

(a*) In North West Africa*: the areas include Tunisia, Algeria, Libya and Morocco

(b) *In South West*: the areas are mainly around Cape Town, Natal and Orange free

**Factors favourable to fruit farming**

1. The presence of Mediterranean climate favours fruit farming in the regions
2. Presence of a bright, sunny weather with hot, sunny weather with hot, dry summers and wet winters
3. Presence of a dry warm summer temperature of 21oC – 27oC
4. Abundance of rainfall in winter of 25 – 75cm per annum
5. Availability of local and foreign markets consumed the products
6. The use of irrigation system to supplement insufficient rainfall
7. The use of advanced methods of cultivation e.g terracing

**Types of fruit produced**

(a) *In South Africa*, popular fruits grown or produced include vine, grapes, apples, pears, oranges, pineapple, peaches and apricots

(b) *North West Africa*: important fruit produced include oranges, apricots, figs, grapes, olive, lemon, limes and tangerine

**Importance of fruit farming**

1. Fruit farming provides foreign exchange through the export on wine produced from fruits
2. It provides employment to many people
3. It provides raw materials for fruit canning and processing industries e.g for wine industries
4. It provides special wine consumed locally or exported to other countries
5. Fruits produced provide minerals and vitamins which are consumed locally
6. Vita culture, which is the cultivation of grape fruits, promotes specialisation by some people

**Problems of Fruit Farming**

1. Rainfall is unreliable as this affects the growth and production of fruits
2. Improper storage and processing can lead to poor quality of fruit products
3. There is the problem competition in quality with other wines produced in other countries
4. Soil erosion during the summer season affects the production of fruits
5. Inadequate trained personnel on fruit processing

**ASSESSMENT**

1. Define Fruit farming
2. List 5 factors favourable to fruit farming
3. List 5 importance of fruit farming
4. List 5 problems facing fruit farming

# WEEK 5

**Geography, SS 3**

**Topic: Mineral exploitation in Africa (petroleum, gold and copper)**

**Content**

1. Mining of gold
2. Methods of mining
3. Transportation and marketing
4. Economic importance
5. Problems of mining of Gold, Petroleum and copper

**Mining of gold**

Africa leads whole world in the production of gold. South Africa is the largest producer of gold in Africa, followed by Ghana, Zimbabwe and Zaire. Gold is a valuable metallic mineral.

**Methods of Mining Gold**

The method of mining gold is the underground or shaft method. In this vertical method, vertical shafts or holes are dug to reach the ore bearing rocks from where holes are drilled. Explosives are used to fill the holes to shatter the rocks by blasting. The broken rocks are then taken to the surface from where they are taken to the concentrator that filters out the gold which is later sent to the smelters for further refining

**Transportation and Marketing**

In South Africa: Gold is mainly transported to rail and road to processing factory or to Port Elizabeth or East London for export. Major market for gold includes America, Britain and Japan.

**Economic importance of Gold**

1. The mining of this mineral provides jobs for many people
2. Taxes paid by mining companies including export and import duties on the minerals are sources of revenue to the government
3. Essential goods or products are derived from mineral e.g necklace, wristwatch, medals etc
4. Gold provides raw materials for industries
5. Money earned from gold is used to provide social and basic amenities which improve the standard of living of the people
6. The presence of extraction of this mineral enable people to acquire different skills

**Problems of mining gold**

1. Poor transport network
2. Environmental pollution
3. Inadequate capital to exploit the minerals
4. Poor management
5. Fluctuation in world prices of minerals

Petroleum or crude oil is an important fuel mineral produced in Libya, Nigeria, Algeria, Egypt and Gabon

**Methods of mining petroleum**

The method used in mining petroleum is the drilling method. In this method, the underground rock are sampled and tested for traces of oil. When the oil is discovered, a well is sunk to reach it with the aid of drilling rig. The oil is the pumped out mechanically or naturally if the pressure within the oil zone in the soil is high

In the soil, three layers within the oil zone exist (i) natural gas is found on top (ii) petroleum or crude oil is in the middle (iii) water at the bottom

**Transportation and Marketing**

Crude oil is transported mainly by pipelines either to the refineries for refining or processing or t he ports or exports. Major markets include America, Japan, Germany etc

**Importance of Petroleum**

1. The mining of these minerals provides employment
2. Essential goods or products are derived
3. The export of petroleum serves as foreign exchange for the country
4. Raw materials like petroleum are used in the refinery industries
5. Towns like Port Harcourt and Warri are grown due to the presence of petroleum
6. Essential goods or products are derived e.g petroleum provides kerosene, petrol etc

**Problems of mining petroleum**

1. Poor transport network
2. Poor management
3. Inadequate capitals to exploit minerals
4. Environmental pollution
5. Outdated topographical methods are used

**Copper** is another metallic minerals produced by Zambia, South Africa, Zaire and Zimbabwe.

**Methods of mining copper:**

Two methods are used in the mining of copper depending on the depths of mineral

(i) **Open cast method**: in this method explosives are used to remove the over size rock.

- A powerful machine called a dragline is then used to pile the copper washed into heap
- A monitor is then used to direct a strong jet of water towards the heap
- The water washes the soil through a series of sluice boxes
- The copper ore sink to the bottom of the sluice boxes while the water carries the dirt away
- The copper concentrate now formed, is later sent to the factory for smelting.

(ii) **The underground method**: in this method vertical shafts or holes are dug to reach the ore bearing rocks from where holes are drilled. Explosives are used to fill the holes to shatter the rocks by blasting. The broken rocks are taken to the concentration that filters out the copper. The copper is which is later sent to the smelters for further refining.

**Transportation and Marketing**

Copper is transported by rail to the port of Beira in Mozambique through Zimbabwe because Zambia is a land locked country

Roads are also used for the transport of copper to the port of Dar –es- Salaam in Tanzania for export. Major markets for copper includes European countries like Japan and America.

**Importance of Copper**

1. Copper is used in electrical equipment because it is good conductor of electricity
2. It can be used in the production of good alloys
3. The export of copper serves as foreign exchange
4. The presence of extraction of copper enables people to acquire different skills
5. It helps in the production of cobalts

**Problems of copper mining**

1. Inadequate capital to exploit minerals
2. Poor management

3. Fluctuations in world prices of minerals
4. Poor transport
5. Environmental pollution e.g air pollution

**ASSESSMENT**

1. Which country is the largest producing country of gold in Africa?
2. List 5 economic importance of Gold
3. List 5 importance of copper
4. List some of the problems of copper mining
5. What are the two methods of mining copper?

# WEEK 6

**Geography, SS 3**

**Topic: Major Hydro Electric Power projects Africa**

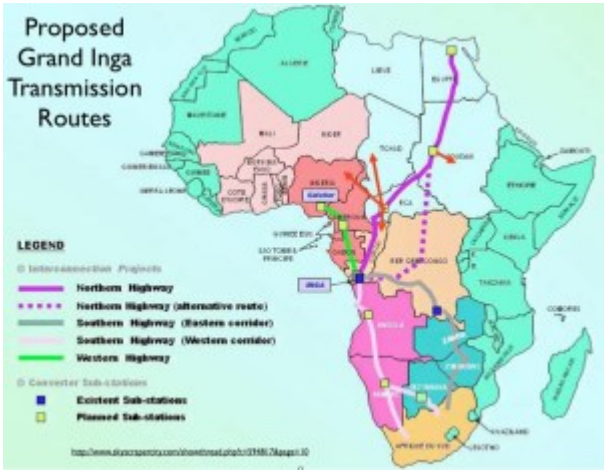
**Content**

1. Definition of Hydro Electric Power
2. Factors which favours the development of hydro electric power (H.E.P)
3. Effects of climate on dam
4. Economic importance or advantages of Dam
5. Problems or disadvantages of Dam

**Definition of Hydro Electric Power (H.E.P)**

It is defined as the generation of electric power (electricity) from water. This is achieved through the damming of rivers and the use of river water to turn device turbines leading to the generation of electricity.

*A dam* is an extensive area occupied by water trapped on a river course




**Factors favourable for the developments of Hydro electric Power (H.E.P) projects in Africa**

1. Presence of waterfalls ensures the development of H.E.P
2. Abundance rainfall in Africa also helps to supply water to river regularly

3. There is high volume of water in rivers which is necessary for H.E.P development , that is presence of big rivers
4. Presence of adequate capital to construct ad maintain dams
5. There is adequate high temperature against freezing water in rivers
6. There is also a firm, narrow rock base for the dam site

**Effects of climate on dam**

1. Inadequate rainfall reduces the volume of water in the rivers or dams
2. Excessive rainfall on the other hand leads to over flow of water from the dams
3. High intensity of rainfall leads to sedimentation of silts in dams
4. Intensive heat also leads to high evaporation of water from dams
5. The nature of bed rocks provide good site for H.E.P construction and prevents easy percolation of water into the soil
6. Intensity heat also leads to high evaporation of water from dams
7. High intensity of rainfall leads to sedimentation of silts in dams

**Economic important of H.E.P (dams)**

1. It promotes irrigation through the water trapped in the dams
2. It helps to generate electricity (H.E.P) for domestic and industrial uses
3. It also supplies water both for domestic and industrial uses
4. It provides food for man e.g crayfish, prawns etc which grows in the dam
5. It provides employment for the people
6. It also helps to improve inland water transportation
7. It provides lakes and water used for fishing
8. It generate revenue for government

**Problems or Disadvantages of Dams**

1. There is low level of technology
2. Inadequate capital to construct and maintain H.E.P
3. Problems created by growth of aquatic weed

4. Occurrence of sand spits and bars
5. Seasonal fluctuation in the volume of the rivers
6. Inadequate capital to construct and maintain H.E.P

**ASSESSMENT**

1. Define Hydro Electric Power
2. What are the factors favourable for developing H.E.P in africa
3. What are the economic importance of H.E.P?
4. What are some of the problems facing H.E.P?

# WEEK 7

**Geography,SS 3**

**Topic**: **International Economic Cooperation of West Africa**

**Content**

1. **Foundation of ECOWAS**
2. **Aims and Objectives of ECOWAS**
3. **Achievement and benefits of ECOWAS**
4. **Problems of ECOWAS**
5. **Solutions to the problem**

**Foundation of Economic Community of West Africa States (ECOWAS)**

The treaty called Lagos treaty formally establishing ECOWAS was signed by in May 28th, 1975 in Lagos by fifteen West Africa Heads of state. Guinea Bissau later joined to make up 16 countries. However, the idea of establishing ECOWAS was conceived by the heads of State of Nigeria and Togo in 1973

**Aims and Objectives of ECOWAS**

1. To promote economic co-operation among member state
2. To promote trade among member of states
3. To promote free movement of people within the sub-region, without visa
4. To ensure cultural cooperation eg in sports, education, arts etc
5. To develop foreign establishment
6. To eventually establish common currency
7. To enlarge natural resources base of member nation

**Achievements or benefits of ECOWAS**

1. The ECOWAS has led to the development of common market for goods produces within the sub-region

2. It has also promoted free movement of people, thereby abolishing the use of visa
3. It has led to cultural integration through free movement of people
4. The free movement of people has led to educational interaction within the sub- region
5. These have promoted cooperation among the member states
6. Unity has been promote within member states
7. Citizens of member states have the right to settle anywhere to the sub region
8. ECOWAS has also helped to link members within the sub – region in promotion of sports

**Problems of ECOWAS**

1. Similarity of products economy limits the volume of trade among member states
2. There are also differences in political ideology among member states
3. Some members do not pay heir dues regularly leading to shortage of funds
4. There is also the problem of transportation and communication within the economic sub-region
5. Differences in currency limit te level of the level of trade among member states
6. There is problem of debt burden and existence of artificial barriers to trade
7. There is the problem of political instability in some member states

**Solutions to the problem**

1. There should be need for the diversification of production economy so that different countries produce different goods
2. There should be trade liberalization among member states
3. Members should be committed in all their activities
4. Member countries should ensure political stability by good governance
5. Members should detach themselves from their colonial masters
6. Common currency should be adopted to facilitate trade within the region

7. There should be free movement of people within sub-region through joint construction of international roads and railway lines

**ASSESSMENT**

1. On what date was the treaty establishing ECOWAS formed?
2. What are the aims and objectives of ECOWAS?
3. List 6 achievements of ECOWAS
4. List 5 problems facing ECOWAS and their solution.

# SS 3

# SECOND TERM NOTES ON GEOGRAPHY

# TABLE OF CONTENT

## SECOND TERM

# WEEK 1

**Geography, SS 3**

**Topic: World population**

**Content:**

1. **Definition**
2. **Concepts of population**
3. **Factors affecting the growth population**

**Definition of Population**

Population is defined as the total number of people living in an area at a particular time.

**Population Concepts**

(a) Over Population: is defined as a situation whereby the population is considered too large for the availability resources. Over population refers to a situation where the population exceeds the available resources of the country

(b) Under Population is the type of population that is less than the available resources of a country. It then means that, the size of population is too small that when combined with the available resources of a country and given the level of existing technology it will secure minimum returns per head

(c) Optimum Population is the number of people that can be supported by the available resources in an area, so as to achieve the highest possible standard of living

(d) Population Density is defined as the number of persons per unit area of land or per square kilometre of land. Population density of a country can be expressed mathematically as:

Population density

Population density = Total population

Land Area

Total Population = Population density x land area

Land area = Total population

Population density
Total Population = Population density x land area
Land area = Total population
Population density
(e) Birth rate (or nationality) of a country refers to the rate at which children are being given birth to in that country. Birth rate may lead to population increase or over population while low birth rate can lead to low population.

**Factors affecting the growth of Population**

Factors that make population grow can be classified broadly into physical and human factors

(a) Physical factors

(i) Climate: areas with favourable climate like U.S.A, China etc do attract population whle areas of unfavourable or harsh climate like desert and Polar Regions d not attract population

(ii) Availability of water: areas where water is available, both human and agricultural purposes like U.S.A, India etc attracts he population

(iii) Relief: lowlands and river valleys like Nile delta, India etc and lowland plateaux attracts population while high mountains and rugged hills like rockies, andes etc repel population

(iv) Soil: fertile soil tends to attracts population like Ganges of India, Java etc. While infertile soil like those in desert and Polar Regions do not

(v) Presence of mineral resources: the presence of mineral resources like coal, iron, petroleum etc does not attract population

(b)Human factors

(i) Agriculture: areas where agriculture is widely practiced like India, China and Java do not attract population

(ii) Religion belief: The Islamic religion believes in polygamy and early marriages, and these promote high population concentration in an area where it is practiced

(iii) Industry: concentration of industries attract people because of job opportunity

(iv) Immigration: the movement of people from one parts of the world to an area due to the availability of employment opportunities in these areas usually leads to

high population concentration
(v) Transportation network: the presence of good transportation network in an area promotes arid facilities migration to increase the population

**ASSESSMENT**

1. Which of the following is a major concern of study about the population of a country?
   (a) Population size and distribution
   (b) Population growth and processes of population change
   (c) Characteristics or qualities of the population
   (d) All the above
2. Which of the following statements about population is correct?
   (a) Population is a dynamic phenomenon
   (b) The number, distribution and composition of population are static
   (c) Population of a country always increases with time
   (d) Migrations do not affect the population of a country
3. The change in the number of inhabitants of a country during a specific period of time is referred to by which of the following terms?
   (a) Density of population
   (b) Age composition
   (c) Population growth
   (d) Absolute population
4. A situation whereby the population is considered too large for the availability resources is known as
   (a) Density of population
   (b) Over population
   (c) Population growth
   (d) Absolute population
5. _____ refers to the rate at which children are being given birth to in a given country
   (a) growth rate
   (b) birth rate

(c) population rate
(d) development rate

**ANSWERS**

1. d
2. a
3. c
4. b
5. b

# WEEK 2

**Geography, SS 3**

**Topic: Irrigation (II) *For previous note on on irrigation***

**Content:**

**Methods of irrigation**

1. *Shaduf method* involves a hand operated lever lifting buckets of water from the river and tipping or dropping them into narrow channels running along the ridges or patches of cultivation
2. *Perennial method* involves the use of dams, barrages and canals. Water is usually stored in the dam reservoir and released during farm seasons. It promotes the growth and cultivation of crops all year round
3. *Basin irrigation* method occurs during flooding of the rivers. When flood occurs, water is held back by building up some embankments or barriers. This water is later released during dry season
4. *Use of pumps* involves the use of generators or pumping machines to get water out from rivers or wells to farmlands. This at times is also referred to s sprinkler irrigation
5. *Manual method* (use of buckets) involves the fetching of water with buckets from rivers and wells and getting them to farmlands

**Crops Cultivated**

a. In the Nile Basin : crops cultivated include cotton, sugar, wheat, maize and rice
b. In the Niger Basin: crops cultivated in the Niger basin include groundnut, maize, guinea corn, onions sugar cane etc

**Problems of irrigation**

1. The construction of dams has led to the displacement of people from their original homes and lands. This leads to high cost of resettlement

2. Lack of technical know- how on the establishment and operations of irrigation scheme
3. Irrigation equipments is expensive to purchase and maintain
4. Excessive dissolution of salts irrigated area or increase in salinity prevents proper growths of crops
5. Disaster can occur as a result of flooding
6. It can result in growth of water weeds
7. Most dams may collapse

**ASSESSMENT**

1. _____ method of irrigation involves a hand operated lever lifting buckets of water from the river and tipping them into narrow channels
   (a) shaduf
   (b) perennial
   (c) basin
   (d) use of pumps
2. The method of irrigation that involves holding back water by building up some embankments or barriers is
   (a) shaduf
   (b) perennial
   (c) basin
   (d) use of pumps
3. _____ method of irrigation involves the use of generators or pumping machines to get water out from rivers or wells to farmlands
   (a) shaduf
   (b) perennial
   (c) basin
   (d) use of pumps
4. The method of irrigation that usually involves storing water in dams and reservoirs which is released during farm seasons is
   (a) shaduf
   (b) perennial

(c) basin
(d) use of pumps

5. One of these is not a problem associated with irrigation
   (a) disaster can occur as a result of flooding
   (b) It can result in growth of water weeds
   (c) Most dams may collapse
   (d) they are very cheap to set up

**ANSWERS**

1. a
2. c
3. d
4. b
5. d

# Week 2

**Geography, SS 3**

**Topic: World Population (II) For previous lesson;**

**see: *https://passnownow.com/namaste-lesson/world-population/***

**Content:**

1. Pattern of world population
2. Problems of rapid growth population growth
3. Advantages and Disadvantages of low and high densities

Pattern of world population distribution is distributed into three; Which are:

(a) The very densely populated parts of the world: the most densely populated areas of the world include

(i) Industrial North – West Europe: this include countries like Great Britain, Franze, German, Denmark, Belgium. These areas are highly industrialized due to the presence of coal and iron

(ii) Industrial North – Eastern U.S.A: this is the great industrial belt of the United States and Canada stretching from the shore of the Great lakes though Pittsburg to New York which is very rich in Coal and iron

(iii) Agricultural Monsoon Asia: This includes populous countries like China, India, Japan, Pakistan, Indonesia etc. This area of largest population concentration of the world, known for fertile soils, warm climate and abundant rainfall which promote agriculture.

(iv) The Nile Valley and Delta: This essentially Eygpt. It is an area within the sahara desert which through irrigation has converted a desert into an area of high agricultural activities and consequently high population

(b) The moderately populated parts of the world

(i) These include areas of cool temperate forest Europe, Canada and Asia.

(ii) The temperate and tropical glass land of Southern continents

(iii) Agricultural U.S.A

(iv) Mediterranean Europe

(v) Africa
(vi) Most part of South Asia
(c) The very sparsely populated pat of the world include:
(i) The cold polar lands of arctic and Antarica which are inhabited due to cold weather
(ii) The Canadian and Eurasian tundra and Greenland also due to cold weather
(iii) The hot deserts of the world like Kalahari, the Atacama, the Sahara etc. Due to the hot weather and dryness no rainfall
(iv) The dense tropical rain forest like the Amazon basin (South America), Congo (Zaire) basin (Central Africa). Both are uninhabited jungles

**Problems of rapid population growth**

1. High rate of infant mortality is certain in a growing population because of social pressure
2. High mobility will also result in a rapidly growing population
3. Rapid population growth is always accompanied by food shortages
4. The pressure on the low lean social services may led to low life expectancy
5. Malnutrition and diseases
6. Overpopulation always breeds vices such as armed robbery, prostitution etc
7. Inflation is bound to occur, in a situation of growing population
8. Over crowding: growing population always leads to overcrowding

**Advantages of High Population Densities**

1. High population provides large labour force for industries
2. High population is a source of large market for the goods produced by the industries
3. With large population concentration in an area, there is need for effectiveness planning so that the town can function properly
4. Many people are brought together and this can promote unity among the diverse people in the country
5. Manpower is exported to these regions to enable them earn foreign exchange
6. Organized army in such area is possible

**Disadvantages of high population densities**

1. Natural resources like fertile farmlands, become over exploited where there is high population growth
2. Areas of high population densities are usually associated with high crime rate like armed robbery, car snatcher, hired assassin etc. These may be due to lack of jobs; hence people resort in crimes
3. Areas of high population densities usually do not have enough jobs for the ever increasing influx of people. This leads to unemployment and underemployment
4. High population concentration leads to scarce or poor accommodation as the house available may not be enough for the high population
5. Many people travel on roads at the same time and ; this leads to traffic congestion most of the time
6. Poor housing, pressure on natural resources and social facilities do lead to environmental pollution

**Advantages of low population densities**

1. There will be abundance of resources in areas where there and resource endowment
2. The rate of armed robbery, car snatching etc is generally reduced
3. There is no traffic congestion in areas of low population
4. Goods and agriculture products are cheap and easily available due to low population

**Disadvantages of low population densities**

1. Pipe borne water, electricity etc are grossly under utilized
2. Defence maybe difficult in case of attack
3. As a result of few number of people, the level of revenue may be low
4. There may be inadequate market for manufactured goods

**ASSESSMENT**

1. Great Britain, France, German, Denmark, Belgium areas are highly industrialized due to the presence of

(a) petroleum
(b) gold
(c) bitumen
(d) coal and iron

2. Pick out the odd one
   (a) China
   (b) India
   (c) Japan
   (d) Egypt
3. Natural resources like fertile farmlands, become over exploited where there is high
   (a) population growth
   (b) birth rate
   (c) death rate
   (d) ageing population
4. One of these is not an advatnage of low population
   (a) There will be abundance of resources in areas where there and resource endowment
   (b) The rate of armed robbery, car snatching etc is generally reduced
   (c) There is no traffic congestion in areas of low population
   (d) Pipe borne water, electricity etc are grossly under utilized
5. One of these is not a moderately populated area
   (a) Agricultural U.S.A
   (b) Mediterranean Europe
   (c) Atacama
   (d) Most part of South Asia

**ANSWERS**

1. d
2. d
3. d
4. d

5. c

# WEEK 3

**Geography, SS 3**

**Topic: Settlement**

**Content:**

1. Meaning of Settlement
2. Favourable condition for siting a settlement
3. Factors affecting population growth
4. Types of settlement
5. Function of rural and urban settlement

**Meaning of Settlement**

*Settlemen*t is a collection of buildings with people living in them. It is centre of human activities and it consists of houses, communication network, roads, tracks, railways etc. It could be one house, a village, a town or a city.

**Favourable conditions for siting a settlement**

1. There must be adequate and dependable water supply for man use
2. The soil must be fertile to produce agricultural activities
3. Such lands must be lowland and well drained for easy erection of buildings
4. The presence of good roads, railways, airport etc
5. The area should be well protected against invading enemies

**Factors affecting the growth of settlement**

1. People are likely to settle in areas that are easily accessible by roads, rails etc nd these tend to increase the growth of settlement
2. Absence of both natural and man made disasters in a place tends to attracts people to such areas, hence the growth of such settlement
3. Favourable climate also tends to attract people to an area which equally leads to the growth of a settlement

4. The presence of low relief or low lands favours settlement unlike rugged relief and highlands which repel settlement of people
5. People also settled in places which are seats of government as social amenities and other facilities are often provided in such areas

**Types of settlement**

There are two types of settlements. These are (a) Rural settlements (b) Urban settlements

A. **Rural Settlement**

I. A rural settlement is a relatively small area with socially homogenous people that know one another
II. It could be nucleated, dispersed or linear
III. They have people with the same cultural background and language
IV. They have few social amenities and the life style is important
V. They are normally involved in primary activities such as farming, fishing and lumbering

**Types of rural settlement**

There are three types of rural settlement. These are:

1. *Homestead*: this is one family residence. These are disperse settlement which are separated from one another by bushes or by geographical barriers and contain few people with little opportunity for social gathering
2. *Hamlet*: this settlement may be nucleated with few houses, usually less than hundred with many people living in them
3. *Village*: this is a large nucleated rural settlement formed from the combination of several hamlets. It contains several hundred or thousands of people with limited services

**Functions of rural settlement**

1. Agriculture is usually the main occupation of rural dwellers, leading o the production of abundant food

2. Most rural areas with forest engage in lumbering activities
3. There are few commercial activities, mostly in petty trades, using their small shops and local markets
4. Most rural areas with rivers are also involved in fishing
5. Rural areas with churches and mosques are involved in religious activities.

B. **Urban Settlement**

An urban settlement is relatively large, densely populated settlement with socially heterogeneous people who do not know one another.

(ii) They are usually compact in nature
(iii) They have nucleated settlement
(iv) There is presence of developed infrastructure
(v) They are usually well built areas
(vi) They have centres of innovation and ideas
(vii) They are made of many building; thousands of people live in them

**Types of urban settlement**

There are four main types of urban settlement and these are:

1. Town: it has several thousands of people
2. City: this is a large town with greater number of people than town
3. Conurbation: this is made up of several towns joined together but, each town still maintains its identity
4. Megalopolis: this is the largest type of urban settlement made up of large cities with several millions of people

**Functions of urban settlement**

1. Urban centres are involved in the manufacturing of finished goods
2. The presence of markets and banks enables urban dwellers t engage in commercial activities
3. Most urban centres are the seats of government

4. Urban settlements are centres for the establishment of universities, polytechnic, schools, churches, mosques and hotels
5. Where minerals are present in some towns, the inhabitant tend to perform mining function

**ASSESSMENT**

1. Considering types of settlement, people of urban settlement are involved in different activities that includes
   (a) business and manufacturing
   (b) fishing and farming
   (c) mining
   (d) forestry
2. River Nile is located in
   (a) Bangkok
   (b) Cairo
   (c) Cologne
   (d) London
3. _____ is a collection of buildings with people living in them
   (a) street
   (b) area
   (c) local government
   (d) settlement
4. These is not an example of a rural settlement
   (a) urban
   (b) village
   (c) hamlet
   (d) homestead
5. A _____ is the largest type of urban settlement made up of large cities with several millions of people
   (a) town
   (b) city

(c) conurbation
(d)megalopois

**ANSWERS**

1. a
2. b
3. d
4. a
5. d

# WEEK 4

**Geography, SS 3**

**Topic**: **Environmental Interaction**

**Content:**

1. Definition of Environmental Interaction
2. Spheres of the environment
3. Definition of ecosystem
4. Environmental balance
5. Food chains and Food webs
6. Interaction within the natural environment
7. Effects of both natural and human interaction

Definition of Environment and Environmental Interaction

Environment is defined as the total surrounding or medium of any organism in a given area. This include physical surroundings, climatic factors and other living organisms in the surroundings.

Human Environmental Interactions can be defined as interactions between the human social system and (the "rest" of) the ecosystem.

**Spheres of the environment**

The environment, which is the earth, is grouped into four sphere and these are

- Lithosphere: This is the solid portion of the environment which contain rocks, sand, soil minerals etc
- Hydrosphere: This is the liquid part of the environment like rivers, lakes and oceans
- Atmosphere: This is the gaseous portion of the environment where gases like oxygen, nitrogen, carbon dioxide etc are found
- Biosphere: This is the portion of the environment where plants and animals are found.

**Definition of Ecosystem**

*Ecosystem* is defined as the community of plants and animals living together in harmony an interacting with their physical environment. Ecosystem can also be defined s the relationship between organisms (plants and animals) and its physical environment.

**Components of Ecosystem**

**There are two types of ecosystem which include**:

(a) *Abiotic* component: this is the non living component of the ecosystem. It includes the factors or elements like soil, water, gases, sunlight etc

(b) *Biotic* component: this is the living component of the ecosystem. It includes plants and animals. The biotic component can be grouped into three sub – classes. These are:

(i) *Autotrophs:* these are called procedures. These green plants which can manufacture their own food from simple inorganic substances through the process of photosynthesis

(ii) *Heterotroph*s: these are also called primary and secondary consumers. These are organisms which cannot manufacture their own food e.g man, parasites, saprophytes etc

(iii) Decomposers: these are micro organisms that decompose dead organic matter in order to release nutrient required by the producers to prepare their food e.g fungi and bacteria

**Meaning of Environmental Balance**

*Environmental Balance* refers to the way of recycling, matter and the flow of energy within an ecosystem in order to ensure continuous supply or availability

Environmental balance is achieved through the following:

- Hydrological (water) cycle: Hydrological (water) cycle is the exchange or circulation of water between the oceans, the atmosphere and the land. The atmosphere receives the water through evaporation from ocean, rivers and from land.

- Carbon cycle: *Carbon cycle* involves the series of processes which contribute to the circulation of carbon in nature. Carbon is circulated in form of carbondioxide
- Mineral nutrient cycle: *Mineral nutrient cycle* refers circulation of mineral nutrient between plants and the soil. These mineral nutrient include mineral, calcium, iron, sodium, sulphur, potassium etc:
- Nitrogen cycle: *Nitrogen cycle* involves the complex process by which nitrogen is circulated between the atmosphere, soil, pant and animals. Plant can only use nitrogen in form of nitrate
- Food chain and food web

**Food chain tropical level and food web**

**Food chain** is defined as the linkage of a series of organisms in a habitat through the flow of energy of consumer levels and their nutritional sequence. Food chain also involves the transfer in which each organism feeds on one before it in a sequence. Example of food chain is as follow

Grass Sheep Man

Grass Grasshopper Toad Snake Hawk

Tropical level refers to the feeding stages found in a food chain example

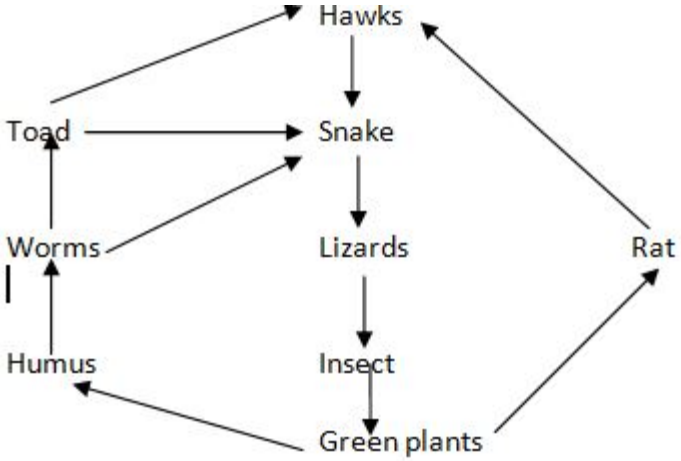
| Grass | Grasshopper | Toad | Snake | Hawk |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |

The first in each group is usually called autotrophs (or producer) e.g grass, while the next e.g sheep is called the primary consumer while the last e.g man is called the secondary consumer.

The trophic level refers to the feeding stages found in a food chain

**Food web**

Food web is defined as the complex feeding relationship of an organisms made up of many interrelated food chains. It involves a wider range of energy transfer. The food web consist of five different food chains




**ASSESSMENT**

1. _____ is defined as the total surrounding or medium of any organism in a given area
   (a) food web
   (b) environment
   (c) atmosphere
   (d) climate
2. The solid portion of the environment which contain rocks, sand, soil minerals is known as the
   (a) lithosphere
   (b) hydrosphere
   (c) atmosphere
   (d) biosphere
3. The interactions between the human social system and (the "rest" of) the ecosystem is known as
   (a) environmental support
   (b) environmental care
   (c) environmental interaction
   (d) environmental web
4. _____ are organisms that cannot manufacture their own food
   (a) autotrophs

(b) decomposers
(c) heterotrophs
(d) biotrophs

5. The linkage of a series of organisms in a habitat through the flow of energy of consumer levels and their nutritional sequence is
   (a) food chain
   (b) food necklace
   (c) food watch
   (d) food brace

**ANSWERS**

1. b
2. a
3. c
4. d
5. a

# WEEK 5

**Geography, SS 3**

**Topic: Environmental interventions**

**Content:**

1. **Definitions of environmental Intervention**
2. **Types of environmental intervention**
3. **Intervention within the natural environment**
4. **Effects of both natural and human interaction**

**Definition of Environmental Intervention**

**Environmental Intervention** refers to the forces of nature and the activities of man that change the natural existence of the components of ecosystem

**Types of environmental intervention**

There are two types of environmental interventions in our environment. These are natural and human interventions

(a) ***Natural intervention;*** It is caused by a number of natural process which include:

(i) Desert encroachment (ii) Vulcanism

(iii) Sea level changes (iv) Earthquakes

(v) Tectonic movement (vi) Climatic changes

(vii) Drought (viii) Hurricane (ix) Flooding

**The effects of Natural intervention**

- New features different from those initially there are produced e.g volcanism creates volcanic mountain
- Changes in the landscape of the area
- Raising and lowering beaches
- Widespread destruction or extinction of aquatic life
- Displacements of animals

- Displacement of man

(b) ***Human intervention;*** It include the following

(i) Deforestation (ii) Land reclamation

(iii) Pollution (iv) Farm activities

(v) Mining/Quarrying (vi) Construction

(vii) Cloud seeing (viii) Fishing

(ix) Hunting (x) Industrialization

(xi) Urbanization (xii) Grazing

*Deforestatio*n causes increased run off and flooding. It leads to destruction of natural habitats. Deforestation leads to energy balance, erosion and reduction in rainfall

*Land reclamation* leads to less rainfall and changes in drainage pattern. Land reclamation reduces amount of soil moisture and loss of some organisms and plants

*Pollution* (soil, atmospheric and noise): atmospheric and water pollution leads to the loss of plants and animal life. Oil spillage and water pollution alter the types of plant that can grow in an area. Land pollution exposes the soil surface and also changes the chemical composition of soil.

*Grazing*: overgrazing leads to the reduction of agricultural land. It depletes the vegetative cover of the soil. Grazing leads to the compaction through excessive trampling by animals and also destroys the soil structure and causes soil erosion.

*Farming activities* causes the destruction of weeds and burns the organic matter content of the soil. It causes the destruction of pests and natural habitat.

*Mining* causes pollution of the land, surface and underground water also causes reduction of farm lands. Mining also leads to the disintegration of settlement

Urbanization causes reduction in agricultural land. Wastes produced by urbanization produce pollution and can lead to loss of some organisms and plants.

Construction destroys the soil structure and causes soil erosion. Construction can also kill plants and animals.

**ASSESSMENT**

1. ____ refers to the forces of nature and the activities of man that change the natural existence of the components of ecosystem
   (a) environmental occupation
   (b) environmental sanitation
   (c) environmental intervention
   (d) environmental integration
2. Natural intervention can be caused y the following except
   (a) Desert encroachment
   (b) Vulcanism
   (c) Deforestation
   (d) Sea level changes
3. _____ exposes the soil surface and also changes the chemical composition of soil.
   (a) grazing
   (b) land pollution
   (c) land reclamation
   (d) deforestation
4. One of these is not a human intervention
   (a) fishing
   (b) industralization
   (c) hunting
   (d) drought
5. One of these is not true of grazing
   (a) reduction of agricultural land
   (b) afforestation
   (c) compaction
   (d) cause of soil erosion

**ANSWERS**

1. c
2. c
3. b

4. d
5. b

# WEEK 6

**Geography, SS 3**

**Topic**: **World Trade**

**Content**:

1. Definition of Trade
2. Division of International trade
3. Importance of international trade
4. Factors affecting international trade
5. Major commodities involved in international trade

**Definition of Trade**

*Trade* refers to buying and selling or exchange of goods and services between one region and another in the same country or between one country and another

**Division of international trade**

(a) Import trade involves the buying of goods and services from another country into your own country

(b) Export trade involve the selling of goods and services produced in one's country to another country

**Importance of international trade**

1. International cooperation is fostered between two nations which are involved in international trade
2. New products that would otherwise have been unavailable in a country are provide
3. Jobs are provided through activities involved in the exportation from the sales or export of their goods to another country
4. Export goods or products are easily stimulated through increased production in the source region
5. Through international trade, skills and expertise are exchange between nations

**Factors affecting international trade**

1. The difference in climate favours the growth of different crops for export
2. The higher the differences in production of agricultural goods, the greater the volume of trade between two countries and vice versa
3. The need to earn foreign exchange helps to increase the volume of trade between nations
4. The higher the difference between prices of goods, the greater the volume of trade between two countries and vice versa
5. The higher the import duties imposed goods and services, the lesser the goods that will be imported and vice versa

**Major commodities involved in international trade**

A. ***Nigeria's export***: Nigeria usually exports agricultural goods and minerals products to her foreign partners

I. Mineral products: e.g petroleum or crude oil, tin, columbite etc

II. Agricultural goods: .g cocoa, groundnut, palm kernel, rubber, timber, cotton, hides and skin.

B. **Nigeria's imports**

III. Manufactured goods: Nigeria usually imports manufacture goods e.g computers, motor vehicles, tractors and machines etc

**Factors which may limit international trade**

1. Inadequate production of goods, either by importing or exporting country can limit
2. Their will be low sales when the other country's demand for products is low
3. High tariff charged by certain country can affect the rate of import or exports of goods to that country

**ASSESSMENT**

1. _____ buying and selling or exchange of goods and services between one region and another in the same country or between one country and another
   (a) trade
   (b) exchange
   (c) import
   (d) export
2. Export trade involves the buying of goods and services from another country into your own country
   (a) true
   (b) false
3. International cooperation is fostered between two nations which are involved in international trade
   (a) true
   (b) false

**ANSWERS**

1. a
2. b
3. a

# WEEK 7

**Geography, SS 3**

**Topic: Map work**

**Content:**

1. Contour representation of land form
2. Types of slope
3. Gradient and vertical exaggeration
4. Cross section drawing and intervisibility

**Contour representation of land form**

The following are some common landforms or relief features that can be represented on map by using contour lines.

1. **Valleys:** They are lowland between two highlands. Valleys are represented by V- shaped contour lines with the apex of the V- shape pointing towards the highland. When a valley contains water, it is called a river valley but when it contains no water, it is called a dry valley
2. **Spurs:** They are projection of highlands into low ground. That is the V-shape points to the lowland spurs separate one valley from another and the contour numbering decreases outward.
3. **Conical Hill:** They are usually circular in shape and become smaller and smaller towards the centre
4. **Round top:** This hill are contours showing round top hills that are circular but do not taper to a points. The inner most circle of contour is fairly large
5. **Isolated Hill:** This is a hill which stands apart or is far removed from other hills or highlands. It may either be round or conical in shape
6. **Knol**l: This is an isolated peak of few metres high, associated with a highland.
7. **Ridge:** This is a strip of highland which is elongated and narrow. He contour run almost parallel to each other
8. **Col or Saddle:** This is a stretch of lowland which separates two highland areas on a ridge, two peaks are usually separated by a col. There is no much difference

between a cola and a saddle. The only difference is that the saddle is wider than the col

9. **Pass or Gap:** This is also a col but is found at lower parts of highland. A pass separates two highlands but at lower level. A pass is always a col, but a col is not always a pass. A col becomes a pass when it is used or likely to be used as a route way, either for footpath, road or railway
10. **Plateau:** It is an extensive and broad highland area with a comparatively level surface. Plateaux usually have a steep side, if a plateau is cut off by a number of river valleys; most of the original level surface is removed by erosion, leaving behind flat top peaks. Such plateau is **dissected plateau**
11. **Escarpment/ Cuesta**: Escarpment refers to steep slope or the precipitous face of a ridge. The contour lines are closely packed.
12. **Cuesta***:* It refers to a hill with a steep slope(dip) on one side and a gentle slope (scarp) on the other. Therefore dip + scarp = Cuesta
13. **Gorge:** It is a steep sided valley with a river or stream.
14. **Watershed** is a highlands area which separates the headstream of rivers flowing in different directions but rising from the same mountainous source
15. **Undulating Lowland** gently rises and falls with low level is usually shown by irregular and well spaced contours
16. **Flood Plain** is lowland, bordering a river, formed by deposits of sediments carried down by a river. It is generally referred to as area liable to flooding; it is very good for the cultivation of swamp rice

**Types of slopes**

The nature of slope in any land surfaces can also be represented by contour lines. The various type include:

1. Even or uniform slope: the contour lines in these slope is uniformly spaced. It means, the degree of steepness is the same throughout the slopes
2. Gentle slope: this occurs when the contour lines are far apart or widely spaced
3. Steep slope: this occur when the contour lines are very close to one another or they are closely packed

4. Concave slope: this is the combination of both steep and gentle slopes. When asceding concave slope, one passes the area which has gentle slope first before reaching the area with a steep slope. Contour lines are widely spread at the lower level and become closely packed at the higher level. Visibility of both ends is possible concave slope.
5. Convex slope: this is the opposite of concave slope. The contour lines are closely packed together at lower level. Visibility is not possible

**Calculation of gradients and vertical exaggeration**

A. Gradient: the gradient of an area is the slope of ground expressed as a ration between the heights and the lengths of the ground slopes are of various steepness.

Formula for calculating gradient = Differences in height (metres) or Vertical interval (V.I)

Horizontal distance (metres) Horizontal Equivalent (H.E)

B. Vertical Exaggeration is defined as the number of time vertical heights are exaggerated or enlarged in relation to the horizontal distances.

Formula for calculating vertical exaggeration = Horizontal scale

Vertical scale

Cross section drawing and intervisibility

C. **Cross section or relief** : It is defined as the practice whereby relief shown by contours on map are drawn to bring out real appearance of such relief as it is on the ground. Cross section shows the nature of the relief that is represented by contour lines at a glance.
D. **Intervisibiity** is defined as a way of knowing whether one point or place on the map can be seen from another point o place on the same map within the limit is of physical sights cross section drawing can help to know if two points on a map are intervisible or not.

**ASSESSMENT**

1. ___ refers to steep slope or the precipitous face of a ridge
   (a) knoll

(b) enscarpment
(c) plateau
(d) gorge

2. An extensive and broad highland area with a comparatively level surface is known as
   (a) knoll
   (b) enscarpment
   (c) plateau
   (d) gorge
3. An isolated peak of few metres high, associated with a highland is a/an
   (a) knoll
   (b) enscarpment
   (c) plateau
   (d) gorge
4. _____ occur when the contour lines are very close to one another or they are closely packed
   (a) gentle slope
   (b) steep slope
   (c) concave slope
   (d) convex slope
5. _____ is defined as a way of knowing whether one point or place on the map can be seen from another point or place on the same map
   (a) cross section
   (b) watershed
   (c) intervisibility
   (d) dual visibility

**ANSWERS**

1. b
2. c
3. a
4. b

5. c

# WEEK 8

**Geography, SS 3**

**Topic**: **Interpretation of topographical maps**

**Content:**

1. Important features that need interpretation
2. Relief (procedures for interpreting relief)
3. Drainage (procedures for interpreting drainage)
4. Settlement (procedures for interpreting settlement)

**Important features that need interpretation include relief, drainage, settlement, communication and land use relief**

**Procedures for interpreting relief**

- Use contour lines, spot heights or trigonometrical station to note the highest point and the lowest point on the land. The highest point is found on the highest contour lines while the lowest point i found on the lowland
- Note the preparation of the land occupied by highlands and low lands
- Note the specific land form and relief whether a ridge, hill, plateau, knoll, plain
- Note the location or direction of these relief features like plateau, hill, ridge, etc on map
- Note the heights of the lowlands above the sea level and whether they are flat or plains of undulating
- Note if the hills and plateaux are dissected or not

**Drainage**

**Procedures for interpreting drainage**

- Find out the important rivers on the map
- Note the direction of flow of rivers
- Find out the pattern of drainage either on the whole part of the map
- Look out for watershed which separate drainage system

- Note if there are marshy areas which are usually poor drained and are liable to flooding
- Note if there are other water bodies like lakes, oceans, boreholes and identify their locations on the map
- Do the rivers have delta or estuary

**Settlement**

**Procedures for interpreting settlement**

- Find out the type of settlement is rural or urban. Urban settlement are found in cities and towns with compacted buildings, presence of good roads and Basic infrastructure.
- Note the pattern of settlement whether linear, nucleated or dispersed.
- Relate settlement of relief: That is i.e are the settlements located on highlands ,plateaux,ridge or on lowlands and give reasons for such settlement
- Relate settlement to drainage : That is the settlement along the river contours far from rivers,near a lake ocean or far from marshy areas and give reasons for such settlement.
- Relate settlement to communication: Is the settlement linear, i.e along the road ,railway far from the airport or along a navigable river or lake?
- Describe also areas which are not settled and give reasons why they are uninhabitable

**Communication**

**Procedures for interpreting communication**

- Find out the means of communication: That is by road ,railway,footpath,air(if there re airports) and rivers (if there are navigable rivers or lakes)
- Note from conventional sign: If the roads are primary, secondary or minor roads
- Relate communication to relief: Do the roads,railways or footpaths avoid steep slopes, passes through highlands, ridge or are they located on the lowlands?, Are there passes etc?

- Relate communication to settlement: The are presence of major road is an indication of commercial or industrial town while minor roads and footpaths are common features of rural settlements
- Note important natural and manmade features like mountains, lakes, ridge, boreholes, factories which one may across when travelling from one area to another

**Land Use**

Land use refers to the various ways in which man uses land. In other word , the use of the land by man is a reflection of the functions of that settlement.
The useful means for interpreting the land use, function or importance of a particular settlement

| Features from conventional signs on a map | Uses of land or function of settlement |
|---|---|
| Presence of building | Residential |
| Presence of mineral resources | Mining |
| Presence of forest | Farming and lumbering |
| Presence of grasses | Livestock and farming |
| Presence of rivers | Fishing and canoe building |
| Presence of prison, court, police station | Administration |
| Presence of banks and market | Commercial |
| Presence of hotel and stadium | Social functions |
| Presence of schools | Educational |
| Presence of marshy area | Swamp rice cultivation |
| Presence of hospital | Health function |
| Presence of industries | Industrial function |

**ASSESSMENT**

1. On a topographic map, the closer the contour lines the
   (a) lower the elevation
   (b) gentler the slope
   (c) flatter the land surface
   (d) steeper the slope
2. A scale of 1:1000 on a topo map indicates that
   (a) 1 unit on the map equals 1000 units in the real world
   (b) the map represents the entire Earth
   (c) 1 unit on the map is greater than 1 unit in the real world
   (d) 1000 units on the map equals 1 unit in the real world
3. If the contour interval on a topo map is 10 meters, and one contour line is labeled 50 m
   (a) the adjacent contour line would represent 60 m in elevation
   (b) the adjacent contour line would represent 20 m in elevation
   (c) the adjacent contour line would represent 150 m in elevation
   (d) the adjacent contour line would represent 10 m in elevation
4. When you observe contour lines with hachures on a topographic map, this indicates that
   (a) the elevation of this area is increasing
   (b) a depression is located in this part of the map
   (c) you are entering a mountainous area
   (d) you have crossed a stream
5. How are streams indicated on a topographic map?
   (a) by contour lines that form v's which point upstream
   (b) by contour lines that form u's which point upstream
   (c) by contour lines that form v's which point downstream
   (d) by contour lines that form u's which point upstream

**ANSWERS**

1. d
2. a
3. a
4. b
5. a