Q1(a) Define Geography, Economic geography and Commercial Geography?

Ans. **GEOGRAPHY:**

The word geography is a combination of two Greek words "geo" means the earth and "graphy" means description. So, geography means "description of the earth".

Main branches of Geography:

i. Physical Geography.
ii. Mathematical Geography.
iii. Practical Geography.
iv. Economic and Commercial Geography.
v. Human Geography.
vi. Environmental Geography

Economic Geography:

Economic geography is the study of the economic activities of man in relation to the environment. It shows how the economic activities of man, so far as they rotate to production, distribution and exchange of commodities are influenced by his physical environment.

Commercial Geography:

Commercial geography has been defined as the subject which helps the traders to learn the places and conditions of production of production of commodities of trade, where there is good market for selling these commodities and how to arrange for the convenient transport of these commodities.

Q1(b) Describe the importance of Economic and commercial geography:

Ans. **Importance of Economic and Commercial geography:**

i. **Advantages for students:**
With the study of economic and commercial geography students can become successful businessmen, industrialists, traders, Landlords and bankers of the future.

ii. **Advantages for Landlords:**
With the help of study of economic and commercial geography. Landlords can know about the various kinds of seeds, methods, crops and products.

iii. **Advantages for Industrialists:**
Economic and commercial geography is also important for industrialists with the help of this. An industrialist can hire cheap labour, raw material for his industry. He is also in search of new markets for this product.

iv. **Advantages for Traders:**
With the help of economic and commercial geography, a trader is in this position to come to know about the various sources of world. Due to this, a trader come to know from where he can achieve his goal.

v. **Advantages for Bankers:**
Capitalists and bankers invest capital in various countries, with the study of economic and commercial geography, bankers are in this position to come to know the sources of different countries.

vi. **Advantages for Rulers:**

Rulers can make effective planning in the light of developed countries and make arrangement to utilize the available agricultural, industrial and mineral sources after get studying of economic and commercial geography.

vii. **Solution of Poverty and Unemployment:**
With the help of economic and commercial geography we are in this position to study the sources and distribution of population.

viii. **Import and Export Trade:**
Study of economic and commercial geography is most important for import and export trade.

Q **Define commercial activities? Describe briefly its kind?**
What are Privacy, Secondary, Tertiary economics activities?

Ans. **Classification of Economic Activities or Occupation of Man:**
The economic activities of man can be classified into three main divisions.

i. Primary activities.
ii. Secondary activities.
iii. Tertiary activities.

1. **Primary activities:**
Primary activities are those activities in which man works with nature and collects the materials found in nature in their original forms. For example, in agriculture man sows the seed but nature germinates it. Man reaps the harvest rewarded by nature. Primary activities are the following:

(a) Hunting
(b) Fishing
(c) Animal keeping
(d) Agriculture
(e) Mining
(f) Lumbering

(a) **Hunting:**
Hunting means trapping and killing of animals and birds. It is one of the oldest occupations of man. In the primitive societies. It was mostly undertaken on substance basis but in modern times it has become a commercial economic activity. In many countries the importance of this activity is decreasing because of little availability of land suitable for wild animals.

(b) **Fishing:**
Fishing ranks with hunting as one of the oldest occupation of man. Fishing industry provides food for man and gives rise to the number of industries like fish canning, extraction of fish oil, fertilizers, boat and vessel construction and fish nets.

(c) **Animal keeping or Rearing:**
Animals are domesticated for food, clothing and transport. Important domestic animals cattle, sheep, pig, horse, ass goat, camel and elephant. The animals give us milk and meat to eat, hide and skin to wear, wool and hair to protect ourselves from cold and bones and horns for manufactures of various articles. Therefore animal keeping or rearing is also an important occupation of man.

(d) **Agriculture:**

Agriculture implies a coconscious an determined effort on the part of man to utilize the soil in order to produce crops. In other primary activities, nature provided certain things man simply exploited them, the dominated part was natures. But in agriculture, dominant part played is man's. the agriculture activities may be undertaken to provide for local need s or requirements or to provide for other also.

(e) Mining:

Mining is an art of extracting the minerals from the womb of the earth for the use of mankind. It is an important economic activity which provides raw materials for most of the basic needs of man like tools, implements, weapon etc. The most important minerals for man's use are iron-ore, coal, petroleum, gas, copper, aluminium, lead, salt, sulphur, manganese, mica and lime atone.

(f) Lumbering of Forestry:

Forestry provides a means of livelihood to a comparatively small population in the world. From times immemorial, forests have enabled man to keep himself warm by burning wood. He also cooked his food on wood fire. For building cottages also forest wood was utilized. But in modern times, forests are being cut in densely populated parts of the world to provide land for agriculture and industries.

2. Secondary activities:

In secondary activities man moulds and charges the shape of the primary products in order make them more describe for human use. This is the function that manufacturing performs. Manufacturing is a wide term and includes from cooking of meal to the manufacture of complex machinery. As a matter of fact very few materials are used in raw state. More of the products of primary activities are changed into useful articles before consumption. For example cotton, ginned, spun and woven into cloth in textile mills before it can be used by man. The use of service and technology has made modern manufacturing more and more complex. Manufacturing industries are two kinds **(a)** ***cottage industry*** **(b)** ***factory industry***. Cottage industry is carried on generally in the rural areas and factory industry is formed in the urban areas. Manufacturing industries yield consumer goods like textiles, canned fruits, meat products which have relatively short life and capital goods like tools, implements, machines and other equipments which are meant for increasing further production of goods and commodities. Manufacturing is an important occupation of a large number of people of U. K, U.S.A , Japan and Germany and many other countries of the world.

3. Tertiary activities.

In tertiary activity man increases the utility of the products of the both primary and secondary activities by trade and transportation.

According to the law of demand and supply trade takes place between the surplus and deficit region. Why some regions are surplus and other are deficit? This happens due to the difference of geographical conditions. Due to favourable geographical environments a region may enjoy facilities for the production of a particular commodity. On the other hand, another region, due to unfavourable geographical conditions may not be in a position to produce that particular commodity, but it may enjoy facilities for the production of other commodity which may not be produced in

the former region. Thus for the benefit of both the regions trade takes place between them. There are some people in every country who are engaged in trade and commerce. They act as middlemen between the producer and consumer of goods. Besides these activities, the last group of human activities include the services professional experts like doctors, solicitors, teachers, scientists, engineers, administrators, religious men etc. All those professionals provide specialized personal services of high value.

Q What is environment? Describe types of environment briefly?

Ans. Environment refers to surrounding in which man lives and works. An environment is the place or surrounding in which people are living. The environment of all mankind is the surface of the earth, and this consists of land on the earth's surface. Besides the land, the ocean and air are very important of the environment of mankind. Without these we would not be able to live at all.

Types of Environment:

The environment of man may be classified into two broad types.

1. Natural or Physical environment.
2. Non – physical or cultural environment.

Natural or Physical environment:

It includes all the things created by nature, for example location, relief or topography, climate, soil, water bodies, vegetations, coastline, mineral, deposits etc.

Cultural environment.

It comprises man made features and human talents. The various elements of cultural environment are religion, races system of political governments, social customs, density and distribution of population etc. and man made features like factors, railways, cities etc.

Aspects of Natural Environment:

The principal aspects of natural environment or geographical conditions effecting economic activities of man may be listed as follows:

a). Shape and size of a country. b). Location.
c). Topography or land form. d). Rivers.
e). Coast line. f). Climate.
g). Soil. h). Minerals.
i). Vegetation and animal life.

i. Shape and size:

The shape and size of a country have a great influence on the economic life of its people. The shape and size differ greatly from country to country.

ii. Geographical Location:

Location means the place where we live on the earth. It plays a dominant role in all man's activities, economic, social and political. A favourable location is a great asset to country, the location of a country is said to be favourable when it has.

i. A natural frontiers
ii. Easy access to world markets
iii. Mild climate
iv. Efficient transport facilities

There are two types of location.

1. Absolute location.
2. Relative location.

Absolute location:

It refers to the latitude and longitude of a certain place or location of a country on the globe. It is studied in relation to the equator and in relation to the sea. In relation to the equator means, whether it is located near the equator or with in the temperate zone or in the cold regions. In relation to the sea, the location may be insular, peninsular or continental.

i. **Insula**r location is aid, when a country is covered by sea on all sides. For example U. K, Japan, Sri Lanka, Cuba, Newzealand.

ii. **Peninsular** location on the other hand is one when it has sea on three sides and the land on the fourth. For example India, Greece, Malaysia, Korea and Italy.

iii. **Continental / Land locked**: this land locked location is not beneficial because these countries find difficulty in foreign trade through sea routes, thus foreign trade is extremely limited because goods pass through other countries, they have extreme climate with low rainfall, cost of transport and Defence expenditure are usually very high and heavy.

Relative location:

It refers to the location of a place or region with other items of natural or cultural landscape.

iv. **Topography or land forms:**

Topography or physical features is one of the important factors which influences its economic conditions greatly Topography includes (i) Mountains and hills
(ii) Plateau (iii) plains.

(i) Mountains and hills:

Mountains and hills are characterized by their high elevation, rugged terrain and quick changes in slopes. The highest part of the earth is mountain lands.

(ii) Plateau:

Plateaus are those areas of the earth surface that have height above 500 ft above sea – level and have tabular shape. Generally, high Plateaus pass into mountains and hills which surround them while low Plateaus pass into plains.

(iii) Plains:

Plains are those regions which have a local relief of about 500 feet above sea level.

v. **Rivers:**

"Of all the physical environments none has played a more important role than rivers in helping man's progress and civilization". Rivers play an important part in the economic life of a country. They serve mankind in many ways. Firstly, they act as sources of water supply. Secondary they act as resources of fish. Thirdly they act as natural transporting agencies as they are good sources of means of transportation. Fourthly, they act as natural fertilizing agencies. They fertilize the valleys through which they flow. Agricultural crops and

vegetation grow on the river plains. Fifthly, they act as natural irrigation agencies without which many river valleys would have been deserts. Sixthly, they help for the production of hydel-power. This hydel-power is responsible for industrial development of a country.

River on the one side helps the economic development of a country.

vi. Coastline:

Coastline is a land which borders on the sea. To be economic advantage, coastline is that which is broken up by bays and rivers.

vii. Climate:

Climate is usually defined as the average of weather conditions prevalent in any place or area. It is most influential of all geographical factors which have an influence, on man and his activities. The two fundamental necessities of man are food and shelter and these are mainly determined by climate.

viii. Soil:

Soils are the top covering of the surface of the earth and have been formed by the wearing and treating of the rock. The importance of soil lies in its fertility. Soil is very important natural resource.

ix. Minerals:

Minerals are so important in the history of human development or progress have been named after them. The stone age mark the time when man fashioned stone weapons and implements.

x. Vegetation and animal life:

The natural vegetation plays an important role in the general welfare and economic development of any region. It influences the human activities can well be judged from the fact that the human activities vary with the change in natural vegetation.

Non – physical or cultural environment and its effect on Human activities:

Natural environment as it is given in its original form, requires certain changes or adjustments to become really useful for man. Man therefore, makes these changes in different ways and thus produces an environmental or surrounding which is entirely his own cultural or social or non-physical environment.

a. Race:

Race finds an important place in the economic life of the people in any region. Mankind is divided into three principal races – white, yellow and black.

b. Religion:

Religion influences the activities of people particularly in the areas where people are found to be superstitions. A religion may prohibit certain activities and the followers therefore shape their lives according to its injunctions.

c. Government:

The commercial progress of a country is largely effected by the character of their government". Good government retards them.

d. Population:

The economic development of a country also depends upon the size and density of population. A country may have all the natural resources, but unless it is well-populated the sources will not be exploited because scarcity of population means lack of capital and labour.

Q. Why is the Density of population is different in the different covatvies of the world? State the reasons;

Q. What are the factors for even/uneven distribution of population around the world?

Q. What are the causes for distribution of population around globe?

Factors/Causes/Reasons Of Distribution Of Population:

The distribution of population reflects the suitability of geographical conditions. Let us examine the reason for the mal-distribution or uneven distribution of population. They are discussed below under the following heads:

1. Physical Features:

Mountainous areas cannot attract people for settlement. Lands for cultivation are limited there. They are restricted very largely to the difficulties of communication by constructing roads and railways accrosing them. Rivers are very swiftly flowing and, therefore, they are useless for navigation. Rugged mountainous regions cannot be made into fertile plain. So the great mountainous regions of the world must remain thinly populated. On the other hands. Mom-mountainous areas where there is a flat or undulating and suitable for settlement and cultivation, population is thick there. For instance, the differences in the distribution of population in north-western European countries are largely dominated by topography.

i. Mineral Resources:

The distribution of population also depends upon mineral resources, coal fields are most usually marked by a local increase in the density of population.

ii. Soil:

The distribution of population is also influenced by the character of the soil. Areas of rich soil support a heavy agricultural population and areas of poor soil support a very meager population.

iii. Climate:

Climate influences the distribution of population to a great extent. There is a correlation between the distribution of population and the distribution of rainfall. Population is sparse in areas having little rainfall, while the bulk of the mankind is settled in the well-watered regions.

iv. Relief:

It means the level of land; that is one of the most important factor for settlement.

v. Rivers and Supply of Water:

This refers to rivers and flow of water from natural resources like rivers or other reserves. Presence of water is an important factor for human population.

2. Economical Reasons:

i. Industrial Centres:

The distribution of population is also determined by the concentration of industries. In the industrial areas population is generally thick. So the industrial cities of Pakistan, such as Karachi, Lahore, Sialkot, Faisalabad, etc, are thickly populated.

ii. Disease:

Diseases which attack man, his animal or his plants still play a large part in determining the distribution of population. The density of population of some parts of Africa is very thin, as the people are attacked with yellow fever and malaria.

Q. Differentiating between "Density of Population" and "Distribution of Population", discuss the world distribution of population.

Ans. Both the terms Density of Population and Distribution of Population are synonymous in meaning nevertheless, it is imperative to discuss both of them simultaneously due to reasons because both these terms are commonly used carrying the same sense. Distinction between Density of Population and Distribution of Population is necessary because: Distribution of population is the 'place concept' while

a. Density of population is 'proportional concept'.

The measure of density is the number of persons living on one sqr. mile or km. in other words, the following formula is used for finding out the density.

$$\text{Density} = \frac{\text{Total population}}{\text{Total area of land}}$$

Continental Density of World Population:

Sr. No	Continent of Area per sqr. Km	Density
	• World	47.0
	• Highly Developed Countries	23.4
	• Less Developed countries	61.2
1.	AFRICA	28.0
	Sub Sahara Africa	28.9
	i. North Africa	21.5
	ii. Western Africa	40.6
	iii. Eastern Africa	41.3
	iv. Central Africa	15.6
	v. South Africa	19.1
2.	NORTH AMERICA	16.0
	Latin America and Caribbean	26.1
	i. Central America	56.9
	ii. Caribbean	161.5
3.	SOUTH AMERICA	19.9
4.	ASIA	119.7
	Asia (Excluding China)	113.1
	i. Western Asia	42.1
	ii. South Central Asia	142.7
	iii. South East Asia	120.5
	iv. East Asia	129.9
5.	EUROPE	24.2
	i. North Europe	55.4
	ii. Western Europe	168.0
	iii. Eastern Europe	16.0
	iv. Southern Europe	112.7
6.	OCEANA	3.9

Q. Describe different classification of densities of population.

Ans. **a.** **Very Thinly Populated Regions:**
Where less than 10 persons live on one sqr. mile.

b. **Thinly Populated Regions**:
Where 11 – 55 persons live on one sqr. mile

b. **Moderately Populated Regions:**
Where 53 – 250 persons live on one sqr. mile

c. **Densely Populated Regions:**
Where 251 – 500 persons live on one sqr. Mile

d. **Very Densely Populated Regions:**
Where more than 500 persons live on one sqr. Mile

Some of the areas in this zone are such as are of recent settlement, but they enjoy a very high standard of living.

Q. **Describe the Agriculture:**

Ans. Agriculture is an art of raising plant life from the soil for use of mankind. It is not merely tilling of land but also implies a conscious and determined effort on the part of man utilize the soil for his benefit.

Q. **Describe the factors to be considered while dealing with agriculture?**

Ans. **Factors Governing Agriculture:**
The factor governing agriculture fall under two categories:
Geographical Factors.
Economic Factors.

Geographical Factors:
The important geographical factors are:

i. Rainfall and Irrigation
ii. Temperature
iii. Fertility of soil
iv. Relief or topography

a. **Rainfall and Irrigation:**
Successful cultivation of agricultural crops mainly depends on rainfall. Agriculture is very difficult in the regions where rainfall is very scanty. It is also difficult in regions where rainfall is very heavy. Moderate rainfall is beneficial to plant growth.

b. **Temperature:**
Temperature has also a great influence on agriculture. Very high and very low temperature regions are not suitable for cultivation.

c. **Fertility of Soil:**
Soil is an important factor in production of agriculture crops. Highly fertile soil produces a good crop and poor soil accounts for poor production. Soils are not equally fertile and vary according to their physical and chemical composition. According to the nature and fertility of soils different crops are grown.

d. **Relief or Topography:**
Relief or topography also sets limit to agriculture. Particular crop is grown in particular region. Rice and Jute for instance are confined to low land. Whereas tea and coffee grow better on hill slopes than on level area. More over the mountainous soil erosion,

mechanization in not possible and transport come in the way of agriculture developments.

1) Economic Factors:

The chief economic factors are:

i. Market.
ii. Labour supply
iii. Transport facilities
iv. Capital
v. Government Policy

a. Market:

The distance from the market determines the cost of transport and hence the competitive power of agriculture produces. Places away from the market, therefore grow such products as can with stand a high cost of transportation.

b. Labour Supply:

Labour supply determines the type and character of agriculture. Intensive cultivation requires large supply of labour while in areas of sparse population extensive cultivation is practiced.

c. Transport Facilities:

Transport facilities widen the market for agricultural produce. Only those regions can develop commercial farming which enjoy highly developed means of transport to carry their produce to far-off places.

d. Capital:

Modern agriculture is highly mechanized and thus capital intensive to a considerable extent. Use of costly machines and equipment. Application of costly chemical fertilizers and agricultural research. All involve large capital expenditure.

e. Government Policy:

Government policy also influence the agricultural trend and patterns.

Q. What are the methods of cultivation or farming?

Ans. Methods of cultivation or farming:

Agriculture is carried on over a large part of the world. It is practiced in diverse physical condition and by people belong to diverse groups. Consequently great diversity has developed in agricultural practices and products.

Classification:

a) Shifting Cultivation:

Shifting cultivation is one of the most primitive types of agriculture. Its chief characteristics are that the new land is cleared usually from forest. Cultivated for one to three years and then abandoned. A new plot of land is then cleared and again abandoned after a few years it is in this way that shifting cultivation goes on from plot to plot because the land gets exhausted. This type of cultivation is known by different local names such as Jhuming in Bangkadesh. Taungua in Burma, Landanga in Indonesia, Zande in Africa and Milpa in the Americas.

b) Intensive Subsistence Cultivation:

This type of cultivation is mostly practiced in the monsoon lands of Asia. Most of the products are locally consumed and only a small surplus is exported. The lands are divided into small plots separated by low ridges. So the use of modern farm machinery is difficult. A wooden plough drawn by a pair of cattle is the most important agricultural implement to which spades, sickles and hose are added.

c) Mixed Cultivation:

In this case the farmer combines with farming which is his main occupation some other subsidiary occupation such as cattle rearing, fruit growing or poultry farming.

d) Commercial Farming:

Commercial farming is the modern type of large scale specialized agriculture. These are all located in the semi-arid belt where the rainfall is precarious, grass is the natural vegetayton and population is low and a century back was occupied by the nomadic herders. The low population has been a great inactive to the mechanization of agriculture; wheat is the distinct crop of this region.

e) Plantation Farming:

Plantation are large traces of agricultural land owned by private individuals or by corporations and operated by a centralized management.

f) Truck Farming:

Vegetable growing on commercial basis is known as truck farming or market gardening. On account of its perishable character it is usually carried on in the outskirts of big towns and cities and industrial centres which offer a ready market. the improved means of communication and transport is making possible the growing of vegetables at places quite remote from the urban centres.

g) Dairy Farming:

Cattle is an important source of dairy productslike milk, cheese, ghee (butter oil) curd etc. Dairy farming is found on large scale in the grass land regions of the world.

Q. Classify agriculture products?

Ans. Classification of Agricultural Products:

On the basis of uses, the agricultural products may be classified into broad groups.

a) Food Crops.
b) Industrial Crops.

1. Food Crops again be subdivided into three classes.

i. Cerials:
Wheat, Rice, Maze, Millets, Rye, (Oats and Barley).

ii. Beverages and Drugs:
Tea, Tobacco, Coffee and Cocoa.

iii. Other Food Crops:
Sugar cane Sugar Beat and Fruits.

2. Industrial Crops may again be sub divided into the following two classes:

i. **Fiber Crops:** Cotton, Jute, Hemp and Flax.
ii. **Miscellaneous:** Rubber, oil seeds etc.

Q. Define wheat, its uses and its verities?

Ans. **Wheat:**

Wheat is the most important and valuable of all the grains. Ground into flour and made into bread it constitutes the staple food of the world except monsoon lands.

Uses:

Wheat is used for different purposes. The greatest portion of wheat is used in manufacture into flour. It is also used in the manufacture of whisky and beer. Its straw is used for fodder, for bedding in stables and also in the manufacture of straw board, mattresses and cheap paper.

Varieties or groups of Wheat:

Due to varied climatic conditions the periods of sowing and harvesting of wheat are different in different countries. On the basis of time of sowing and harvesting wheat can be classified as winter wheat and spring wheat.

Winter Wheat:

It is sown in the autumn, germinates in the spring and harvested in the summer. Winter wheat can be cultivated only where winters are mild. It can not be cultivated in the region of extreme climate. In the tropical countries like Mediterranean countries. India and Pakistan wheat is a winter crop.

Spring Wheat:

It is sown in spring and reaped in the autumn in Russia and Canada the severity of the winter produces the cultivation of wheat during spring season. Spring wheat is cultivated in such region because it is only during the spring and summer Seasons that the average temperature of about 60°F requisite for wheat cultivation is available.

Q. What are the factors or conditions to be considered while cultivating wheat?

Ans. Condition of growth:

1. Physical condition:

Wheat through essentially a crop of the temperate climate is grown in a variety of climates. It is cultivated almost through out the world – from Alaska to Siberia, from Canada to Argentina and from Manchuria to Australia. However the physical conditions necessary for its successful cultivation are as follows:

i. Mild Temperature:

Wheat requires a temperature of 10°C during the vegetative period and a temperature of 19°C at the time of ripening. Sharp seasonal changes are harmful for good quality wheat.

ii. Moderate rainfall:

Wheat plant requires an annual rainfall of about 75cm but can be grown even in areas having less than 25cm of rainfall with the help of irrigation. However at the time of ripening it requires warm and dry climate. Rainfall at this time injures the plant.

iii. Fertile Soil:

Wheat requires a soil of high fertility and fine texture. Through it can be grown on a variety of soils, sandy loam is the best for its cultivation. The black soil is also good for wheat cultivation.

iv. Level Land:

The land must be leveled so that machinery can be extensively used. The best wheat lands are gently undulating with an efficient system of drainage.

2. **Economic Factors of Growth:**

Economic factors in wheat cultivation are not so important in the present age. Introduction of farm machinery, adoption of scientific methods and the improvement of transport have caused rapid expansion of wheat farming in the sparsely populated areas.

These are the important factors.

Technology
Transportation
Research and Scientific method
Knowledge of farmer
Nearness to market.

Q. Define Rice, its uses and varieties?

Ans. Rice:

Rice is by far the most important grain of the tropics. It is the staple food of the people living in tropical countries and form the principal food of about 50% of the population of the world.

Uses:

Although rice is the staple food of about one half of the total world population, a part of it is used in preparation of alcoholic drinks. A large quantity of starch is made from it. Sandals, hats and various other articles are made from the straw. The husk is used for the manufacture of ropes, bags and mattresses. It is also mixed with cement for etching roofs.

Varieties:

There are many varieties of rice but generally speaking there are two main types: Upland and lowland. The upland rice some times is referred to as hill rice and the lowland rice as swamp rice. The upland variety is usually grown in the sparsely populated areas, where shifting cultivation is practiced.

i. **UpLand or Hill Rice:**

It is cultivated in those parts of the tropics where most parts of land are covered with the thick growth of forest as in the case of Malaysia, Smatra, Bornea, some parts Burma and Indo-China, Equatorial Africa and tropical America. After cutting down the forest the seed is sown and as soon as two crops are obtained the field
is deserted and fresh plot is cleared. The yield is low and the quality inferior. That is why upland rice accounts for only 5% of the total rice acreage.

ii. **Low Land or Swamp Rice:**

Lowland or swamp rice is a transplant crop and requires frequent flooding. It is grown in level dyked, swampy fields where water must stand for some time. It must be raised on level ground suitable for irrigation. It is grown in densely populated lands with intensive methods of cultivation. It accounts for about 95% of the total rice acreage.

Q. Describe physical factors and conditions to consider while cultivating rice?

Ans. Physical Factors of Growth:

i. **Climate:**

Rice is a tropical plant and as requires hot and moist climate for its growth. It requires a temperature of 27°C and a rainfall of more than 100cm during the growing period. The plant needs to stand in water for some time. Flooding is most essential in the early part of growth.

ii. **Soil:**

Rice requires a very fertile soil though it can be grown on a variety of soil, loams with a high slit and clay content are the best for it as they prevent rain water from being drained away to underground outlets.

Economic Factors of Growth:

Rice cultivation requires a large supply of cheap human labour as every work is done by hand. The tilling of the land, transplantation of paddy plants, harvesting of crop, husking and threshing of paddy are done by hand. Hence the densely populated monsoon lands are most suitable for rice cultivation. Rice is an exhausting crop and as such requires constant use of fertilizers and manures.

Q. Define Edible Oil? Also define its different kinds?

Ans. Almost all edible oil or vegetable oils are extracted from the fruit or seed of certain plants. The plants bearing oil vary widely in character ranging from the small herbs to tall trees.

The principal edible or vegetable oils of the world are olive oil, cotton seed oil, ground nut oil, mustard or rape seed oil, sesame oil and soyabean oil.

Olive Oil:

Olive oil is extracted from olive fruits. It is mainly used for cooking and salad. It is also used in spinning, weaving and soap making. The principal olive-oil producing countries of the world are the Mediterranean countries such as Spain, Italy Greece, North Africa, Portugal and Southern France.

Cotton Seed Oil:

Cotton seed oil is a product of cotton producing countries of the world. It is a good substitute of olive oil. Its use as a producer of edible oil is gradually increasing. It is now the chief ingredient of vegetable ghee and margarine in many countries. It is also used for soap making . The oil cake is a nutritious food for cotton and is a good fertilizer.

Coconut Oil:

Oil is extracted from the coconut which is the dried fruit of coconut palm coconut oil is used as food and for using in hair. It is also used in the making of good quality soap.

Ground Nut Oil:

The nut is obtained from the roots of a small plant which grows well on sandy soils with scarty rainfall. Oil is extracted from this nut. The oil is used as food directly and also in the manufacture of vegetable ghee. Its by product i.e oil cake is used as fodder.

Mustard or Rape seed Oil:

Mustard or rape seed is one of the most extensively grown oil seeds crops, but the quantity entering international trade is very limited. Oil is obtained from the seed. It is mainly used for cooking. Its by –product is used as fodder.

Sesame seed Oil:

Oil is extracted from the seed. It is used as food and also used in hair. The leading producers are India and China.

Palm Oil:

Palm oil is obtained from palm fruit. It is used for soap, candles and lubricants. It is also used for making edible butter and fats.

Soya Bean Oil:

Oil is obtained from bean. It is very nutritious and an important item of food. It is also used for varnishes, lubricants, candles etc.

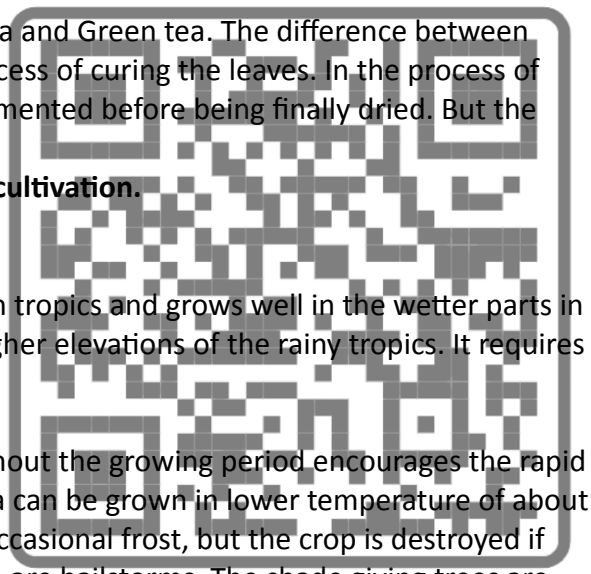
Soya bean grows best on rich loamy soil which are suitable also for the cultivation of cotton and Maize.

Q. Define Tea, its uses and varieties.

Ans. Tea is the name given to the dried leaves of the Asiatic Evergreen shrubs known as Thea Sinesis. Now a days the use of tea has become so common in the world that it is looked upon as one of the necessities of life. British, Australians, Russians, Dutch and Pakistan has also increased considerably. Tea leaves, after they are picked from the gardens are dried ny heating in the factory or in the sun and are then crushed and rolled before they are packed.

Varieties of Tea:

There are two varieties of tea – Black tea and Green tea. The difference between them is due to the difference in the process of curing the leaves. In the process of Black tea preparation the leaves are fermented before being finally dried. But the green tea is unfermented.



Q. Define the condition or factors for tea cultivation.

Ans. Conditions of Growth:

a) Physical Condition:

Tea is essentially a plant of monsoon tropics and grows well in the wetter parts in the monsoon regions and on the higher elevations of the rainy tropics. It requires for its growth.

i. Warm Climate:

A temperature of 27°C throughout the growing period encourages the rapid growth of leaves. However, tea can be grown in lower temperature of about 16°C as well. Tea can survive occasional frost, but the crop is destroyed if the climate is too cold or there are hailstorms. The shade giving trees are planted in the tea garden to protect direct sun's rays.

ii. Heavy Rainfall:

Tea requires an average annual rainfall of about 200cm. frequent showers, heavy fog and morning dew favour the growth of young leaves long dry spell is harmful for the crop.

iii. Fertile well drained soil:

Tea requires very fertile soil containing organic matter with an element of iron.

The land should be gently rolling so as to prevent water logging, hence it is successfully cultivated in the well drained slopes of hilly regions.

b) Economic Factors:

i. Cheap human Labour:

The preparation of tea gardens is a labouriors task done by hand as the hill slopes cannot be ploughed by heavy machinery. After plantation weeding, pruning and picking are all done by hand. Picking of leaves is the greatest consumer of labour. Therefore abundant and cheap labour supply is no less

an important factors is tea production. So it is a suitable crop for the monsoon lands of Asia, where half of the world's population live.

ii. **Use of Fertilizers:**

Tea is an exhausting crop therefore, constant use of chemical fertilizers and green manure is essential to maintain fertility of the soil.

WHEAT

Q. Enlist and illucidate wheat producing regions of the world?

Ans. World producing areas:

It has been estimated that about 12% of the world's land surface is within the limits of wheat production and the world total production of wheat around 580 million metric tons per year.

The important wheat producing countries of the world may be divided into two groups.

i. Those producing only for domestic consumption.

ii. Those which grow wheat largely hose which grow wheat largely for domestic consumption as well as for export.

1. Europe:

There are three important wheat growing regions in Europe.

(a) North-western Europe.
(b) Eastern Europe.
(c) Mediterranean lands.
(d) Former U.S.S.R.

North-western Europe:

In western with a cool temperature oceanic climate. In Great Britain the east and south east regions with rainfall between 20 to 30 inches, the climate of west of England is too wet and north Scotland is too cold. France has larger area than any other country but the yield is low.

Eastern Europe:

This region includes the comparatively less densely populated countries of Eastern and South-Eastern Europe such as Hungary, Rumania, Bulgaria, Czechoslovakia, Austria and former Yugoslavia.

Mediterranean lands:

The Mediterranean lands grow large crops especially of hard wheat.. the important wheat producing countries of this region are Italy and Spain.

Russia:

Russia is the largest producer of wheat in the world produces 95 million metric tons of wheat. The Russian wheat belt extends from the Carpathian mountains to lake Baikal. The main areas are Ukraine, Moldavian republics south western part, Volga region of spring wheat, Trans-Ural, western Siberia, northern Kazakhstan, Moscow, Gorki and Orenburg.

2. North America:

In North America the important wheat producing countries are the U.S.A and Canada.

U.S.A:

In USA region the hard red spring wheat region of Montana, North Dakota. South Dakota and Western Minnesota. This wheat belt extends to the Canadian provinces is so important that is called “Bread Basket of the World”. The hard red winter wheat region comprising parts of Nebraska, Kansas, Eastern Colorado, Oklahoma and Texas. The soft winter wheat region comprising Missouri, Minois,
Indiana Ohio and Western New York. The Columbia plateau region comprising Washington Idaho and Oregon. The great wheat centers of USA are Minneapolis, Duluth, Chicago and buffalo. She is a great exporter of wheat in the world.

Canada:

The wheat lands of Canada are known as “Prairies”. There are two major wheat producing regions the spring wheat region, comprising Manitoba, Saskatchwan and Alberta. The winter wheat region comprising Ontario and Quebec. Important wheat collecting centers of Canada are Winnipeg and port Arther.

3. **Asia:**

In Asia, the important wheat producing countries are china, India and turkey.

China:

The principal wheat producing regions are:
The winter wheat kasling region of Hopel Honan and shantung.
The spring wheat region beyond the great wall.

India:

There are two principal wheat producing regions.

i. The alluvial soil region of the Sutlej Ganges plain comprising East Punjab, Hareyana and U.P.
ii. The black soil region comprising Maharashtra, Madhya Pardesh and western Andhara Pardesh. Wheat is also grown in Rajisthan, Bihar and Gujrat.

Pakistan:

The province of Punjab is the most important producer of wheat in the country. In this province, main wheat belt extends from Sialkot to Muzaffargarh and other districts in Punjab are Gujrat, Gujranwala, Jhung, Attock, Sargodha, Shekhupura, Shiwal, Faisalabad, Multan etc. Wheat is also produced in Sindh and N.W.F.P. ***Turkey:***

Turkey is an important producer of wheat in south west Asia. Here wheat is grown mostly in scattered areas and plateaus and valleys of central Anatolia.

Other Asian Countries:

Iraq, Jordan, Israel, Syria and iran in south west Asia and Japan and Korea (DPR) in the far east are other producers of wheat.

4. **South America:**

In Argentina wheat is cultivated in Argentina and Chile.

Argentina:

In Argentina wheat production is concentrated in crescent area around the estuary of Rio-de-Ia-plate and Rio parana.

Some quality of wheat is also produced in southern Brazil, Colombia, Peru, Equador and Boliva.

Africa:

There are three important wheat growing regions in Africa, namely.

(a) Mediterranean lands of Morocco. Algeria and Tunisia.

(b) The Nile valley (c) The union of South Africa.

Australia:

Wheat is cultivated on large scale in all slates except Tasmania. The principal wheat producing areas of Australia are the Murray-Darling region in south east. The Mediterranean region in South Wales, Victoria, western Australia, queens land and South Australia.

5. International Trade:

Wheat is one of the most important commodities of international trade. No other enters into world trade as largely wheat.

Exporters:

The principal wheat and wheat flour exporters are the U.S.A, Canada, Australia, and Uruguay. Other notable exporters are France. The Netherlands, Hungry, Sweden and Romania.

The U>S>A has became the leading wheat exporting country in the world after the second world war. Canada is the second largest exporter. Argentina and Australlia have also large quantities of wheat for export.

6. Importers:

North west Europe and some Asian countries are the chief importer's of wheat. Important importers of wheat U.K. Germany, Italy, Netherlands, Belgium, Poland, Czechoslovakia and former Yugoslavia are important importers in Europe , China, China, Japan and Pakistan are the main importers in Asia, Brazil is the chief importer in south America.

Q. Enlist and illucidate the rice producing regions of the globe?

Ans.

"RISE – PRODUCING AREAS OF THE WORLD"

The principal producers of rice are China, India, Bangladesh, Indonesia, japan, Burna, and Thailand. Other producers are the U.S.A, Brazil, Pakistan, Egypt, Italy and Spain.

1. Asia:

China:

China is the leading rice producing country in the world. Rice is grown inmost parts of China. But there are four principal areas of rice cultivation. The Yangize kiang delta and central Yangize plain. The Szechwan basin. The Southern Kwangtung coastal plain. South Central Yunnan.

India:

The principal rice producing areas are west Bengal, Andhara Pardesh, Madhya Pardesh, Bihar, Tamil Nadu, Uttar Pardesh and Orissa.

Rice is also produced in assam Maharashtra, Kerala, Karnataka, Rajihistan and East Punjab. The yield of rice among the lowest in India.

Bangladesh:

The climate and soil of the country is ideal for rice cultivation. The chief rice products districts are Mymensingh, Bakergang, Sylhet, Dinajpur, Faridpur and Rangpur.

Japan:

The main producing areas are the islands of Honshu, Shikoku and Kyushu. The Setounchi region in Honshu is the largest producer.

Pakistan:

Pakistan produces considerable quantity of rice. The rice area are located in the Indus valley. The main areas of production are the flooded and irrigated districts of Punjab and Sindh, such as Sialkot, gujranwala, Sheikhupura, Sahiwal, gujrat, Faisalabad and Kusur in Punjab and Jacobabad, Larkana, Badin, Shikarpur, Dadu etc in Sindh.

Burma, Thailand and Indo-China:

The main rice land of Burma are the middle and lower irrawaddy valley. In center Burma rice is cultivated with the help of irrigation. The principal rice producing region of Thailand is in the Menal valley and delta. In indo-china, the principal rice production areas are; the Mekong valley in Cambodia, the Tonking valley in North Vietnam and costal plain in Annam.

Indonesia:

Rice is the staple cereal crop of Indonesia. Java is the Malaysia, North and South Korea, Taiwan and Philippines.

2. **Europe:**

In Europe, rice is cultivated in Italy, Spain, Czechoslovakia and Portugal. A little rice is also grown in Balkan States. In Italy, rice is produced mainly in the Valley of Po River and the northern province of piedmont and Lombardy. In Spain, rice is grown in the costal plain along the Mediterranean and the delta of Ebro River. In Czechoslovakia, rice is grown in the irrigated low-land.

3. **North America:**

In north America, the U.S.A is the principal producer of rice. There are three areas of rice cultivation in the U.S.A. namely the Gulf coastal plains, the lower Mississippi valley and Sacramento valley in California. The important rice producing states are Arkansas, Louisiana. Texas and California. In North America, Mexico is another notable producer of rice.

4. **South America:**

Rice is produced in many countries namely, Brazil, Columbia, Peru, Cuba and Ecuador; of them brazil is the leading producer. Rice is produced in many parts of Brazil. Particularly in Sao Paulo and Rio Grande do sul. Surinam is another notable producer of rice in South America.

5. **Africa:**

Egypt and Madagascar are notable producers of rice in Africa. In Egypt the production of rice is confirmed in the newly reclaimed marshy lands. Egypt is noted for high yield of rice, about 6000kg per hector. In Madagascar rice occupies three-fourth of the cultivated acreage.

6. **World Trade:**

Most of rice that is produced is consumed locally. Therefore international trade in rice is limited. The commerce of rice is mainly confined to the

countries of the Far East. This trade varies greatly from year to year according to the harvest.

Exporters:

The principal rice exporting countries are China, Burma,. The U.S.A. Pakistan, Thailand, Egypt, Cambodia, Brazil, Ecuador, Vietnam, Taiwan, Spain, Italy etc.

Importers:

The principal importing countries are Indonesia, Malaysia, India, Bangladesh, Srilanka, HongKong, former U.S.S.R, U.K, France, Germany etc. recently the Gulf States have emerged as importers of rice to meet the needs of rice eating migrants.

Q. What are the major and other Tea producing countries.

Distribution Or Producing Areas:

Monsoon region has a virtual monopoly in regard to tea and produces more than 90% of the total world out put. Leading producers are India, Srilanka, China, Japan, Indonesia and Bangladesh. Other producers include the formers U.S.S.R, Taiwan, Kenya, Ugenda, Malawi and Turkey.

1. **Asia:**

India:

There are two principal tea producing regions, namely Morth East India and South India. The first regions includes the Assam Valley. Cacher of Soorma Valley, Darjeeling, Dooars, Tera and Tripure, The second region comprises Tamil Nadu and Kerala. Tea is also produced in Bihar, U.P. Himachal Pardesh, Maharashtra and Karnataka. Assam and West Bengal together account for about 75% of the total Indian out put of tea.

Srilanka:

The main tea producing areas are in the mountainous land in the South Central area at a height of 1000 meters. Kandy is the main tea producing district.

China:

China is probably the original home of tea, tea is widely grown in China, but the main producing areas lie between Yangize and Sekiang valleys. The mountainous regions of the provinces of Hunan, Hupeh, Anhwei, Chekiang, Kiangsi and Fukien produce tea.

Japan:

In Japan tea is produced in central andsouthern regions on the western and eastern sides of mountains. Uji and shijouki districts are the most important for tea production in Japan. Tea planting in Japan is done in small patches on low slopes and terraced uplands. There are usually 3 to 4 pickings in a year. Japan produces nearly 6% of the total world out put of tea.

Indonesia:

Tea is mainly gown in the Island of Java and Sumatra. In Java tea is cultivated at a altitude between 260 and 1640 meters and in Sumatra at an elevation of 390 to 780 meters. The Deli district is an important producer of tea.

Bangladesh:

In this country tea plantation occupy the hillocks and hills. Most of the plantations are located in Sylhet district and a few are in Chittagong district.

2. **Africa:**

The principal producers are Kenya, Uganda, Tanzania and Malawi.

Other countries:

Russia has emerged as a great tea producer. Tea is produced in the Trans-Cancasus region, Turkey and Iran in Asia and Argentina in South America are other producers of tea.

3. **World Trade:**

Tea is tenth in the value of all products that enter world trade.

Exporters:

India and Srilanka are the leading exporters of tea while Indonesia, Bangladesh, Japan, Kenya and Malavi also export tea.

Importers:

The principal tea importing countries are U.K, U.S.A., Russia, Australia, Canada, Egypt, Iraq, Pakistan, Newzeland, Netherlands, South Africa and Colombia.

Q. Describe Sugar Cane, its uses and conditions of growth.

Sugar Cane:

It can be obtained from various sources- sugarcane, sugar beet, apples, Maples, Dates and palm tree, but commercial sources of sugar are sugar cane and sugar beet.

Uses:

Sugar cane is a thick-stemmed grass, parthly resembling the maize plant in appearance and rising to a height of 8 to 15 feet. Sugar is retained from the juice of the stem of sugar cane. The stem after being crushed and the leaves of sugar cane are used as fuel and also in the manufacture of cheap paper. The by-product in the refining of sugar from the juice of stem is molasses, Juice can be used for the manufacture of alchol, agricultural manure and road-making material.

Conditionas Of Growth:

Physical:

Sugar cane is a tropical plant and thrive well in the areas of high temperature and heavy rainfall. Its cultivation requires the following physical factors:

1. **Temperature:**

   Sugar cane requires high temperature between 24^0C and 27^0C throughout the growing period which is fairly being 11to 12 months.

2. **Rain Fall:**

   Sugar cane requires a long rainy season of about 8 months with an annual rainfall of about 150 cm. dry weather before the harvest helps the plant to store up sucrose in the stalk.

3. **Fertility And Soils:**

   Sugar cane is grown in different types of soils. In the river valley it is grown in deep, fertile loamy soils. It is also grown on well-grained volcanic soils and loose soils rich in lime and salt.

4. **Climate:**

   sea breeze is beneficial for sugar cane cultivation. The main sugar growing areas in south America, Cuba and Hawaii etc. are located near the sea-cost.

5. **Fertilizers:**

   as it is an exhausting plant, constant use of fertilizers and manure is essential.

Economic Factors:

Cane is cut by hand and a great deal of manual labour is required, so abundant cheap labour is essential in harvesting and also for preparing sugar for export. Being a bulky crop existence of an efficient transportation system is also essential for the development of sugar cane cultivation.

Q. Enlist and illucidate the key and other producing areas of sugar cane?

Ans. Sugar cane Producing Areas of Globe:

Sugar cane is cultivated in all tropical and many subtropical countries. The major producers of sugar cane are India, Brazil, Cuba, Puerto Rico, Philippines, Pakistan and Australia. Other producers are Indonesia, Mauritius, Dominican Republic, British Guiana, Taiwan, China and Bangladesh.

1. Asia:

India:

In the northern region, the entire Ganges valley produces sugar cane. It comprises the states of U.P, Bihar, West Bengal, East Punjab, Haryana and Madhya Pardesh. In the Southern region, sugar cane is produced in the river vallys of Maharashtra, Andhra Pardesh and Karnataka.

Indonesia:

Java is a small island, with very dense population. The soil is rich and well-drained, rainfall is ample and labour is cheap and efficient.

Philippines:

The Philippines islands have excellent climate and soil conditions for cultivation of sugar cane. The low plains of the western side are main areas.

Pakistan:

The upper Indus valley is the main producer of sugar cane cultivation in Pakistan. Sindh and N.W.F.P are south are other important areas.

China:

China is eneavouring hard to increase its sugar cane production. The climatic conditions in the south are favourable for the production of sugar cane.

2. North America and West Indies:

The main sugar can growing area of the U.S.A is in Hawaii islands in the mid-pacific ocean. Hawaiian sugar cane plantation is based upon the volcanic soil and the vast market of the U.S.A. On the mainland of country, Louisiana, round the Mississippi delta and the gulf coast have a considerable amount of sugar cane production.

Mexico:

Mexico recently has gained great importance in the production of sugar cane.

Cuba:

Cuba's economy is dependent upon a single commodity sugar cane. Cuba is one of the largest producers and exporter of sugar cane in the world. Sugar cane is grown on the gently rolling land and flat valleys from west of Havana to the northern slope of sierra Meastra in the south east of the island.

Other Caribbean islands:

Other Caribbean islands like Jamaica, Barbados and Trinidad have favourable climate and soil conditions. Sugar cane plantation is expanding in these islands.

3. South America:

Brazil:

Brazil has recently emerged the important producer of sugar cane. There are three major producing areas (i) The coastal lands of north east and the states of Parahiba, Pernambuco, Alagos, serjipe and Bahla. (ii) The Savanna plateau of Minas Gewraes and (iii) The coastal plain north and northeast of Rio-de-Janerio.

Other countries:

Argentina, Peru and British Guiana are other notable producers of sugar cane in south America.

4. **Africa:**

The union of South Africa is the largest producer of sugar cane in Africa. The islands of Mauritius and Re-union are other producers of sugar cane in Africa.

Australia:

The east coast plains of Queens land are the important producers of sugar cane in Australia.

5. **World Trade:**

Exporters:

The principal cane-sugar exporting countries are Cuba, Philippines, Australia, Dominican Republic, Mauritius, Taiwan, Brazil, Peru etc.

Importers:

The leading importers of sugar are U.S.A. Japan, former U.S.S.R. Canada, Italy, France, Malaysia and Switzerland.

INDUSTRIAL CROPS

Crops which are not produced for food or beverage but are used in the factories as raw materials may be considered as industrial crops such as Cotton, Jute, Hemp, Flax and Rubber etc.

Fiber Crops:

Three types of fiber crops may be distinguished:

i. **Seed Fiber:**

Cotton is a seed fiber, since it is found covering the seeds of plants.

ii. **Bast Fiber:**

Jute , Hemp and flax can be mentioned in this category. These fibers are obtained from the stalks of plants.

iii. **Leaf Fiber:**

Manila Hemp and Sisal which are obtained from the leaves of plants may be included in this group.

Q. What is meant by cotton crop, enlist its varieties?

Ans. Cotton is a wooly fiber surrounded around the seeds of the plant belonging to Genus Gossyplum. Cotton provides the civilized world with a large portion of it's clothing. It is the most important textile fiber, being universally used in the hot, warm and even cold countries. There is no other commodity which has as universal and extensive demand as cotton.

Varieties of Cotton:

There are innumerable varieties of cotton grown in the different parts of the world of which the following are the most important varieties. (It should be noted that the

quality of cotton depends upon the staple length of fiber. Cotton with longer staple is considered to be superior.)

i. **Sea Island Cotton:**
This is the best quality cotton having a staple length of more than 5cm. it is produced in small quantities exclusively along the south – eastern coast of U.S.A in Puerto-Rico and other islands of the West Indies.

ii. **Egyptian Cotton:**
This type of cotton has a staple length of 3 to 5 cm and is used for the manufacture of super fine cloth. It is produced in the Nile valley of Egypt, Turkistan, U.S.A, and Sudan.

iii. **Upland American Cotton:**
This type of cotton has a staple length of 2 to 4 cm and grows extensively in the U.S.A., Mexico, Pakistan and Argentina.

iv. **Short Staple Cotton:**
This type of cotton has a staple length of less than 2cm. India and Brazil are the principal producers of this variety of cotton.

Q. **Enlist and describe the condition for the growth of cotton?**

Ans. **Conditions of Growth:**

Physical Conditions:

i. **Temperature:**
Cotton plant requires warm climate, a temperature of round about 21°C, through out the growing period. It requires about 180 to210 frost free days and its growth is hampered if the temperature falls below 16°C.

ii. **Rainfall:**
It requires a moderate amount of rainfall. An annual rainfall of 62 to 112cm favours its growth. In areas of scanty rainfall, cotton is cultivated with irrigation. Dry sunny days are essential in the latter part of its growth when balls have opened.

iii. **Soil and Fertility:**
When climate conditions are favourable cotton may be produced on almost any type and character of soil. It is usually grown on lught sandy soil, on loams, on heavy clay and on bottom land. Yield on different types of soil varies considerably. The soil must also be capable of retaining moisture.

iv. **Climate:**
Sea breeze is beneficial for the quality of the fiber. Hence lowlands near the sea or islands in the tropical and sub-tropical latitude are ideal for cotton plantation.

v. **Natural Factor:**
Cotton is an exhausting crop and after a limited number of years manuring or a carefully regulated crop rotation becomes essential.

Economic Factors:

i. Cheap human labour is essential to pick cotton as soon as possible after the boil has burst, otherwise rain, dust dews and mud combine to ruin the crop. Picking is done by hand. There is thus sudden high demand for labour just at the time of harvest.

ii. Cotton plant is very much susceptible to diseases, proper application of insecticides and pesticides is essential to keep the disease in check.

Q. Enlist and illucidate producing areas of cotton?

Ans. **Cotton – Producing Area Distribution:**

Cotton is cultivated in about 60 countries of the world. The most important cotton producing countries are U.S.A. former U.S.S.R. , China, India, Egypt, Mexico, Brazil and Pakistan. The less important producers are Sudan, Peru, Uganda, Turkey, Zaire,Syria, Iran, Argentina and Mozambique.

North America:

U.S.A:

There are four principal areas producing cotton in U.S.A. They are:

i. Area to the south – west of Mississippi river, comprising the states of Texas, Oklahoma and Arkansas.
ii. Georgia, Alabama, North and South Carolina.
iii. The Mississippi valley, comprising the states of Mississippi and Louisiana.
iv. The western states in San Joaquin valley of California and the salt river valley of Arizona.

Mexico:

Mexico is a notable producer of cotton in North America. Cotton producing areas located in the eastern side along the Gulf coast.

Central America:

Nicaragua, Guatemala are important producers of cotton in Central America.

Asia:

China:

The chief producing areas are ; the lower valley of yangtse river, upper delta of Hawang - Ho and the Wel – Ho valley around Stan. Chinese cotton is of coarse quality.

India:

India is the fourth biggest producer of cotton in the world. There are three important areas growing cotton:

North – West part of India, comprising East Punjab, Haryana, Western U.P and East Rajhistan.

Pakistan:

The principal cotton producing provinces are Punjab and Sindh. Inferior variety known as Desi cotton is grown in N.W.F.P.

Other Asian Countries:

Turkey, Syria, Iran, Israel are other notable producers of cotton in Asia.

Africa:

Egypt:

Egypt produces a very high quality cotton in the world. The dry air, plentiful sunshine, rich alluvial soil, the Nile water and sufficient labour are the factors responsible for the high yield and good quality cotton. The Nile valley is the main producing area.

Other African Countries:

Uganda, Sudan, Tanzania and Congo are other principal producers of cotton in Africa.

South America:

Brazil:

Brazil has become an important producer and exporter of cotton. Cotton is cultivated in the coastal lowlands where Sao Paulo is principal producer.

Other Countries:

Colombia, Peru and Argentina are other notable producers of cotton in South America.

Europe:

Russia:

Russia is the second largest producer of cotton in the world. Here cotton is produced both in European Russia and Asiatic Russia. Turkistan and Trans – Cancasia are the chief producers. Other cotton growing areas are Ukraine and Crimea.

Greece:

In Europe, Greece also producers cotton.

Australia:

In Australia, cotton is cultivated in Queens land.

World Trade:

Cotton is an important article in international trade.

Exporters:

The principal exporters are the U.S.A former U.S.S.R, Pakistan, Egypt, Mexico, Sudan, Nicaragua, Iran, Brazil, Syria, Columbia, Turkey and Peru. Other exporters are Uganda, Greece, El-Salvador, India, China and Tanzania.

Importers:

The chief importers of raw cotton are Japan, China, Hong Kong, Germany, Korean Republic, France, Poland, Italy, U.K, Belgium, Netherlands, Canada, India and Czechoslovakia.

India and China export inferior quality and import good quality of cotton.

Q. What is meant by textile and textile industry? Describe.

Ans. The textile means woven fabrics. Therefore textile industries are those in which fibers are used, such as cotton, wool, silk, jute and synthetic fibers like rayon, nylon, etc. Due to the invention of modern machineries and improved transport facilities, textile industry has made tremendous progress and now it is widely distributed throughout the world. Textile industry supplies us articles like clothing, carpets and hessien etc. Cotton, jute Linen, woolen, Silk, Rayon and Nylon are the important textile industries of the world.

Q. Describe the meaning of cotton textile industry in the present scenario.

Ans. **Cotton Textile Industry:**

Cotton textile industry is the most important of all the textile industries and supplies the clothing requirements of the greater section of the world population. No product is so widely used as cotton cloth. It holds a high place in a country's economy.

Q. What are the factors for localization of cotton?

Ans. **Geographical Factors:**

a) Raw Material:

Availability of raw cotton is the principal factor for the localization of cotton textile industry because raw cotton is the raw material for this industry. So the important raw cotton producing countries of the world have developed in this industry.

b) Climate:

The influence of climate on the cotton textile industry is very great. The cotton textile industry requires humid atmosphere for its localization. The fibers of cotton break if they are spun in a dry atmosphere. The localization of cotton textile industries in Manchester, Osaka, Bombay, and Karachi has been determined by the most climate of these places. But now a days this factor has been over come with the installation of the Humidifiers. This industry now can be located even in dry areas. But in that case the cost of production will be high.

c) Power:

Coal is the cheapest source of power. To have advantage of cheap source of power cotton textile industry tends to be localized near the coal fields. This industry may also be developed in the areas where other sources of power are available.

d) Water:

Another factor in the localization of this industry in the abundance supply of water. Water is necessary for use in the condensers of the steam engines and in the numerous washing operations of the industry. The influence of this factor can be seen in the localization of cotton mills in Lancashire, Blackburn or Burnley along the streams or canals.

Economic Factors:

1. Cheap Labour:

Cheap labour supply is the most important economic factor for the localization of this industry. The influence traditional skill of workers has been considerable in the development of cotton mills in U.K. , Japan, India, China and Pakistan.

2. Easy means of Transport and Communication:

Easy means of transport and communication also greatly influence the localization of cotton textile industry. Some times raw cotton is brought from distant places and even imported from foreign countries. Finished goods i.e. cloths are distributed through out the country and also exported to foreign countries. Hence a good transport and communication system is indispensable for the localization of cotton textile industry.

3. Market:

Market is also an important factor for the localization of cotton textile industry. There must be a ready market near at band for the finished products. It has been observed that the countries like U.K. Japan, Germany and U.S.A. command a vast market particularly outside their territory – a factor which insoired the development of this industry in these countries. The densely populated countries like India, China and Pakistan have vast home markets for cotton textile and hence the industry has made rapid progress in these countries.

4. Capital:

Cotton textile industry requires huge capital for its growth and development. In the areas where capital and other means of finance are available this industry can make a rapid progress.

Q. Enlist and illucidate main and other areas of cotton textile industry?

Ans. The leading cotton manufacturing countries of the world are U.S.A. China, India, U.S.S.R. Japan, Germany, France U.K., Brazil and Pakistan.

Cotton Manufacturing Industries:

1. North America:

U.S.A.:

There are three cotton manufacturing regions in the U.S.A.

i. New England Region or the North Eastern U.S.A.
ii. Central Atlantic States or region.
iii. The southern cotton growing states.

i. New England Region:

Rohde Island and Massachussets are the most important cotton manufacturing centers of this region. Many cotton textile towns have developed in the river valleys, such as Lowell on the Tannton river. But New Bedfords is the gratest cotton textile centers in this region. Fall river, Pawtucket and Woonsocket are other important cotton textile centers.

ii. Central Atlantic states or Region:

In this region, the principal centers of cotton textile industry are Pensylvania, New York, Maryland and Philadelphia. The mills of this area specialize in knitted goods and this region is the chief centre of U.S.A. hosiery industry.

iii. Southern Cotton growing states:

The great concentration is in North Carolina, South Carolina, Georgia, Alabama and Texas. Important textile centers are Chorlotte, Columbia, Augusta, Atlanta, Montgomery, Macon and Columbus.

2. Europe:

U.K.:

The cotton textile industry is highly concentrated in Lancashire and the adjoining areas. Eighty five percent of the workers engaged in the cotton textile industry are to be found in Lancashire, Cheshire and Derbyshire. Most of the remainder are in west Riding and Scotland.

Lancashire towns may be divided into two classes – Spinning towns and weaving towns. Towns on the northern sides of Lancashire are engaged in weaving while the southern towns specialize in spinning. Preston, Blackburn and Burnley situated in the drier Ribble valley are engaged in weaving while towns around Manchester i.e. Rochdale, Oldham, Bolton and Bury having damp climate are engaged in soinning. Cotton textile industry is also located in the lower Clyde area.

Russia:

During the Czrist regime cotton textile industry was developed in an area bounded by Moscow, Ivanova- Vosnesensk and Leningrad. This area still continues to hold supremacy. This regionlies away from the cotton fields of central Asia and Tanscaucasia which supplied the bulk of raw cotton requirements.

Central Asia:

In central Asia is the Cancasus Republics, Tashket, Ashkabad, Stalinabad, Farghana,Franza and Khojent in central Asia. Bunal Novosibrisk in the

Kuzentak basin are important centers of cotton textileindustry, cotton mills have also developed in Cancasus, Western Siberia and Ukraine.

Germany:

Although cotton mills are scattered through out the country but the Ruhr coal field and Saxony are particularly important. Bremen, Elber field Aachen – Duren, Munchen, Glad bach, Chemnitz and Zwickaw are important centers of cotton textile industry in the country.

France:

Today Alsace is a great center of production of high quality of cotton fabrics. Roven and the north east indusrial area (Lille, Roubiax, Tonrocoing) later drew ahead.today the industry is located in the northern coal field at Lille in and around Ronen, near the port of Lehavre and at Nancy, Belfort, Mulhouse and Colman in the Vosges area.

Other European Countries:

Milan, Camo and Bergamo in Italy, St. Gallan and Glaruns in Switzerland, Ghent and Brussele in Belgium, Barcelona in Spain and Lodz in Poland are other important cotton textile centers in Europe.

3. **Asia:**

Japan:

In Japan spinning and weaving operations are done in separate establishment. Whereas weaving mills are small and numerous. Spinning mills are largely concentrated in the Kinki region with Osaka as the main center in the Kwanto region around Tokyo and Yokohama and in around Nagoya. Osaka is known as the "Manchester of Japan".

India:

Though the industry has scattered over more then 75 towns in India, four areas lead in the production of cotton goods. These are Maharashtra and Gujrat, west Bengal, Tamil Nadu and Uttar Pradesh (U.P). in Maharashtra and Gujrat the important centers are Bombay, Ahmed abad, Sholapur, Poona, Nagpur and Jalgaon, in west Bengal cotton mills industry is mainly located in the district of Howrah, Hooghly and 24 Parganas. In U.P. Kanpur is the principal centre, other centers are Coimbatore, Madural, Salem, Madras, Mysore and Trirandrum etc. Cotton mills are also located in Delhi and at Gwalior, Indore and Rajnand goan in Madhya Pradesh.

China:

The important cotton textile centers of China are Shanghai, Tientsin,Tsingtao, Hankow. Nanking and Canton. The cotton textile industry of Shanghai grew with the help of foreign capital. New cotton mills have been set up in Manchuria and North China.

Pakistan:

The most important cotton textile center is Karachi. Faisalabad located in the midest of canal colony area of Punjab is next important cotton textile center in Pakistan. Other important centers are Mulatan, Lahore Sheikhupura, Rawalpindi, Muzaffargarh, Rahimyar khan in Punjab Hyderabad, Khairpur in Sindh. Peshawer, Kohat and Bannu in N.W.F.P. and Quetta in Balochistan.

4. **South America:**

Brazil:

The cotton mills are located in SaoPaulo, Minas Geraes, Rio – de – Janerio, Pernambuco and along the coast.

Other Countries:

Besides Brazil there are some cotton mills in Peru, Venzuela and Argentina.

5. Africa:

The leading cotton manufacturing countries of Africa are Egypt, Uganda and Sudan.

Australia:

Queensland is the only cotton manufacturing area.

6. World Trade:

Now a days, the principal cotton goods exporting countries are Japan, India, U.S.A. , U.K. , China, former U.S.S.R., Belgium, France and Pakistan.
The chief importers are Canada, Australia, Srilanka, Netherlands, Indonesia, Malaysia, and African countries.

Q. What is meant by Mining. State its importance and factors for exploitation?

Ans. Mining and its Importance:

A mineral is an inorganic substance which is produced by natural process. Mining is the process of taking minerals substances from the womb of the earth for the use of mankind. Minerals are so important in the history of human development that stages of development or progress have been named after them.
Minerals constitute the wealth and, as such, mineral resources are being explored and exploited in every country of the world. They are used as raw materials for many industries. The development and maintenance of manufacturing industries are their turn mainly on the use of minerals.
The U.S.A, former U.S.S.R, U.K. and Germany are economically and industrially developed due to abundance of variety of minerals.
In modern times, the development of Saudi Arabia is a dramatic story of how minerals transform a barren waste into a thriving land. Before the world war II, the country was mainly a desert. But as people from the west came in to exploit and develop the oil resources, a big programmed of public improvement began. But towns sprang up with modern amenities, thus oil created the start of modern nation.

Factors in which exploitation of minerals, depends:

The exploitation of minerals from a particular area depends on the following factors:

(i) The Size of mineral deposit:

Usually large size deposits are exploited first.

(ii) Percentage of metal content in the ore:

Ore to be exploited should contain a large percentage of metal content because it is economical.

(iii) Presence of sources of energy:

Cheap water power or other sources of energy are necessary for exploitation and processing the ore.

(iv) Depth and cost of mining:

the depth at which an ore occurs effect the mineral exploitation. Ores found near the surface of the earth are easy to exploit while those of great depth are difficult and costly to work upon.

(iv) Demand:

International demand of a particular mineral effects the exploitation. If the demand is high the deposit is extracted even in difficult circumstances.

(v) Transport Facilities:

Usually minerals are bulky so thy require cheap transport facilities for movement from pithead to industrial and other consuming centers.

(vii) Other facilities:

(a) Scientific and technical development (b) Capital investment
(c) Availability of labor (d) Government policy.

Q. Classify minerals and its types also:

Ans. Classification of Minerals:

Minerals may be classified under the following groups:

(i) **Power:** Coal, petroleum, natural gas and water power.
(ii) **Basic metal:** Iron.
(iii) **Ferro – alloy metals:** Manganese, chromites, nickel and Tungsten.
(iv) **Non-ferrous metals:** Copper, lead zinc, tin, mercury, and aluminum.
(v) **Non-metallic metals:** Mica, sulphur, salt potash, magnetic, graphite, and lime stone.
(vi) **Precious metals:** Gold, silver, platinum, and diamond.

Q. What is meant by coal?

Ans. Coal:

Coal is a sedimentary deposit formed by the slow action of pressure and heat on dense forests buried in the past due to earth movements and earth quake. The earth was covered in many areas by dense vegetation in the Carboniferous era when the main coal deposits of the world were formed. The principal constituents of Coal are Carbon, Hydrogen, moisture and ash and upon them the heating power of Coal depends.

Important Use of Coal:

Coal is a very important Source of inanimate energy of power. Till the beginning of this century was responsible for over 90 percent of the total energy supplies in the world. Although petroleum and natural gas have become alternate sources of energy coal is still significant as a source of power or energy as it supplies about 30 percent of total

energy requirement of this world. It is used both commercial and industrial purposes. Its main function is to run the factory, locomotives and the steam-ship. It is also used in domestic purposes. The rise of large scale industries and the expansion of modern means of transport have only become possible since the use of coal for the generation of power, otherwise, the use of Coal has revolutionized, trade and transport.

Kinds or types of Coal:

Coal is a carbonaceous matter. In general the quality of coal depends upon its heating power. There are many different types of coal and they are frequently named according to the use to which they are most suited. The chief types of coal may be stated as follows:

(a) Anthracite.
(b) Bituminous.
(c) Lignite or Brown Coal.
(d) Peat.

Anthracite:

Anthracite is the best variety of coal. It is a hard coal and is relatively free of moisture. The amount of fixed carbon may be as high as 95%. It burns with a little blue fame and gives practically no smoke. It has a great heating capacity and leaves little ash after burning. It is black in color and is lustrous. All these characteristics of An thracite coal make it valuable and popular for central heating purposes in homes and large buildings in cold countries of thee world. A deposit of anthracite coal is fairly small in the world.

Bituminous:

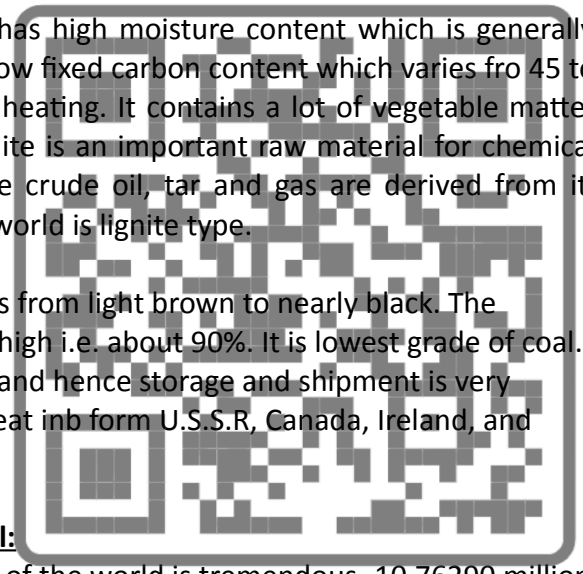
Coal includes the ordinary house and steam coal. It is of medium quality. It contains about 80% of Carbon. Its colour usually black. It burns with yellowish flame and are smoky. It is used for domestic purposes and also for the manufacture of coke which is very much important in iron and steel manufacture. About 80% of the worlds coal production is of bituminous variety.

Lignite and Brown Coal:

This type of coal is brown in color. It has high moisture content which is generally 40percent of the total weight. It has a low fixed carbon content which varies fro 45 to 60 percent and hence low capacity of heating. It contains a lot of vegetable matter that is why its structure is woody. Lignite is an important raw material for chemical industry and important by-product like crude oil, tar and gas are derived from it. Nearly 45% of the coal deposits of the world is lignite type.

Peat:

Is not coal in strict sense. Its color varies from light brown to nearly black. The moisture contents of peat is extremely high i.e. about 90%. It is lowest grade of coal. It contains very little carbon. It is bulky and hence storage and shipment is very expensive. There is a large deposit of peat inb form U.S.S.R, Canada, Ireland, and Finland.



Q. Describe the world reserves, briefly?

Ans **World Reserves and Production of Coal:**

The volume of the known coal reserves of the world is tremendous- 10,76290 million metric tons, sufficient for other 1500 years at the present rate of consumption. The following important facts about coal may be noted.

Coal reserves are most unevenly distributed

90% of the world's coal reserves are found in three countries viz, former U.S.S.R., U.S.A, and chine, all in the North hemisphere.

More than half of the world's coal reserves are found only in former U.S.SR.

The world production of coal is more than 3800 million metric tons per annum. At the beginning of this century, the world production was about 1000 million metric tone while at the beginning of world war II in1939. it was about 1500 million metric tons.

Distribution of coal:

North America:

U.S.A:

U.S.A. is the biggest coal producer in the world. Coal occurs nearly in every state of the country. But the most important deposits occur in the eastern part of the U.S.A. the most important coal fields are the following:

(i) The Appalachian coal fields.
(ii) Eastern interior coal of fields.
Western interior coal of fields.
Northern great plains and Rocky mountain coal field.
The pacific coast coal field.

Canada:

The coal output in Canada is small, although it has vast reserves of lignite in Manitoba and Saskatchwan. Canada's coal production meet about 40% of her own needs. The rest imported from the U.S.A. the main coal fields occur in Nova Scotia, Albeta, Brunswick, Saskatch-wan and British Columbia.

South America

South America has small and widely scattered coal reserves. At present chile, Colombia, and Brazil are the only countries with substantial coal output/. In brazil coal producing areas are Rio Grande-do-Sul, Santa Catamia, Parana and Sao Paulo. Colombia coal reserves are estimated at 40,000 million metric tons which is about 60% of Latin America's coal reserves.

Europe:

Great Britain:

On account of industrial revolution and the invention of steam engine and loco motives. Britain was the leading coal producer in the world till the end of 19th century. To day she ranks sixth in the production of coal.

The coal fields of Great Britain are widely distributed and have coal of many different types. The principals coal region are: (i) Scottish lowlands (ii) Pennine range and south wales. The important individual coal fields are Northumber land. Durham, Yorkshire, Derbyshira, Nottigham, Lancashire, North Wales, Bristol and Warwickshire. The important coal fields are Ruhr, West-phalia, Saar and Bavaria in former West Germany and Saxony and Silesia in former East Germany.

France, Belgium, and Natherlands.

France and the Netherlands depend for their coal on the somber. Mense field lying on the border of France and Belgium. France gets coal from the newly developed Lorraine coal field also. Belgium gets coal from coupine coal field. Coal mining in the Netherlands is mainly confined to the south of Linburg Province.

Poland:

Poland is one of the important coal producing countries not only in Europe but also in the world. Her coal is worked at upper Silesian; the coal is of bituminous type.

Russia and central Asia:

Former U.S.S.R.

Former U.S.S.R. contains about 53 percent of the world's coal reserves. The important coal fields are the following:

(a) The Donetsk coal basin Donbas area.

(b) The kuzntsk coal basin.
(c) The Karaganda coal Basin.

The other coal fields in the former U.S.S.R. are Tula field near Moscow and Chelyabinsk coal field in southern Urals. The Siberian coal fields have large reserves but they lie unutilized in remote and thinly populated regions. They still await exploitation and development.

Asia:

China:

Huge coal deposits are reported to be in existence in China. It is the third biggest coal producer in the world. Coal deposits are widely scattered, they are far away from the industrial regions and from areas of dense population. The main coal fields lie in the north-west regions of Shensl, Shansi, Honan and Kansu. Bituminous coal of very good quality is found nearly in all the coal fields. China has vast coal reserves in Manchuria. **Japan:**

Small coal field occur in Japan in North Kyushu, Houshu and Hokkaido. The quality of coal varies from low-grade bituminous to high grade coking coal.

India:

The principal coal field of India are located in the eastern part of the country mainly in west Bengal and Bihar. They are Raniganj Jharia, Bokaro, Ramgarh, Karonpura and Rajmahal.

Other coal producing regions are Maghya Pradesh, Assam, Arunachel Pradesh, Tamil Nadu, Rajasthan and Gujrat.

Pakistan:

In Pakistan, some coal is produced in Baluchistan. Salt range of Punjab, Larkana in Dadu district and Jhumpir, Metting in Thatta district both in Sindh.

Coal is also found in Thar area.

Other area in Asia:

Besides the above countries coal is found in Malaysia, Indo-china and Korea.

5. Africa:

South Africa:

In south Africa, Natal Cape and Good Hope area and Transvaal are the leading producers of coal. The best coal comes from Natal. Coal is mainly used for generation of power to be utilized at gold mines at Johannesburg and diamond mines at Kiznberly.

6. Other countries:

Nigeria and Zimbabwe have also large deposits of coal in Africa.

Australia:

Australia's coal reserves are concentrated in mainland eastern states. New South Wales produces more than 60% of Australia's coal. Queens land and Victoria are other producers of coal.

Newzealand:

In Newzealand , there are two coal fields namely, west port and stay-mouth on the west coast of the South Island.

7. World Trade in Coal:

Despite importance of coal as a commercial source of energy, only about 5% of all mined coal is exported. It is to be noted that four areas – Western Europe, former U.S.S.R. and Eastern Europe, the North American countries

and Japan export and import about 95% of coal of the world. It should be remembered that all these nations are economically advanced.

Major Exporters:

Major exporters of coal are the U.S.A., U. K., Germany, Poland, former U.S.S.R., South Africa, Australia and India.

Major Importers:

France, Italy, Switzerland, Canada, Brazil, Belgium, Luxemburg, Netherlands and Japan are the major importers of coal. Pakistan also imports coal from abroad.

Q. Describe "Petroleum", its importance and uses, briefly.

Ans. **Definition in Reference:**

Petroleum is the name derived from two Latin words. "Petra" which means rock and "oleum" which means oil. So petroleum is rock oil. It is believed that petroleum was derived from organic plant and animal life which lived in large quantities in the sediment of the earth millions of years ago. The organic matter, which flourished on the ocean floor bottoms, died and was buried by layers of rocky fragments deposited over it, later increased pressure and heat caused a partial distillation of organic matter, resulting in oil and gas formation. Petroleum is found in sedimentary rocks only.

Petroleum usually occurs with gas and water in the synclines of sedimentary rocks. Gas being lighter than oil lies above it and water being heavier occupies the base. Oil is raised from the mine by drilling wells. From the oil fields it is now usual from to pump the oil through pipes and many pipe line are hundreds of miles long. In this way the oil may be taken to ports for shipment, to industrial centers or to convenient points for refining. The first oil bore was dug at Titusville, Pennsylvania in U.S.A. on 27th August 1859.

Importance or uses of Petroleum:

The liquid, when originally lifted from well, is known as "crude oil" which is mixed with various rough things. So before it can be used for any purpose, it is required to be refined in the refineries. By refining varieties of products are obtained. Its chief products are petrol or gasoline, kerosene, fuel oil, diesel oil, lubricating oil, paraffin wax, Vaseline, naphtha, benzene and asphalt etc.

Oil is an important source of liquid energy in many countries of the world. It is the best source of energy for transportation services. The world's automobiles, aeroplanes, trucks, buses, tractors are run on petroleum. Most of the ships consume mainly oil these days for their energy or power; Railways are switching more and more to dieselization of locomotives nearly all over the world. Various types of agricultural machines consuming oil are used on farms. Oil fuels provide energy to run the machines in many factors. Fuel oil is burnt in generating stations to produce steam which causes generators to move. These generators produce electric power which is used for various purposes. In modern industries lubricants, which are derived from petroleum are used for lubricating gears and pistons of machines. There are hundreds

of other ways in which petroleum used. It is used for making various cosmetic products like cold cream, lotions, perfumes and ointments. For paving roads, asphalt, an important petroleum product is used. Artificial petroleum or synthetic rubber and

synthetic plastic consume petroleum. The importance of petroleum in the development
of modern industries can therefore, hardly be exaggerated. In fact its importance to the industrial progress of a country is so strongly felt that all the major powers of the world are seeking to gain control of oil fields and are searching diligently for possible reserves not yet discovered.

Q. Describe the areas of crude oil reserves of the world.

Ans. Middle East contains the largest petroleum reserves in the world, about 50% of the world's oil reserves are found in four Middle East countries, namely Saudi Arabia, Kuwait, Iran and Iraq, outside Middle East, the former U.S.S.R. and U.S.A. contains about 17% of the world's oil reserve, most of the oil reserve are concentrated in the Northern Hemisphere, Western Europe and Japan contain negligible reserves of oil.

Producing Zones:

The petroleum producing countries of the world can be divided into the following zones or regions:

The American Zone:

This zone extends from the Appalachian region in east of U.S.A. through the central states of the country to Mexico in the south and then still further south up to Venezuela in South America. A branch from central U.S.A. extends westward to the rocky mountains up to California.

The Middle East and East European Zone:

This zone extends from Rumania – Eastern Europe through the Cancasus region in former U.S.S.R. to Middle Eastern countries viz. Saudi Arabia, Kuwait, Iraq, Iran and U.A.E.

The South East Asian Zone:

This zone extends from Assam in India through Burma to Indonesia.

Other Areas:

Among other areas, three distantly located countries are particularly important namely China, U.K. and Nigeria.

Cuntries:

North America:

U.S.A:

The U.S.A is far the most important petroleum producing country – contributing nearly 19% of the worlds out put. This country alone produces about one-eighth and consumes about one-third of all oil

The Appalachan oil fields:

The Illinois and South- west Indiana Oil Fields:

The Lima –Indiana Fields:

The Mid Contenent Oil Fields:

The Gulf Coast Oil Fields:

The Rocky Mountain Oil fields:

The Californian oil fields:

2. Mexico:

Mexico had dropped to 5th place among the world's producers. Her oil fields are located near the gulf coast around the great oil ports of Tampico and Tuxpan. With the discovery of Poza Rica and Faja de Oro fields in the state of

Veracoz in 1938, the production began to increase again. Recently Reform and Samaria field were discovered.

3. **Canada:**

Canadian oil fields are located near Edomton in Alberta. Besides these there are some oil fields in Southern Ontario. At present Canada is one of the major producers of oil in the world, and its production is on the increase.

4. **South America:**

Venezuela:

Venezuela is a significant producer of oil in the world she is also the leading exporter. Her oil fields are located in the Maracaibo Basin. The important oil fields are Lagunillas, Mene Grande and La Rose. Recently Gas Drilling has started in Orinco Valley. Most of the oils are exported to the U.S.A. and Europe.

5. **Columbia:**

Columbia ranks next to Venezuela among the South America countries in oil production. The oil comes from Magdalena Santandar field opened in 1962. oil is refined at Berranca Berneja. Most of oil is exported.

6. **other countries:**

There are all oil fields in Peru, Argentina and Brazil. They produce oil on small scale. Bolivia, Ecuador and Chile produce negligible quantity of oil.

7. **Europe**

Russia & Central Asia (former USSR)

Former U.S.S.R is the biggest producer of petroleum in the world. In 1961 former U.S.S.R displaced Venezuela as the second largest producer of oil. Her oil region extends from Cancasus to the Ural Mountains. Baku on the Caspian Sea is the principal oil field. From Baku, oil is taken by pipeline to Batum, a port on the Black Sea. Gronzy and Maikop to the north or Cancasus are the other oil producing fields of the former U.S.S.R. in recent years the Ural region is also producing petroleum in increasing quantities, today the Ural is the second largest oil producing area, of the U.S.S.R. Ufa in the south western slopes of the Ural has become so important in the production of oil that it is now known as second Baku.

In former Asiatic Russia there is also largest reserve of oil. Uzbek, Kazakh and Turkman are the important oil producers. North Sakhalin in the far east is also notable producer of petroleum.

8. **Rumania:**

Rumania is an important producer of petroleum in Europe. Her oil fields are located at the southern foothills of the Carpathians from Succeava in the north to the Damboritza valley in the south Damboritza valley, Parhova, Buzan and Bacan are the main oil producing areas.

9. **U.K.**

The U.K. has emerged as an important producer of petroleum. Most of the oil fields have been drilled in the North Sea.

10. **Other Countries in Europe:**

Other important oil producing countries are Hungary, Czechoslovakia, Poland, Germany and France. A small quantity of petroleum is also produced in Albania, Austria, Bulgaria Italy, Netherlands and former Yugoslavia.

4. Asia:

The Middle East:

Most of the world's energy sources are located in the Middle East. The countries of the middle East viz. Saudi Arabia, Kuwait, Iran, Iraq, U.A.E. Qatar, Bahrein bordering the Persian Gulf have rich deposits of petroleum. More than half the total resources of petroleum of the world are located in the middle East. The oil fields of Middle East are mainly in the south western and northern portion of the Persian Gulf. The major oil fields are the following.

Iran:

Iran is an important producer of petroleum in the middle East. The principal oil fields are located in the South west of the country around Khuzistan. The main fields are Masjidi Sulaiman, Haftkel, Gach Saran, Agha Jafri, Naft Sajid, Lali and Ahwaz.

Petroleum was first produced from Masjidi – Sulaiman field in 1908. Output steadily rose just after world was I. other fields were developed mainly during or after world war II. There are pipelines from theses oil fields to Abadan, a part on the Shatt-el-Arab. Today Abadan is the largest oil refinery centr in the world. Petroleum plays an important role in the economy of Iran.

Iraq:

The main oil fields of Iraq are Kirkuk, Zubair, Rumalla, Ain Zaleh and Khaneh. The Kirkuk oil field was first developed in 1927. The oil movers by pipelines across the Syrian desert to Halfa and Tripoli on the Mediterranean coast. Another oil field further to the south east, occurs at Naft-Khaneh. A refinery has been constructed at Alwand, at a distance of about 50 km, from the oil field. A new oil refinery has been constructed at Basra.

Kuwait:

Kuwait possesses about 11 percent of the free world's proved petroleum reserves. Just before World War II oil was found in Burgan district. Exploitation

on a large scale commenced soon after World War II in 1954. The Burgan oil field with two adjacent centers of Ahmedi and Mugwa has the largest number of oil fields in the Middle East. Kuwait's oil is of good quality. Crude oil moves to a refinery at Min-al-Ahmadi on the Persian Gulf

Saudi Arabia:

Saudi Arabia has the largest oil resources in the world. The principal oil fields are Ghawar, Abqaiq, Qatif and Dammam. Ghawar, field the largest field in Saudi Arabia was discovered in 1951. oil moves by pipelines to refineries installed at RasTanura and Bahrein on the Persian Gulf and Al-Saida on the Mediterranean coast.

Bahrein:

Oil reserves of Bahrein are quite small. A refinery has crude oil and also a part of Saudi Arabian output.

Qatar:

In Qatar peninsula, oil was discovered in 1939 at jabel Dukhan. But work could be resumed in 1950, because of world war II.

U. A. E:

The United Arab Emirates (U.A.E) have emerged as one of the major oil producers in 1970's. their economic prosperity is dependent upon a single commodity namely oil. Abu Dhabi is the leading producer where oil was struck at Murban in 1959. other oil fields discovered are Abu Hasa, Abu Jidu, Umm Saif and Zakum. Sharjah is a relatively small producer of oil.

South East Asia:

Oil is produced in a number of countries of South East Asia, but the major producer are china, Indonesia, Burma, India, Japan, Pakistan and Brunei.

China:

China is emerging as an oil giant and one of world's ten largest crude oil producers.

Initially, the Chinese petroleum industry was developed on the Yumen, Karamai and Tsadam basin fields. All these areas are in the interior of the country far away from the main consuming areas. The discovery of the Taching field in the north east region in the Northern Manchuria since 1964. has given a real boost to all production. It is the largest oil field in China. The new discoveries have been made in Tarin basin, Sungliao basin, North China basin, Szechwan basin, on shantung peninsula and in the province of Sinkiang.

Indonesia:

Indonesia is one of the biggest producers of petroleum in the far Eastern Asia. Production of oil comes mainly from Sumatra Indonesian Borneo, and Jawa. The Minas field in central Sumatra is an important oil field. Medan, Sabang, Djami and Palem League are the principal oil fields of Sumatra. Semarinda and Tarakan are main oil fields of Borneo. Rembang and Soerabya are notable oil fields of Java.

Burma:

The oil fields of Burma have been worked for long period. The oil fields are located in the Irrawaddy and Chindwin valleys, lying between the Shan plateau and Arakan yoma. Singu and Yenang yaung are the two important oil producing areas. Oil is transported by pipelines to Siriam near Rangoon where it is refined and exported.

Japan:

Japan petroleum fields lie along the Japan sea coast from Hokkaido on the north to Northern Honshu. The western part of northern Honshu includes two principal oil fields – Akitta and Nigata.

India:

Petroleum is one of the primary sources of commercial energy in India. Oil was first drilled at Dagboi in upper Assam. The second important oil field lies in the Cambay region of Gujrat. Most of the oil field are located in Assam and Gujrat. The biggest refinery in the country has been set at Mathura in U.P.

Pakistan:

In Pakistan, the production of oil is very prospective. Since 1947, many oil fields have been discovered in the country. Most of the oil fields are located in Potwar Plateau and lower Indus valley in the province of Sindh. Important oil fields are Khaskhaili, Laghari, Mazarat, Meyal, Balkhassar and Tando Alam etc.

Brunei:

Brunei produces a small quantity of oil. But its economy largely depends upon it. Seria and Miri are the main oil fields. The oil is taken to refinery at Lutong.

Other Countries:

Other petroleum producing countries of Asia are Israel, Turkey, Taiwan and Mongolia.

5. **Africa:**

Egypt:

Egypt is not only self-sufficient in oil but also export oil. The Gaza oil fields are located in the Sinai Peninsula. Petroleum in commercial quantities was first discovered at Gemsah in 1908. Production is now obtained from the fields at Ras Gharib.. Asl, Sudr, Ghardaka, Ras Matarma, Firan, Balaim, Abu Kodis, Abu Bahr, Karim, Al Alamaya and Qattarah.

Libya:

Today Libya is one of the important producer and exporter of oil in the world. Zelton is an important oil field located about 320 km south of Benghazi. Other important oil fields are Dahra and Beida.

Algeria:

Algeria is a notable producer of petroleum in Africa. Important oil fields are Edjele, Hassi Massoud and El Gassi.

Nigeria:

Nigeria has emerged as a major producer and exporter of petroleum. The oil fields of the country are located in the Niger Delta. Oil refineries have been established at port Harcourt and Kaduna.

Other Producers:

Other minor producers of oil in Africa are Gabon, Angola, Zaire, Senegal, Congo and Morocco.

Australia:

Australia has insignificant petroleum production. Exploratory work does not indicate that, as a continent. It is likely to attain a high place in oil production.

Exporters:

Major exporters of petroleum are the Middle East and Near Eastern Countries such as Saudi Arabia, Iraq, Iran, Kuwait, UAE, Libya, Egypt etc. Other exporters are Venezuela, Colombia, China, Indonesia, Burma, Nigeria and Algeria. The former USSR has become an exporter of oil and petroleum products.

Importers:

USA has become a very significant importer of crude oil. She imports not only from nearby sources of Venezuela and Colombia but also from distant sources like the Middle East and Indonesia. The north-west European countries and important importers of crude oil. UK, France and the Netherlandsimports considerable quantities of petroleum. Other importers are Germany and Italy. In Asia the most important importer is Japan. Other notable importers and Canada, Australia, Pakistan, India, Argentina.

Q. What is meant by iron ore, uses and classify its kinds.

Ans. Iron Ore:

Iron is the back bone of modern civilization. We have become dependant upon it in homes, agriculture farms cities machine automobiles trucks, trains and ships. Without it we would travel in wooden carts on dusty roads.

Uses:

Iron is the most useful of all the metals. No other metal has contributed so much to human progress and civilization as iron. The uses of iron are numerous and wide spread. Iron is indispensable for the manufacture of machinery, railway plants, ship building, aeroplanes, bridges, pipes, structure and so on. Thus it is the basis of whole modern industrial system.

Classification of Iron Ore:

Iron does not occur in nature as a pure metal it occurs as a compound in the form of iron are mined with a certain amount of earthy matter commonly called "impurities". Common impurities its iron ore are silica, calcium carbonate phosphorus manganese sulphur water and Titanium. There are many forms of ores. On the basis of iron contents in the ore, there are four chief iron ores. The ore containing less than 40% iron is uneconomical to mine.

For chief iron ores are the following:

1. **Magnetite:**
   This is the richest and the best type of iron ore. Magnetite is known magnetic iron ore because it is easily attracted by a magnet. It is a heavy black mineral with a metallic luster. Theoretically magnetite ore should condition 72% iron, but this theoretical content is seldom obtained in nature. Rich deposits of magnetic iron ore are found in Sweden, parts of the USA and in parts of former USSR.
2. **Hematite:**
   The best hematite carry about 69% of iron content. Its deposits are extensive in the world. Its colour is steel grey to iron black. It is as hard as magnetite but slightly less heavy. It has also metallic luster. The iron ores of Krivol Rog of the form USSR and Indiana ore of the USA fall under this category.
3. **Limonite:**
   It contents about 60% iron. But the moisture content is quite high. Its colour is yellowish brown. Cleveland of York shine, Midland of England and Lorraine in France produce ore of this type.
4. **Siderite:**
   It contains iron between 40 to 50 %. Its colour varies from ash grey nrown. The iron ore of New found land is of this type.

Q. Describe the world distribution of iron ore.

Ans. World Distribution of Iron Ore:

Iron ore deposits are scatted all over the world. The biggest producers of iron ore the world are the former USSR, Australia, Brazil, China, USA, Canada, Liberia, South Africa and India.

1. **North America:**
   a. **U.S.A.:**
   The U.S.A. is an important producers of iron ore in the world. She produced 55 million metric ions ore in 1991.
   Iron ore is found mainly in two areas viz. lake Superior Region and Alabama.
   i. Lake Superior Region:

High grade of haematite iron ore occur on the Western and South Western shores of Lake Superior in the States of Minnesota and Michigan.

ii. Alabama region:

Alabama region contributes about 10% of the USA iron ore. Ore occurs in the Birmingham valley and Red mountain. This region suffers from its limitation at a great distance from the ports.

b. Canada:

Canada is also an important producer of iron ore in North America. Important deposits of iron ore are found in Labrador and Northern Quebec. Other producing areas are British Columbia and Nova Scotia.

2. Europe:

a. Russia And Central Asia:

Former USSR:

Former USSR is the biggest producer of iron ore in the world. She produces about 30% of the world's total. It has made tremendous progress in iron ore production.

The production has increased from 33 million metric tons in 1940 to 250 million tons in 1987. the Ukranne and the crals supply 85 percent of all iron ore produced in the former Sovlet Union. Krivoi Rog is the main producing areain Ukarine. Deposits of Haematite and some Magnetite are obtained from this field. Kerch, another iron field of the Ukarine, produces about 5 percent of the total production. Kerch field has mostly limonite deposits.

The Urals is the second biggest iron ore producing region and the form USSR. The outstanding area is Magnitito gorsk. Much of the total production is obtaind from Ural. Other fields in and near the Urals include Kustanai fields in Kazakhstan, Pervouralsk and Baikal fields.

Other iron ore fields, which are receiving attention in recent years on the Fornaia Shoria field near Kuznets area of Siberia and the Kursk fields. Tula and lipetsk fields near Moscow and Karelia fields near Volgograd, the Amur valley and the little Khingan mountain.

France:

France obtains bulk of the iron ore from Lorraine fields, the second richest area of iron in Europe. Lorraine ore is rich in lime but the iron content is about 45%

other iron ore producing areas in France are Normandy and Pyrenees.

Sweden: Sweden supplies the best iron ore in Europe. The deposits occur in Kiruna, Gallivare and Dennemora. The ores are not abundant but they are noted for every high quality of Magnetite type.

Germany:

Germany obtains iron ore of low grade from Vogelsburg. Sudetanland, Silesia, Westphalia and Saxony, ores are not rich in iron content.

U.K.:

The bulk of British iron supplies come from Cleveland field of North Yorkshire, Lincoinshire. Northamptenshira Cumber and North Lancashire. Other producing areas are Midland and Scottish fields.

Spain:

Spain has large deposit ofiron ore in the North west ner the ports of Bilbao, Gijon and Santandar around the Bay of Biscay.

Other Produces In Europe:

Belgium, Norway, Luxemberg, Austria, Czechoslovakia and former Yogoslavia are other notable producers of iron ore in Europe.

3. **Asia:**

a. India:

India is an important producer of iron ore in Asia. The major iron ore producing states in India are Orissa, Bihar, Madhya Pardesh, Karnataka and Goa. Minor producing states are Maharashira, Andhara Pardesh, tamil Nadu, Rajasthan and UP. Most important iron ore producing centres are Noamundi, Badampahar, Gourmahisan and Gua. They are all close to Jamsedpur, where a modern Iron and steel industry has been established.

b. China:

China is another important producer of iron ore in Asia. Iron ore deposits in China are widely scattered. The most important deposits occur in Manchuria near Mukden. Other areas of rich iron ore deposits are Hopei province and Shantung peninsula.

c. Japan:

Japan has little deposits of iron ore. There are only two important iron ore mines in Japan. One at Senin on the east coast of Honshu and the other at Muroran in Hokkaido.

Other Countries Of Asia:

Malaysia, Philippines, Korea (democratic) and Turkey are other producer of iron ore in Asia.

4. **Africa:**

Africa accounts for about 10% of world's output of iron ore. Most of the supply comes from North African countries, Algeria, Morocco and Tunisia. Other notable producers of iron ore are Liberia and Mauritania. Minor producers are Sierra Leone, Guinea and South Africa.

a. South America:

Brazil:

Brazil has the largest deposits of high grade iron ore. The main iron ore mining regions are the districts of Minas Gerais and Itabira.

Chile:

Tofo iron ore mine is noted for high grade, which contains more than 60 percent iron. Other area in Chile is La Serena.

Venezuela:

Venezuela has increased its out put since 1955. the iron ore mines are located in lower Orinoco valley. The Serro Bolivar region is the main producing area in Venezuela.

Other iron ore producing country in South America is Peru.

Australia:

Australia is not important producer of iron ore. The principal iron ore mines of the country are located in the Middle Back range in South Australia. Large reserves have been discovered in Western Australia.

5. **World Trade:**

The international trade of iron ore is not very extensive.

a. Exporters:

Major exporters of iron ore are the North African countries, Chile, Sweden, Philippines, Malaysia, India, Australia, Brazil and Spain.

b. Importers:

The USA is an important importer of iron ore, although she is the second largest

producer of iron ore in the world. U.K., Germany, Belgium, France, Italy are other important importers of iron ore. Pakistan also imports iron ore from abroad.

Q. What are the factors for localization of iron and steel industry?

Ans. Factors Of The Location Of Iron And Steel Industry:

Geographical Factors:

The location of iron and steel industry depends on the following geographical factors:

a. Proximity Of Iron – Ore And Other Raw Materials:

Iron ore constitutes the principal raw material for the iron and steel industry. Therefore, the great iron and steel industry is concentrated near the larger deposits of iron – ore, or those particularly rich in metallic iron or those readily accessible. Lime stone, manganese, tungsten, nickel and other ferroalloy metals are also required for the manufacture of steel. Hence presence of all these ferroalloy metals is also the important factor for the growth and development of iron and steel industry.

b. Proximity To Coal:

The melting of iron – ore requires such a large quantity of fuel that the industry is rarely developed in regions deficient in coal. Hence the iron steel industry is developed close to the coal deposits rather than near deposits of iron – ore. Since coal is much bulkier material than iron – ore and the quantity of coal needed for smelting is unusually higher than that of iron ore, the great metallurgical centuries therefore concentrated on sites which excess to the source of coal. Thus coal exerts a stronger influence on the location of the iron and steel industry than the iron – ore.

c. Availability Of Water And Large Tracts Of Land:

Water is needed for cooling. Washing and steam and so is an important factor in determining the site for the iron and steel industry. More over the various operations connected with production of iron and steel can not be carried on in a limited area. It is therefore, necessary to acquire a large tracts of land.

Economic Factors:

a. Nearness To Market:

Nearness to market is the most important factors for the location of the iron and steel industry. The products of this industry are not meant for final consumption. They form raw material for a number of subsidiary industries and therefore. Unless there is a big consuming market in the form of subsidiary industries like engineering goods, machines tools, automobiles, locomotives etc. the development of a large iron and steel industry would not be possible. Chicago – Gary region in the U.S.A. is developed in iron and steel industry because it is located near the market.

b. Good Transport Facilities:

Easy transport for moving in the bulky raw material and coal, and moving out the heavy steel goods is required. Water transport which is considered to be the cheapest means of transport is the best suited.

c. Labor:

A large supply of cheap skilled labor is also required for iron and steel industry.

d. Capital:

As iron and steel industry is a gigantic one. Its establishment requires a huge capital. The main obstacle to the development of this industry in under – developed economics is the lack of capital rather than a deficiency of suitable raw materials.

Besides these factors, favorable policy of the Government is other factor for the development of his country.

Q. Enlist distribution areas of iron and steel industry?

Ans. Distribution:

Iron and steel industry is widely distributes and its locations cover most of the industrialized areas of the world. Through iron and steel are produced in many countries, the bulk of out put comes from six great industrial nations of the world, namely the U.S.S. former U.S.S.R., Japan, Germany, the U.K. and France.

1. North America:

U.S.A.:

The U.S.A. is one of the largest producers of iron and steel in the world. The first iron and steel plant in the U.S.A. was established in September 1864-0 but the real progress

began after1875, when Andrew Carnegie erected the first integrated steel plant at Edger Thompson. There are six important steel producing centers in the U.S.A. there are as follow.

Canada:

Canada is not rich in iron and steel industry. Hamilton and Sault – Saint – Marie are important steel producing centers in Canada. They are locate in Great Lakes area. They receive the Lake Superior iron – ore, Appalachian coal an Michigan lime stone. Sydney in Nova Scotia is another important steel producing center in Canada.

2. Europe:

Great Britain:

Great Britain has been a pioneer in the manufacture of steel an until the last decade of nineteenth century she enjoyed leadership in making of steel in the world. But successively she was surpassed by U.S.A. (18990) Germany (1893) former U.S.S.R. (1934) and Japan and France occasional years. Still Britain is a major iron and steel country I the world.

The Black Country Area,

Birmingham, Coventry, Red ditch and Dudley are the important centres of iron and steel industry. Birmingham produces motors, railway equipment, cycles, machine tools, electrical apparatus and brass ware. Coventry produces needles and Dudley produces chains.

Sheffield Area:

The development of iron and steel industry in the Sheffield area is due to existence of local iron ore and water – power. Both light and heavy metal goods are manufactured in Sheffield. Sheffield is particularly famous for cutlery and arms, other important centers are Chesterfield, Rotterdam and Stocks Bridge.

Further north and outside the Sheffield area are Leeds on the river Aire having important iron and steel works and low Moor near Brad ford specializing in alloy steels.

The Northern East Coast:

The advantage of this region for steel industry are the nearness to iron – ore, the excellent coking coal of South Durham, the supplies of lime stone in the Pennies and facilities for importing high grade iron ore from Spain and Sweden. In this area important centers of iron and steel are Hartle Pool, Middles borough, Darlington, New Castle and Sunderland. Hartle Pool is an important center for shipbuilding. Darlington for railway engine and Middles borough is noted for engineering goods.

South Wales:

The important centers are New Port, Cardiff, Port Talbot, Swansea and Llanelly. Rolled and sheet steel are especially important. Tin plates and galvanized iron sheets are other important manufactures of south Wales.

Central Scotland:

The central valley of Scotland, with Glasgow, Coat bridge, Airdrie, Mother – well and Wishaw is another important steel making region of Great Britain.

Germany:

Germany is another important iron and steel producing country of Europe. The main advantage of Germany in the production of iron and steel is the abundance of coal near iron deposits. More over, the water ways of the country permit to easy transport of goods. The Basin of Ruhr River is the principal iron and steel producing areas of Germany. Hortz Mountains, Saxony and Upper Silesia are other important steel producing areas of Germany.

France:

In France the iron and steel industry has develop[ed in the Lorraine area with Briey, Metz, Nancy and Long way as important centers. Here coal is imported from Ruhr area. Another important steel producing centre has developed in the Sambre – Mense coal field where iron ore comes from Bormandy, Luxemburg and Lorraine and coal comes from Great Britain and Holland.

Belgium & Luxemburg:

These countries are interdependent for the development of their iron and steel industries. Belgium has non – coking coal while Luxemburg has iron ore. There is an unrestricted movement of coal and iron ore between these two countries. They export
crude steel.

Italy:

The iron and steel industry of Italy is based upon Eibe iron ore, imported coal and cheap hydel – power. Genoa, Plombine, Naples, Milan, Triesta, Toronto and Aosta are important steel producing centres of Italy.

Sweden:

The development of iron and steel industry in Sweden is due to local supply of iron ore, abundance charcoal from Great Britain and Germany. Sweden's specialty is high – quality steel. She exports high quality steel goods like hard wares, machinery, electrical apparatus and also semi – finished steel needed to make cutlery, tools, razor blades, watches springs, ball bearings and other products requiring high quality steel.

Other Countries:

Spain, Netherlands, Poland and Czechoslovakia are other important iron and steel producing countries in Europe.

Asia:

Japan:

Though, deficient both in coal and iron ore, Japan has become one of the leading producers of iron and steel in the world, Japanese iron and steel industry depends upon imported raw materials. Japan imports iron ore from Philippines, Malaysia, India, Canada, USA, Peru, etc. Coking coal is imported from Australia, China, and Korea etc. Japan lacks in alloy metals and manganese which are imported from various countries. Local iron ore deposits are found in North Honshu, Hokkaido. Coal producing area of Japan is Northern Kyushu and Hokkaido.

China:

The three most important steel producing regions of China are (i) South Manchuria (ii) Hopeh and Shantung (iii) The Yangtze Valley.

India:

India is one of the largest producers of iron and steel in the world. The principal iron ore mining areas are located in the States of Orrisa and Bihar. India is also self sufficient in coal, limestone, dolomite and various other ferro alloy metals. The only drawback is the limited supply of good quality coaking coal. Important steel centers in India are Jamshedpur in Madhya Pradesh, Bhadravati in Karnataka. Other centres are Durga pur and Bokaro.

Australia:

Australia possesses large quantities of coal, but her deposits of iron ore are limited. It has a limited local market and its distance from the foreign market is a great limitation to the development of iron and steel industry in the country. Steel plants are developed in New Castle and Port Kembla along the coast of New South Wales. Coal is obtained from nearby mines and iron from the Iron knob fields in the south Australia. A blast furnace for pig iron has been set up at Whyalla, which obtains coal from New Castle as a return cargo.

Latin American Countries:

In Latin America, the steel industry on modern lines has been developed in Argentina, Brazil, Colombia, Chile, Mexico, Peru, Uruguay and Venezuela. All these countries have valuable deposits of iron ore, coal and other raw materials, due to lack Capital and enterprise, they were unable to develop manufacturing industries. However, in the course of the last four decades these countries have embarked upon a plan of rapid industrialization. The important iron and steel plants are at Volta Re – Donda in Brazil, at Zapla in Argentina, at Monterry in Mexico, at Huachipato in Chile, at Chinbote in Peru, at Paz del Rio in Colombia and at Matnazar in Venezuela..

Africa:

In Africa, the iron and steel industry has been developed in the South Africa. The important steel manufacturing centers are Pretoria and Vareeninging in Transvaal and New Castle in Natal.

Worlds Trade:

The multinational trade of iron and steel goods is very wide. The industrially developed countries of the world are the chief exporters and industrially back ward countries are the main importers.

"Transportation"

Meaning:

Transportation means the conveyance of persons or goods from one place to another. The need for conveyance of goods arises from the fact that they are often produced in one place and desired in another. The transport of persons arises from the need of

individuals to go from one place to another to satisfy some need, whether connected with business or related to social, cultural or recreational interests.

Importance:

Transportation plays a significant role in the economic activities of man. Its importance is as follows:

i. Transportation is an important factor for production and distribution of goods.
ii. Transportation is indispensable for the growth of home and foreign trade.
iii. The industrial development of a country also depends to a great extent on the nature of development of her transport system.
iv. For the exploitation of minerals and forests, transportation is also essential.
v. Transportation is also necessary for the internal administration of a country.
vi. Transportation also helps the distribution of cities and urban development.
vii. Transportation is also indispensable for controlling famine, epidermic and attacks of agricultural crops by insects.

Q. What is meant by ship canals, discuss its types.

Ans. **The Ship Canal of the World:**

Ship canals are those through which the large vessels can pass. They are artificially constructed water – canals used mainly for navigation. The construction of ship canals has considerably influenced the development of trade and commerce along the world's important ocean – ways.

Types of Ship Canals:

There are two types of ship – canals:

(i) Those which cut across the isthmuses, such as Suez canal, Panama canal and Keil canal

(ii) Those which connect inland centres of trade with the Sea, such Manchester ship canal, Amsterdam ship canal and Stalin canal.

Q. Describe SUEZ CANAL, its importance and significance.

Ans. **The SUEZ CANAL:**

The Suez canal is one of the greatest water ways of the world. This canal cuts across the isthmus of Suez and connects the Red Sea with the Mediterranean sea. According to an agreement reached between Ferdinand de – Lesseps, a French enginner and Khediv Ismail of Egypt. The construction of the canal started in 1859. It took ten years time to construct this canal, which was opened in November 1869. The canal is 169 km long with a maximum width of 65 meters and a depth of 13 metres. The canal is at sea level through out and there are no lock gates in the canal. The canal connects three important lakes, the Great Bitter Lake. The Little Bitter Lake and Timsha.

As a ship enters the Suez Canal from the Mediterranian Sea, it will pass Port Said, a very important port and proceeding south will enter Lake Timsha on the bank of

which is Ismailia. From lake Timsha to Suez city, a ship passes through Great Bitter and Litter Bitter lakes.

The Suez Canal can handle 50 ships per day with tonnage upto 50,000. the time taken to cross this canal is about 12 hours. Ships can also pass through this canal during night as there is good arrangement of electric installation all through out the canal.

The canal was nationalised by the Egypt Government in 1956. On account of Arab – Israeli conflict, the Suez canal was closed in 1967. It remained closed for eight years and reopened for traffic on June 5th 1975.

Advantages of Suez Canal:

The opening of Suez Canal had a tremendous effect on world commerce and politics. It opened up a new route to Africa, Asia and Oceania.

Its main advantages are:

(i) A new shorter route has been opened between Europe and Asia, because before its opening, the ocean route between Europe and Asia was through the Cape route. It has reduced the distance between Liverpool and Karachi by 4500 miles, between London and Calcutta 4500 miles, London and Yokohama by about 3000 miles. Similarly the distance between London on the one hand and Colombo, Singapore, Kualalumpure, Hong Kong one the other have been considerably reduced.

(ii) The Suez Canal has provided not only the fastest but also the most economical line of transit between Europe and North America on the one hand and Eastern Hemisphere on the other.

(iii) The Suez route passes through the heart of the world and serves more than three – fourth of the population of the world, and thus offers unique opportunities for development of trade and commerce.

Disadvantages of the Suez Canal:

(i) Ships passing through this canal have been considerably hampered on account of high canal dues.

(ii) This canal is fairly narrow and hence it is difficulty for big ships to pass through this canal.

Q. Describe the PANAMA CANAL and its importance?

Ans. **The Panama Canal:**

The Panama Canal is the second largest ship canal in the world. It connects the Caribbean Sea with the Pacific Ocean across the Isthmus of Panama which connects Central America with South America.

The canal is owned by the USA Government. The construction of the canal was begun in 1907 and the canal was opened in August 1914. the canal is about 80 km long and about 13 metres deep. The width of this canal varies between 100 metres and 330 metres. A big reservoir has been constructed at Gatun, a river on the Isthmus of Panama. The water level of the canal is higher than the sea – level. Hence six lock gates have been provided in the canal for maintaining the proper water level. There are parallel rail lines on the side of the canal. The vessels are dragged from one end to another by electric driven rail – engine. This canal can handle 48 ships per day. It takes a ship about 8 hours to pass through this canal.

Advantages of the Panama Canal:

The USA and Latin American countries are the main Panama users of Panama canal. The main advantages of this canal are:

(i) The canal has brought the pacific coast of North America in close touch with its Atlantic coast. A large volume of inter coastal trade has resulted between the east and west of the USA.

(ii) The distance between the Pacific coast of South America and the Atlantic coast of North America has been greatly reduced and trade between these two areas has increased considerably.

(iii) Australia and New Zealand have also been brought nearer to the USA. The distance between New York and Sydney via Panama is 15520 km while viz the Suez it is 21440 km.

(iv) Japan has become nearer to the eastern parts of North America.

(v) The western sea boards of North America and South America have been brought nearer to Europe.

(vi) Panama canal has opened up a new route for Europe for going to Australia and New Zealand.

Disadvantages of the Panama Canal:

(i) Its potential capacity to handle traffic expansion is limited. Big commercial cargo liners or tankers are too big for the canal.

(ii) Difference in water level makes it difficult for ships to pass through the canal. The system of locks is very inconvenient.

(iii) The Panama canal route passes through a thinly populated area which is economically undeveloped.

(iv) There are fewer port and islands on this route.

Q. Describe the Physical features / Physiographic regions of Pakistan. Briefly.

Ans. Physiographic Regions:

The main physiographic divisions of Pakistan are the Western Highlands and the Eastern Lowlands or the Indus Plains. They can be further divided into a number of smaller units.

Western Highlands

a. Complex mountains of the north

These mountains are the offshoots of the Himalayas which stretch like a bow in the north of subcontinent. The Himalayan Chains abruptly turn southward around Nanga Parbat, east of river Indus the mountain ranges generally run from east to west and to the west of river from north to south. The parallel mountain ranges are intervened by narrow and deep river valleys.

The important mountain ranges are the following:

(i) The Himalayas

The western parts of the Himalayas fall in Pakistan. There are a number of east-west ranges which have been given different names. They are as follows:

✓ *The Sub Himalayas or the Siwaliks:*

Their heights vary between 600 and 1200 meters. These ranges have been dissected deeply and cover the hills of Rawalpindi district.

✓ *The Lesser Himalayas:*

They lie to north of Siwaliks and rise to the height between 1800 and 4600 meters. They spread over Rawalpindi, Abbotabad and Mansehra district.

- ✓ *The Central or Great Himalayas:*

They are located north of the lesser Himalayas. They attain snowy height that is more than 4600 meters. They dominate Kohistan district. Some of the ranges are capped by glaciers.

(ii) The Karakuram

The famous Karakoram range lies to the north of great Himalayas. They average height of the range is 6100 meters. Godwin Austin (K-2) the second highest peak in the world (8610 meters) is located in Karakoram. A number of glaciers cover these ranges. Siachen, Hispar, Biafo, Baltoro and Batura are some of the important glaciers. The mountain ranges can be crossed with great difficulty. They important passes which are used for communication are the following:

- ✓ *The Babusar Pass:*

It is situated at a height of 14393 ft. and connects Abbotabad with Gilgit.

- ✓ *The Lawari Pass:*

It lies at a height of 10230 ft. and connects Chitral valley with Peshawar valley.

- ✓ *The Shandur Pass:*

Its height is 12205 ft. and connect Gilgit valley and Chitral valley.

(iii) The Hindukush Mountain

The Hindukush mountain is in the west of Karakoram on the western side of Pamir Plateau. The ranges take a southerly turn and run up to Kabul river on the northern and north western borders of Pakistan. The mountain ranges rise to snowy height and are covered with a number of glaciers. Some of the peaks rise to a great heights like Trich mir (7690 meters) and Noshaq (7369 meters). These mountain ranges have number of pasess such as Baroghil, Dorah, Shul, Shera Shing and Shingara passes. All these passes connect Pakistan with Afghanistan. A number of ranges branch off south of the mountain and pass through Chitral, Swat and Dir These ranges are deeply cut by the Chitral, Kunar, Panjkora and Swat rivers.

b. Potwar Plateau and Salt Range

The potwar plateau and Salt range are located south of the Complex mountain of the north between the Indus river on the west and Jhelum river on the east. Th northern border is formed by the Kala Chitta and Margalla hills.

The Kala Chitta ranges rise to an average height of 450-900 meters and extends for about 72 km. their western part is composed of sandstone and the eastern side of limestone. The ranges are cut by deep valleys. The Margalla hills are located northe east of Kala Chitta extending eastward upto Kurang river, rising upto an average height of 900 meters.

c. Inter mountain High Plains

These high plains and mountain ranges occupy the north-western parts of Pakistan and lie to the west of Indus river. They have typical ranges and basins topography. The river valleys of plains and hill ranges are well marked running parallel to ach other from west to east.

The high plains are formed by the Kabul, Kohat, Kurram and Gomal rivers. The deposits made by these rivers are sufficiently deep and fertile. South of Kabul river lies the famous Khyber Pass which connects Peshawar with Kabul in

Afghanistan. Other notable passes of this regions are Kurram, Tochi and Gomal. They are named after the rivers on which they are located.

d. <u>Sulaiman Mountain and Kirthar Ranges</u>.

The Sulaiman and Kirthar ranges belong to the Himalayan arc and separate Baluchistan with other parts of Pakistan. South of the Gomal river the Sulaiman mountain runs south wards for a distance of about 500 km. The Sulaiman mountain rises to an average height of 600 meters. The highest peak is Takhte Sulaiman (3487 meters) and other peak is Takatu (3470 meters).

The Sulaiman ranges merge into the hills of Waziristan and Safedkoh in the north. At the Southern end of Sulaiman mountain, the Bugti and Marri Hills run from the southeast to the north-west. The ranges are difficult to cross. The Bolan is the main river of this region, along the valley of which lies the famous, Bolan pass which connects Quetta with Sibi.

The western border of the Lower Indus plain is formed by the Kirthar range. These hills are not so high, their average height it about 2000 meters. Their height decreases south ward, descending to a height of 300 meters near the Arabian Sea. In the South, the hills are drained by the Hub and Lyari rivers which flow into the Arabian Sea.

e. <u>Balochistan Plateau</u>.

The large Plateau of Baluchistan which is about 300 meters high lies to the west of Sulaiman and Kirthar Ranges. The plateau has a complex and rugged relief covered with mountains and hills, as well as several basins lying these areas between these hills and mountains.

The Taba Kakar Range and Chagai hills in the northe separate the plateau from Afghanistan. The Khojak Pass near Chaman and Gonsheru Pass in the Chagai hills are used for movement between Pakistan and Afghanistan. The Siahan, the Raskoh, the Central MAkran and Brahui hill lie in the centre. The Hala and Pab hills lie in the east. The coastal Makran range Skirts the South of the Plateau.

The important basins are Zhob valley and Baji valley in the north, the Quetta and the MAstung valley the centre, the Hingal and the Ketch in the south. The eastern part of the plateau is occupied by the Lasbela plain which is formed by the Porali river.

In the north western part of the Plateau between Chagai hill and Siahan hill there is a large area occupied by an extensive desert with sand-dunes. This is a region of inland drainage with a number of Playa lake (Saltlakes) locally called “Hamun”. The most important Playa lake of this region is “Hamun-i-Mashkel”.

The only rivers of importance are Zhob which flow into Gomal river in the north and Porabi, Hingol and Dasht which flow into the Arabian Sea in the south. Most of the rivers become waterless in dry season, having gavels and rock fragments in their beds.

The coastal plains along the Makran coast are very narrow. At many places the hills project into the Arabian Sea.

<u>Eastern Lowlands or the Indus Plains:</u>

South of the Himalayas and Salt range lies a vast plain stretching south to the Arabian Sea. As it is drained by the Indus and its tributaries it is usually called the Indus plain.

River Indus is about 2900 km long. The river Indus flows from east to west in a valley several miles deep from its sources in the Mansavower lake up to Sazli. Then the river takes a southerly direction and cuts the mountains by deep gorges. The mountainous journey ends at Kalabagh where the Indus enters the plains. On entering the plain a number of small tributaries flow into Indus from the west. The Kurram, Tochi and Gomal are the important ones. The tributaries of the Indus from the east are large rivers. They are the Jhelum, the Chenab, the Ravi and the Sutlej. The River Beas joins the Sutlej (in East Punjab, India) before it enters Pakistan. These rivers combine at

Panjnad (the five rivers) and flow as one river for about 70 km. before joining the Indus near Mithankot, South of it, the river Indus makes almost a lone journey to the Arabian Sea. The plains slope down from north to south. In the north, they rise to about 300 meters and drops to about 75 meters near Panjnad. From there they slope gently to the Arabian Sea. The average gradient or fall is one foot to a mile.

The Indus plains or Eastern Lowlands may be sub-divided as follows:

a. **<u>The Upper Indus Plain:</u>**

The Upper Indus Plain extends from Attock in the north to Mithankot in the south and lies mainly in the Province of Punjab. This vast plain is largely made of fertile alluvium deposited by the Indus and its tributaries. Near Sargodha, Chiniut and Sangla some old dry hills rise above the plain, they are known as Kirana hills. In the south east of the plain, there is Thar desert, which extends into Pakistan and India. The desert is known as Cholistan in Bahawalpur. To the west of the river Jhelum there is the Thal desert, which is being reclaimed by the canals.

The land which lies between two rivers is known as DOAB. The Punjab plain is therefore divided into several doabs.

Between Sutlej-Dias and the Ravi lies the Bari Doab. Its one third northern part lies in India. The Rechna Doab lies between the Ravi and the chenab and the Jech or Chaj Doab between the Jhelum and the Chanab. Between Jhelum and the Indus lies the larges of Doabs, the Sind Sagar Doab, which is also known as the Thal.

The active plains locally called Bet or Khadar Soil are narrow strips of land along the Indus River and its main tributaries, the Jhelum, the Chenab, the Rabi and the Sutlej. In this Khadar are erosion and deposition take place on a large scale during the rainy season. The best is most extensive along the Indus and the least extensive along the Ravi. The bets are absent from the southern part of the Ravi river.

The land in the centre of the Doabs rises to an elevated plain called “Bar”. The bars are separated from the adjoining flood plains by river cut bluffs ranging an height from 5 to 15 meters. They consist of old alluvium. The different bars are as follows:

Nili bar is located between the Sutlej and the old abandoned bed of the Beas and that between the old course of Beas and Ravi is Ganji bar. In the middle of Rachna Doab, there is the Sandal Bar, and in the Chaj or Jach Doab, the Kerana Bar. Another bar is located south of Sutlej in Bahawalpur. The southern most parts of the bars are dotted with sand dunes. A large part of

the Sind Sagar Doab is most likely occupied by bars but at present most part of it is covered with a desert called Thal.

The surface of the upper Indus plain is general has a gentle slope towards the south west. This has helped in laying canals which have turned the Doabs into excellent agricultural lands.

b. <u>The Lower Indus Plain:</u>

The lower Indus plain lies mainly in the province of Sindh. It begins at Kashmor some 90 km south of the Indus-Panjnad confluence. There is no apparent physical demarcation between the upper and lower Indus plain at this point, but history and tradition have long accepted this as the dividing place.

Below Mithankot, in Sindh, the Indus carries not only its own waters but also that of its, five big tributaries. The river Indus flows very slowly and the silt carried by it is largely deposited on its bed. The sloping of the plain is to the south with an average gradient of only one meter in 10 km.

The lower Indus plain is divided into two parts by the Indus river. The western part is mainly formed of old alluvium, locally called Khaddar. The river Indus has freely moved across this region, and has formed oxbow lakes locally called Dhoros. They are actually the abandoned channels of the river Indus. Small Salt lakes, which are called Dhands are another remarkable features of this region.

c. <u>The Indus Delta or Deltaic Plain:</u>

The Indus river has built a large delta at its mouth along the Arabian Sea. The apex of the delta has shifted its position towards south several times. Once it was close to Hyderabad. At present it is south of Thatta. Here the distributaries

of the Indus begin to spread out across the deltaic flood plain to the Sea. The uneven surface is marked by a network of flowing and abandoned channels. A coastal strip 8 to 49 km wide is flooded at high tide. The area is bounded by the Kalri and the Pinyari, the two former distributaries of the Indus. At present the Ochito and Haideri take off from the apex and they are the principal distributaries of the Indus river. The Indus Delta is still growing. The advance is mainly towards the south-west. At the coast barrier bars have developed. Inland there are extensive mud flats sliced by tidal channels. The inland limit of the mud flats is marked by a cliff. The deltaic plain has mangrove swamps and tamarisk groves in the western section. The eastern section is the Rann of Kutch, a saline marshy land. The coast is low and flat except between Karachi and the Cape Monze, where the Pab hills approach the coast. The old deltaic lands in the south have been reclaimed by the canals of the Ghulam Muhammad Barrage.

Q. Enlist and describe importance, problems and remedies towards agriculture of Pakistan. Briefly.

Ans. <u>Importance of Agriculture:</u>

Pakistan is primarily an agricultural country. The supreme importance of agriculture in the economy of Pakistan has by no means diminished despite the rapid-pace of industrialization in the large urban areas. Its share in the national income is about

30% and about 70% of the total population of the country comprises agriculturists and farmers.

Thus agriculture is the basic industry of Pakistan that not only feeds and clothes millions in the country, but also provides most of the commodities for export.

The total cultivated area in Pakistan is about 22 million hectare. Of this cultivated area, about 57% lies in Punjab, having vast alluvial plains and extensive irrigational facilities. One notable feature of cultivated area in Pakistan is that it increased 4.5 times from 1947-1948 to 1984-85. This has been necessitated by the increase in population and was made possible by increased irrigational facilities.

Agricultural Problems:

Though Pakistan is basically an agricultural country, but the yield of crops per acre is very low in comparison with other agriculturally developed countries. There are some geographical and economic factors for this low-productivity. These factors may also be termed as problems of agriculture. The main problems are given below:

a. Lack of the use of modern farming techniques:

This is the most important factor or problem of agriculture in Pakistan. Most of our cultivators follow the old tradition and cultivate their land with the help of wooden plough and a pair of bullock. Most of them do not know how to use the modern agricultural implements. That is why the yield is low.

b. Sub-Division and fragmentation of holding:

Individual holding of our cultivators are not only divided into many units due to the law of inheritance, but different units lie in different places. Due to this sub-division and fragmentation of land the modern scientific implements can not be used as a result the yield is low.

c. Soil Erosion, Salinity and Water-Logging:

Soil erosion, salinity and water logging are rendering valuable land unfit for cultivation. Due to the perennial canal irrigation, most of our land is becoming victim of salinity and water-logging and due to the soil erosion, the fertility of the soil becomes poor and as a result the soil are becoming less productive.

d. Lack of the use of fertilizers and good seeds:

Little use is made of natural or artificial fertilizers and good quality of seeds are seldom used as a result the yield is low.

e. Damages Caused by Insects and Pests:

A large part the country's crops is damaged every year by the attacks of insects and pests. But our cultivators have no effective control over pests and insects and thus the net result is low yield.

f. Lack of Capital:

Most of our cultivators are poor. They are living hand to mouth. They have no capital of their own. So they are unable to purchase better agricultural implements, fertilizers and good quality of Seeds.

g. Lack of Irrigational Facilities:

One of the major problems of agriculture in Pakistan is the problem of scarcity of water. Although most of the areas in the country have irrigation facilities still there are various parts where there is no irrigational facilities available and due to shortage of water, the yield is low.

Remedies or Solutions of Agricultural Problems:

The following measures may be under taken to solve the problem of agriculture in Pakistan..

No doubt the Government of Pakistan is trying its best to solve these problems. As a result the agricultural growth rate has increased, and agriculture is progressing towards the objective of self-sufficiency in food grains. But it is more important that good use should be made of land already under cultivation by increasing the yield per acre.

a. Mechanization of Agriculture:

Mechanization of agriculture is the key to yield better crops. Tractors play important role in mechanisation. Tractors in general are used on large farms. Besides tractors, tillers, combines harvesters, threshers reapers etc may be used for obtaining better and more crops.

b. Co-operative farming and consolidation of holding:

Co-operative farming may over-come the difficulties and problems associated with sub-division and fragmentation of land. Consolidation of holdings is one of the most important steps for undertaking measure to increase the yield of land.

c. Creation of Credit facilities:

Lack of capital or credit is one of the greatest obstacles on the way of modernizing of agriculture. The facilities provided by the Agricultural Development Finances Corporation, Co-operative Credit Society and Agricultural Development Bank should make easy to a large number of farmers.

d. Use of Better Seeds and Fertilizers:

Easiest way of getting better yield is the use of better seeds. Some arrangements should be made to distribute better and improved quality seeds to the farmers. The constant cultivation of land decreases the fertility of the soil. So fertilizers should be used to increase the fertility of the land and there by to increase the yield. Therefore, it should be also available to the former easily.

e. Protection against pests and insects:

Pests and diseases cause great damage to the crops about 10 t0 15 % of the crops are damaged by them every year. So constant measures should be taken to overcome these natural hazards. Plant protection measures have two aspects. Preventative and curative. Preventative measures comprise the breeding and treatment of seeds to be resistant to diseases and curative measures entail spraying with insecticides against pests and diseases. So these facilities should be easily available to the farmers.

f. More irrigational facilities:

Arrangement should be made for improvement of irrigation water in the country to avoid the aridity and variability of rainfall which has made agriculture uncertain in some areas of Pakistan.

g. Agro-educational and marketing facilities:

These should be provided to our cultivators, and means of transport should be developed in the rural areas.

Q. Enlist and describe the principal crops if Pakistan.

Ans. **Principal Crops:**

The agricultural crops of Pakistan may be grouped under two broad heads.

i. Food Crops.
ii. Cash Crops

i. **Food Crops:**

The principal food crops of the country are wheat, rice, millets (Jowar and Bajra)

Maize, Pulses, Barley and Gram.

ii. **Cash Crops:**

Among the cash crops of Pakistan, Cotton, Sugar Cane and Tobacco are by far the most important and minor ones are Mustard, Sesamum, Rape seed, ground nut and sunflower seed. These corps are produced for commercial purposes. They provide the main sources of purchasing power to our cultivators and hence

they are called Cash Crops. The Cash Crops are mainly exported. It should be noted that food grains are not included in Cash-Crop although they may be the source of income to the cultivators. The Cash Crops account for 16 percent of total cropped area.

Q. Define What is favorable conditions for growth in Pakistan.

Ans. **Introduction:**

Wheat is the staple food grain of Pakistan. It accounts for about 70% of all food grains of the country. Wheat has been cultivated in Pakistan from the time immemorial. In wheat production, Pakistan ranks 11th in the world and 4th in Asia.

Favorable Geographical conditions for its growth.

Wheat prefers mild temperature and a small amount of rainfall. It grows well in cold weather though a certain amount of heat is required for ripening the crop before harvest. In dry areas it is grown by artificial irrigation.

However the conditions necessary for its successful cultivation are:

(i) Mid Temperature

Wheat require a temperature of 10^{0}C during the vegetation period, and a temperature of 19^{o}C at the time of ripening.

(ii) Moderate Rainfall

The wheat plant requires an annual rainfall of about 75cm but can be grown even in areas having less than 15 cm of rainfall with the help of irrigation, and at the time of ripening it requires warm and dry weather. Rainfall at this time injures the plant.

(iii) Fertile Soil

Wheat requires a soil of high fertility and fine texture. Sandy loam soil is the best for its cultivation. Wheat, being on exhaustive crop requires the use of fertilizers every second or third year.

(iv) Level Land

The land must be level so that machinery can be extensively used. The best wheat lands are gently undulating with an efficient system of drainage.

In Pakistan, wheat being a Rabi Crop is sown in October – November and harvested in April – May.

Q. Describe the wheat growing region of Pakistan?

Ans. **Wheat Growing Region:**

Wheat is the most extensively grown crop of Pakistan. Although it is produced in all the provinces of Pakistan, but the climate and soil conditions for its cultivation occur over an extensive area of the Indus plain, particularly the Punjab where 70% of the total acreage is found.

1. **Punjab:**

   In this province the Rechna and Bari Doabs have the highest concentration. The main wheat growing districts are located in the canal colonies. They extend from Sialkot district in the north to Rahimyar Khan district in th south and from Kasur district of Gujrat, Gujranwala, Jhung, Sheikhupura, Sahiwal, Faisalabad, Bhakkar, Leiah, Tobateksingh, Khushab, Multan, Muzaffargarh and Mianwali. Second important districts are Vihari, Bhawalpur, Bhawalnagar, Jhelum, D.I .Khan, Attock and Rawalpindi.

2. **Sindh:**

   Important wheat growing districts are those having rich alluvial soils and canal irrigation facilities such as Nawabshah, Sukkur, Khairpur, Sanghar, Tharparkar and Hyderabad.

3. **N. W. F. P:**

   In this province, the notable wheat growing regions are located in the valleys of Kabul, Kurram and Gomal rivers. Important districts are Peshawar,Bannu, Mardan, Kohat and D.I. Khan.

4. **Balochistan:**

   Important wheat growing district is Nasirabad other notable district are Quetta, Pishin, Loralai and Sibi.

5. **Production, acreage and yield:**

   There has been a sharp rise in wheat production during the last three decades. The production of wheat in 1970 – 71 was 6.4 million tons which rose to 11.4

   million tons in 1980 – 81 and again it rose to 14.5 million tons 1990 – 91 and the total production in 1996 – 97 was 16.6 million tons.

   The increase of production was achieved by an increase in acreage and the yield of wheat per hectare. The yield increase is due to the use of fertilizers and introduction of high yielding variety Mexican wheat. The wheat position in general has improved with an increase in production. But the population is eaten up by the growing population.

Q. Describe Rice and its condition for growth and cultivation in Pakistan?

Ans. **Introduction:**

Rice is not only the second largest food crop of Pakistan but it also serves as a major source of foreign exchange earnings. Rice is cultivated in Pakistan mainly for commercial purposes, because the staple food for Pakistani people is wheat.

Conditions of Growth:

i. **Temperature:**

   Rice requires hot and moist climate for its growth. It requires a temperature of 27°C and a rainfall of more than 100cm during growing period. In Pakistan, rainfall is nowhere sufficient for rice cultivation. So its production is almost exclusively dependent upon irrigation.

ii. **Fertility of Soil:**

Rice requires a very fertile soil. Though it can be grown on a variety of soils, plain areas with fine textured Soil like clay loams are preferred as they retain moisture and water from being drained away to underground outlets. Rice is an exhausting crop and as such requires constant use of fertilizers and manure.

iii. **Water:**

Since the plant of rice like flooding at certain stages of its growth level land especially the alluvial Soil of the river valleys are most suited for its cultivation. In Pakistan, rice is grown mainly in Punjab and Sindh, in the canal irrigated areas of Indus plain, where abundant water is available for flooding of the fields.

iv. **Cheap Human Labour:**

Rice cultivation requires a large supply of cheap human labour as every work is done by hand, such as tilling of land transplantation of paddy plant, harvesting of the crop, husking and threshing of the paddy etc.

v. **Method of Cultivation:**

Rice is cultivated in two ways. Firstly the seed of rice known as paddy are grown in small bed on nurseries, from there the small plants of about 4" to 6" high are transplanted in the main field and there they are planted by hand in rows. Most of rice is grown in this way. Secondly the paddy is directly broad – cast in the fields. This method is used in some areas.

Q. What are main rice growing regions of Pakistan? Describe.

Ans. Rice Growing Region:

In Pakistan rice cultivation is mainly confined to the low-lying parts of Punjab plain and the flooded river and inundated canal areas of Sindh. To a small extent it is also grown in the sub-montane districts in the north and canal irrigated areas. It means rice is not grown as widely as wheat. Most of rice grown in Punjab is Basmati and that grown in Sindh is Irri-Pak.

1. Punjab:

Major Rice growing districts are located the north eastern part of the province. These districts are Gujranwala and Sheikhupura. They together account for 50% of rice production in the country. Second rice growing districts in this province are Sialkot and Okara. The minor rice growing districts are Gujrat, Sargodha, Lahore, Kasur and Sahiwal. All the rice growing areas have excellent canal irrigation facilities.

2. Sindh:

Most important rice growing districts are Larkans and Jacobabad. Secondary rice growing districts are Dadu, Shikarpur, Thatta and Badin and other minor producing districts is Hyderabad.

3. N. W. F. P and Balochistan:

They produce small quantity of rice. The valley of river Kabul in N.W.F.P and the districts of Nasirabad in Balochistan are notable rice growing areas.

4. Producing, Acreage and Yield:

Since rice is grown almost exclusively on irrigated land, recent improvement in the irrigation system have added to acreage and increased yield. The yield

of Irri-Pak variety is almost double those of Desi varieties. At present the yield of rice is about 1900kg per hectare.

Rice ranks next to wheat in acreage and production among cereals in Pakistan.

The production continues to make an onward march and the increase in yield per hectare has resulted in higher production.

5. Export of Rice:

The export of rice recorded a phenomenal increase since 1971-72 after the secession of East Pakistan (now Bangladesh) which used to consume surplus rice from West Pakistan (now Pakistan). Pakistan exports both varieties of rice – Basmati and coarse varities.

Q. Describe cotton and condition for growth in Pakistan?

Ans. Introduction:

Cotton is the most important cash crop of Pakistan and plays an important role in the economy of the country. The export of raw cotton and cotton manufacturers together remain on the top list of the export items of Pakistan.

Cotton has been grown in the Indus valley since earlier than 2500 B.C being white in colour, it is also known as Silver fibre of Pakistan.

Cotton is a white, wooly fibre surrounding the seeds in the fruit or ball of the cotton plant. The process of separating the seeds from the fibre in known as ginning. After ginning the cotton enters ibto trade channels.

The seeds of cotton known as Benola are equally important as they yield edible oil and oilkcakes. The oilcakes are used as for cattles and as a fertilizer.

Conditions for Growth:

i. **Climate:**

Cotton plant requires warm climate, a temperature of round about 24°C throughout the growing period. It requires about 189 to 200 frost free days and its growth is tampered if the temperature falls below 16°C.

ii. **Rainfall:**

It requires a moderate amount of rainfall. An annual rainfall of 60 to 100cm favours its growth. In areas of scanty rainfall such as the areas of our country, cotton is cultivated with irrigation. Dry sunny days are essential in the latter part of its growth at time of ripening of boll or pod.

That is why, the irrigated arid areas produce good quality of cotton. Rain during the harvesting time is harmful, as the cotton in the opening bolls is injured by rain water.

iii. **Soil/ Topography:**

The plant of cotton grow best on alluvial Soil, light Sandy Soil, loam or heavy clay. This soil must be capable of retaining moisture and well trained.

iv. **Rotation of Crops:**

Cotton is an exhausting crop and after a limited number of years, manuring or rotation of crop becomes essential.

v. **Insecticides and Pestisides:**

Cotton plant is very much susceptible to diseases. Proper application of insecticides and pesticides is essential to keep the diseases in check.

vi. **Cheap Labour:**

Among the economic factors, cheap human labour is an important factor, because picking of fibre is done by hand as soon as possible after the bolls have burst otherwise, dust, mud, rain combine ruin the drop.

Q. Describe growing regions and varieties of cotton?

Ans. 1. Varieties of Cotton:

In Pakistan two main varieties of cotton are cultivated (i) Upland cotton or American cotton or long staple cotton. (ii) Desi variety or short staple cotton. Upland cotton accounts for about 90% of the total cotton acreage of Pakistan and the remaining 10% is devoted to Desi variety, which is mostly used for mixing with wool.

Growing Regions:

Cotton is grown in the Indus plains which are formed by the alluvium laid down by the river and have irrigation facility. Upland cotton is grown in these plains.

i. **Punjab:**

The most important cotton growing districts are Multan, Vehari, Bahawalpur and Rahimyar Khan. Next important districts are Bahawalpur, Sahiwal, Jhang, Muzzaffergarh, D.G.Khan, Faisalabad, Okara, Sargodha, Mianwali, Bhakhar, Leiah, Tobateksingh, Rajanpur etc.

ii. **Sindh:**

In Sindh important cotton growing districts are Sukkur, Khairpur, Hyderabad, Nawabshah, Badin and Tharparkar.

iii. **N.W.F.P.:**

In this provinces mostly Desi variety is grown in the districts of Peshawar, Mardan and D.I. Khan.

iv. **Balochistan:**

A small area is devoted for growing Desi variety in the districts of Loralai and Lasbela.

v. **Production, Acerage and Yeild:**

The production of Cotton in Pakistan is increasing at a rapid rate. The increase in production and Yeild has been achieved in the upland variety of cotton. It has been estimated that 40% increase in Yield has been achieved by improvement in irrigational facilities 40% by application of fertilizers and 20% by improvement in plant protection, growing of improved variety etc.

As a consequence of these efforts, Pakistan is now fourth largest country in the world in respect of production and Yield of cotton.

Q. Describe sugar cane and its conditions for growth?

Ans. Introduction:

Sugar-cane is the second most important cash crop of Pakistan.

Sugar-cane is a thick-stemmed grass partly ressembling the maizeplant in appearance and rises to a height of 3 to 4 meters. Sugar and 'gur' are retained from the Juice of the stems of sugar-cane. The stems after being crushed and the leaves of sugar-cane are used as fuel, fodder for cattles and also in the manufacture of the stem in molasses.

Conditions of Growth:

Sugar-cane is a tropical plant and thrives well in the areas of high temp. and heavy rainfall. For its successful cultivation the following conditions are required.

i. **Temperature:**
Sugarcane requires high temp between 24^0C and 27^0C through out the growing period of about 10-11 months.

ii. **Climate:**
It requires a considerable amount of moisture particularly during the period of growth.

iii. **Rain Fall:**
Annual rainfall of about 150cm is required for its cultivation. But in our country the amount rainfall is not sufficient for its cultivation, that is why it is grown under irrigation.

iv. **Weather:**
During the period of ripening the weather should be relatively dry in order to maintain a high quality of sucrose.
Forest and stagnant water are dangerous to young plants of sugarcane.

v. **Soils/Topography:**
Sugar-cane can be grown in a variety of soils. In texture the soil may range from sandy loam to clays, but silt loams and clay loams are most suitable as they permit water infiltration and retention.

vi. **Fertilizer:**
It is an exhaustive crop, so the application of manure and fertilizer is necessary.

Q. Describe the main growing regions of sugar cane in Pakistan?

Ans. Growing Regions:
Sugarcane is grown over an extensive area in Punjab and Sindh and over a relatively small area in N.W.F.P. It is not important crop in Balochistan.

1. **Punjab:**
In this province main sugarcane growing regions lies in the east central part extending from Gujrat districts in the north Rahimyar Khan district in the south. They have excellent irrigational facilities and rich soil.
Secondary important districts are Shaikupura, Sahiwal, Vehari, Bahawalpur, Muzaffargarh, leiah.
The minorproducing districts are Sialkot, Gujranwala,Ranjanpur, D.G. Khan, Mianwali, Bhakkur and Khushab.

2. **Sindh:**
The main sugarcane growing districts are located in south central part comprising Hyderabad, Nawabshah and Badin district.
Secondimportant districts include Khairpur, Thatta while the minor producers are Sukkur, Sanghar, Tharparkar, Larkana and Dadu.

3. **N.W.F.P:**
Peshawar and Mardan districts are the important producers of sugarcane, while the ditricts of Bannu and D.I. Khan are minor producers.

4. **Production, aceage and Teild:**
The production of sugarcane has shown a marked increase since 1947-48.

In 1947-48, total production was only 5.4 millions tons, while 1990-91 production rose to 36 millions tons. The yield of sugarcane in Pakistan is low about 38 tons per hectare. Mechanization has been suggested as one measure of increasing the yield of sugarcane.

Q. Describe Tobacco, its condition for growth in Pakistan?

Ans. **Introduction:**

Tobacco is also an important cash crop and a item of export of our country. It occupies a comparatively small area, but yields high returns to the farmers per unit area.

Tobacco is the fried leaf of a plant known as Genus Nicotina, which has many spicies. Only two of the species, however are cultivated. They are Nicotina Tobaccum and Nicotina Rustica. The first is used for the manufacture of cigarette, Cigar and biri. The second one is used for snuff and chewing. Both are used for medicinal purposes and for smoking of 'Hukka'.

Conditions of Growth:

1. **Temperature:**
   Tobacco requires fairly high temp between 21^{0}C and 27^{0}C, and moderate rainfall, but it can also be cultivated in regions of cool summers and dry areas with help of irrigation.
2. **Water Logging:**
   Frosts are most injurious to Tobacco cultivation and it cannot tolerate water logging.
3. **Climate:**
   Tobacco plant grows well in light, deep and well drained soils that are rich in lime, potash and humus. Light sandy loam soils are very good for tobacco cultivation.
4. **Fertilizers/Fertility:**
   Tobacco is an exhausting crop. Therefore constant use of fertilizers is essentials for maintaing fertility of the soil.

Q. Describe the growing regions of Tobacco in Pakistan?

Ans. **Growing Regions:**

The major part of tobacco produced in Pakistan comes from the alluvial plains in the north. Its cultivation in small areas to meet local requirement is quite wide-spread throughout the plains. Such areas are generally scattered.

1. **N.W.F.P:**
   This province accounts for about 65 per cent of the total production of tobacco in Pakistan. Mardan district is the most important producer, followed by Peshawar, Swabi and Manshera districts.
2. **Punjab:**
   This province accounts for about 35 percent of total production of tobacco. Important tobacco producing districts are located in east central area. They are Faisalabad, Sahiwal, Tobateksingh and Gujranwala. Minor producers are Sheikupura, Okara, Vehari, Multan, Jhang, Gujrat, Attock district particularly the Chach plains is notable producers of high quality snuff tobacco.
3. **Balochistan:**

It accounts only 5 percent of the total production of tobacco Good quality of 'niswar', chewing tobacco is grown in Mastung and Kalat districts other notable producer of tobacco is Pishin district.

Q. Describe the importance of coal as a water Val source?

Ans. **Coal:**

Coal is a sedimentary deposit formed by the slow action of pressure and heat on dense forests buried in the past due to earth movement and earthquakes. Carbon, hydrogen, moisture and ash are the principal constituents of coal and upon them the heating power of coal depends. The byproducts of coal are also equally important for the industries. The principal by products are gas, tar, dyes, sulphur etc.

Coal is mined in its perfect state and is thus ready for use immediately on its extraction from the coal fields.

In Pakistan, the principal use of coal is in brick and lime burning, the Ceramic industries, Ginning Mills, briquetling plants and for firing the boilers and power stations and steam locomotives.

Q. Describe the coal producing regions of Pakistan?

Ans. **Producing Regions:**

There are three coal producing areas in Pakistan. They are Quetta region in Balochistan, Salt Ranga regions in Punjab and lower Sindh.

Coal fields of Balochistan:

The coal fields of Balochistan are mostly located in the north eastern part of the province, within the radius of 90 Km from Quetta. They are as follows:

1. **Khost-Shahrig, Harnai Coal fields:**

   This is the largest coal field of Balochistan, covering an area of about 200sq Km. It is connected with the Sibi-Zardalu branch line of Pakistan Railways. The coal is bituminous type is better than other coal produced in Pakistan.)

2. **Sor Range-Degari:**

   This coal field is located about 15km east of Quetta, covering an area of about 50 sq, km. The coal is sub-bituminous containing ash and sulpher. It is suitable for brick Kilns and briquetting. The P.I.D.C. has built a 1.6 km long haulage tunnel which leads to the central part of the field.

Mach Coal Field:

This coal field is located about 55 km South of Quetta, covering an area of 40 sq. km. On both sides of Sibi-Quetta railway line. The coal is of inferior quality and mines are located in low-lying areas, thus there is a problem of excess water in the mines.

Besides these three important coal fields, coal also occure at Duki, Ziarat, Pir Ismail, Ali Gul and Ab-i-Gum and other areas of Balochistan.

Coal Fields of Salt Range and Makerwal:

The coal fields of the salt range extend from north of Khushab to north-east of Khewra, covering an area of about 250 sq. km. The main coal mines are Dandot and Pidh. Other mines are Chittadand. Ara and Dhakkarha. The coal is of inferior quality with high percentage of ash and sulphur.

The Makerwal coal field is located in the trans-Indus Salt Range and extends from west of Kalabagh to the west of Makerwal. The seams are slightly thicker and the coal is of some what better quality than that of Salt Range.

Lower Sindh Coal Fields:

The lower Sindh coal fields namely Jhumpir-Meting and Lakhra account for about 50% of the coal reserves of the country. Jhumpir-Meting coal field is located about 130 km north of Karachi; covering an area of 900 sq. km. Coal occurs at the base of a low limestone hill and is of low quality.

Lakhra coal field is located north of Hyderabad in Dadu district, on Dadu-Kotri railway line. It extends over an area of 200 sq. km. The coal beds are associated with a gentle folded anticline. The coal is inferior quality lignite.

A third coal field was discovered in 1981 namely Sonda-Thatta coal field in district of Thatta. This field is located on both sides of the Indus river covering an area of about 600 sq. km. The coal is reported to be of good quality.

6. **Coal Fields in N.W.F.P:**

Coal is also found in N.W.F.P. such as Cheerat hill, Nowshera and Surgarh Range but due to inferior quality and smallness of deposits, mining is uneconomical.

Q Define Petroleum and its importance?

Ans. Petroleum:

Petroleum is the name given to mineral oil or rock oil which is deposited under ground. It is found usually in the synclines of folded Sedimentary rocks. It is generally believed to have been formed from micro-Scopa marine organisms that were subjected to heat and pressure after burial underground. Petroleum usually occurs with gas and water. Gas being lighter than oil lies above it and water being heavier occupies the base.

Petroleum is raised from the mines by drilling wells. The liquid when originally lifted from wells is known as "Crude Oil", which is mixed with other various rough things. So before it can be used for any purpose it is required to be refined in the refineries. Its chief products are Petrol or gasoline, Kerosene oil, diesel oil, lubricating oil, Vaseline, Paraffin wax, Naphtha, Benzene etc.

Importance:

These products are mostly used by transport. The bulk is consumed by the truks, buses, automobiles, steamships and aeroplanes. Power industry, domestic and agriculture are other users of petroleum products.

Petroleum is associated with Sedimentary rocks, as such a very large area of Pakistan is structurally suitable for containing oil.

Q. Discuss the oil regions distribution in Pakistan.

Ans. Oil Fields of Pakistan:

There are two oil regions in Pakistan ***Potwar Plateau*** and ***Lower Sindh***.

i. **Potwar Plateau:**

Encouraged by the geological conditions the search for oil was started in this region in 1880, but success was achieved in 1915 when a successful oil well was drilled at Khaur (Attock district). Later on Dhulian (Attock) in 1937, Joyamair (Jhelum) in 1944 and Balkassar (Jhelum) in 1996 were discovered. Even after the independence the search of oil continues to the present day, under the supervision of Pakistan Oil and gas Development Corporation with the help of various foreign companies. As a result of that a number of oil

fields have been discovered.such as Karsal (1956), Meyal (1968), Toot (1968), Adhi (1978), Fimkassar (1978), Dakhni (1983) and Dhurnal (1984).

The production of Khaur, Dhulian, Joya mair and Balkossar has considerably declined, in the other hand Dhurnal, Meyal,Toot and Adhi are major producers of oil.

ii. **Lower Sindh:**

Lower Indus emerged as an oil producing region when Khaskhali oil field discovered in 1981 in the district of Badin. Later on two other important oil fields were discovered one at Laghari (1983) and other at Tando Alam in 1984.

Lower Indus accounts for about 35% of the total production of oil in Pakistan.

Other oil fields of Sindh are Tajedi, Nari, Mazari, South Mazari, Thora, Turk and Dhabi etc.

Oil Refineries:

At present three oil refineries are working in the country. Attock Refinery is the oldest and is located at Morgah near Rawalpindi. It refines the oil produced in the Potwar Plateau and accounts for about 10% of total oil refined in Pakistan. Other two refineries namely Pakistan Oil Refinery and National Oil Refinery are located in Karachi. They mainly refine imported oil, but now the oil produced in lower Indus is also refined there.

A new refinery Known as Pak-Arab refinery is being established near Multan.

Q. Define the natural gas and its importance.

Ans. Introduction:

Natural gas is generally found in association with petroleum in the oil producing region.

Sometimes it is also found in a place apart from oil fields. Natural gas is an important raw material for Ammonium Sulphate, Ammonium Nitratic and Carbon Black. For ceramic, cement, glass, iron steel industries, it acts as fuel. At present it is used both for domestic and industrial purposes.

Importance:

Natural gas has some important advantages over other power resources. It has tremendous heating power and is very economical. Unlike coal or oil, natural gas does not require storage arrangement in the place of consumption. It is cheaply transported through pipelines and fed directly into the plant.

Natural gas, the second most important source of energy is the cheapest and most efficient source of energy in Pakistan. The country is well endowed with natural gas.

Natural Gift Economically:

Natural gas is a great gift of nature to Pakistan. It is used for both power generation and industries. Power generating stations, using gas have been built at Karachi, Hyderabad, Jamshoro, Multan and Faisalabad. They consume about 31% of total production of gas. Fertilizer factories 20%. Cement factories 2% other industries 22%. Thus natural gas is playing a vital role in the economic development of Pakistan. Natural gas is used 3% of commercial and 13% for domestic purposes.

Q. Describe the distribution of natural gas resources in Pakistan.

Ans. Natural Gas Fields:

The search for oil in Pakistan resulted in the discovery of gas field in 1952 at Sui (Balochistan) since then 25 ga sfields have been located, 6in
Balochistan, 10 in Sindh and 9 in Punjab.

1. **Sui Gas Field:**
   Sui is the largest field of the country both in reserve and production. It is located at the foothills of Marri-Bughti hills, Balochistan. It is estimated to have a recoverable reserve of over 6 million million cubic feet of gas. This gas has high Calorific value and is contained in limestone. Sui gas is supplied to Karachi by a pipeline passing through Sukkhur and Hyderabad. This gas is also transmitted to Lahore by a pipeline passing through Rahimyar Khan, Multan and Faisalabad, from Faisalabad another pipeline goes to Rawalpindi, Islamabad, Wah and Peshawar. This gas field is also connected with pipeline with Quetta.
2. **Pirkoh:**
   Pirkoh Gas field was discovered in 1977 and is located north of Sui. Gas from Pirkoh is fed into the sui transmission line.
3. **Mari:**
   Is the second largest gas field contributing 18 per cent of total production of gas. It is located in upper Sindh. The gas from Mari is majnly used by fertilizer factories at Dharki, Mirpur Matholo and Machigot. Some gas is also used by thermal power station at Guddu.
4. **Kandkot:**
   Kandokat Gas field which is also located it upper Sindh supplies gas to Guddu Thermal plant. The gas produced from Meyal, Dhurnal and Tool is ed into the main transmission line. These gas fields, are located in Potwer Plateau.
5. **Other Miscellenous Gas Fields:**
   Minor gas fields of the country are Uch, Zin, Khairpur, Sari/Hindi, Golarchi, Khaskhali and Leghari etc.
6. **Total Reserve Approx:**
   Total reserve of gas in Pakistan is 492 billion cubic meters.

Q. Discuss Hydro Electricity/Hydel power its importance and features ?

Ans. Hydro-Electricity Or Hydel-Power:

Introduction:

Hydro-Electricity or Hydel-power is the power created by the pressure of water from water fall with great speed or from rivers with strong currents, water power resources are naturally greatest in hilly mountainous regions, giving a big fall of water.\

For generation of electricity, water is made to pass through a narrow pipe on a penstock to the blade of the turbine wheel which starts to revolve nad move the turbine wheel and keep it moving without break.

Hydel power has certain inherent advantages over coal and petroleum. Firstly, coal and petroleum mines are exhaustable while water power is unexhavstable, because so long streams will run, water power is comparatively cheaper than coal and

petroleum. Lastly in comparison with coal and petroleum, water power is more evenly distributed.

2. **Factors of Growth and Development of Hydel-power:**

There are some geographical factors upon which the growth and development of water power depends. They are as follows.

i. **Mountainous Region or Topography:**

A stream flowing from a great height has great force and moves the turbine wheel. So a natural water fall is the best force for erecting a hydel-electric plant or unit. The suitability of mountainous land for the growth or water power thus becomes evident.

ii. **Regular Flow of Stream:**

The flow of water should be uniform and regular, so that generating plant may function throughout the year. Flood water or low water in the stream may harm the generating plant. This difficulty may be over come by the construction of dams at the head of the plant. The water is stored during the rainy season and a uniform flow is maintained throughout the ear.

iii. **Suitable Site:**

A good position for construction of a dam is necessary. The rock should be sufficiently firm so that the dam may easily by constructed. The river should be narrow so that it can be dammed economically. Again the site must be accessible for transporting plant and machinery to the power house.

iv. **Nearness to Consuming Centres:**

The consuming centers of hydel power should not be far away from the power house because it is uneconomical to transmit water power beyond 800 Kilometers.

Q. Describethe Hydel Power Plants distribution across the Pakistan?

Ans. **Hydro-Electric Projects:**

Most of the hydel plants of Pakistan are located on the rivers of the north-western hilly and mountains areas. Some sites in the plains have also been developed by utilizing fall in rivers and cannals.

1. **Tarbela Hydel Project:**

This is the largest hydel project of the country. It is a multipurpose project located at Tarbela on river Indus in Abbottabad district of N.W.F.P. This is a magnificent earth full dam about 9000 feet long, and 445 feet high. A reservoir about 50 miles long has been constructed behind the dam with storage capacity of 11.1 million acre feet of water. This project is primarily constructed to supply water for irrigation, but it also produces electricity and accounts for about 60% of the total generation.

2. **Mangle Hydel Project:**

Mangla is the second largest multipurpose project located on river Jhelum about 30 km away from Jhelum city. The dam is about 1100 feet long and 380 feet high. A reservoir lake of about 60 km long has been constructed behind the dam with a storage capacity 0f 5.5 million acre feet of water, which can be increased to 9.6 million acre feet. Besides providing water for irrigation it also generates electricity accounting for about 32% of the total generation.

Warsak Hydel Project:

This project is located on river Kabul about 30 km from Peshawar. The dam is about 750 feet long and 235 feet high creating lake about 26 miles long to store about 20,000 acre feet of water. This multipurpose project was completed in 1981. Besides providing water for irrigation it generates electricity.

The Warsak power station has six units with a total capacity of 240 Mw. This station was one of the major sources of Hydel power before the completion of Mangle and Tarbela.

Rasul Hydel Project:

Rasul Hydel Project is located in Gujranwala district. It utilizes a head of 27 meters between upper and lower Jhelum canals. It was completed in 1952. Its installed capacity is 22Mw. At present about 22 thousand Kw of electricity is being produced from this project this power is also used for operation 2200 tube wells constructed for the reclamation of water. Logged area of Rechna Doab.

Malakand Hydel Project:

The project is one of the oldest in Pakistan having been completed 1938. it utilizes the water of upper Swat canalwith an installed capacity of 16.7 Mw, which was raised to 20 Mw in 1952. The power station is located at Jabban.

Dargai Hydel Project:

This project utilizes the 250 feet fall of water 5 miles downstream of the Malakand Project on the upper Swat canal. The power house is located at Dargai. This was completed in 1954 with a capacity of 20 Mw.

Besides, the above mentioned Hydel Projects there are a number of small Hydel plants in Pakistan.

They are following:

i. **Renala Project:**

This project located at Renala in Okara district on the Upper Bari Doab canal. It is the oldest project completed in 1925 with an installed capacity of one Mw.

ii. **Chichokimallian Project:**

This project is located at Chichokimallian near Sheikhupura. It makes use of a seven meters fall of water on Upper Chanab Canal. It was completed in 1959 with a capacity of 13.2 Mw.

iii. **Shadiwal Project:**

This project is located on upper Jhelum canal in Jhelum district, utilizing an artificial fall of water seven meters high. Its installed capacity is 13.5 Mw.

iv. **Nandipur Project:**

This plant is located in the district of Gujranwala on the upper Chanab canal. It was completed in 1963 with an installed capacity of 13.8 Mw.

v. **Kurram Garhi Project:**

This project is located on irrigation canal taken out from the Khurram river in N.W.F.P. The powerhouse is at Garhi with an installed capacity of 4 Mw.

All small hydel projects together have installed generation capacity of 107 Mw.

Q. Describe Thermal Power Resources? Distribution also.

Ans. Thermal Power Stations:

The increase in the generation of electricity by thermal plants has been appreciable during recent years. According to WAPDA, the installed capacity of electricity during July-March 1997-98 stood at 11.566 Mw of which thermal power was 6741 Mw and that of hydel power was 4825 Mw.

Water and Power Development Authority (WAPDA) and Karachi Electric Supply Company (KESC) are the two commercial producers of electricity. Besides there are a number of private producers, producing electricity for their personal use.

Distribution:

The thermal plants are well distributed over Pakistan, Karachi is the single centre of thermal electric plants in the country.

Besides Karachi, other stations in Sindh are Hyderabad, Kotri, Jamshoro, Sukkur, Larkana and Guddu. In Punjab large thermal plants are located at Multan, Faisalabad, Lahore, Rawalpindi, Kot Addu and Muzaffargarh. In Balochistan, Quetta has a large thermal plant, another is located at Pasni.

Q. Discuss Nuclear Power Energy?

Ans. Nuclear Power Energy:

Pakistan is the only Muslim country which has been utilizing nuclear energy for electricity generation. (The country has also tested nuclear bomb explosion in May 1998).

Resources Distribution:

The Karachi Nuclear Power Plant (KANUPP) was commissioned in 1971 as the first Pakistani nuclear power station. It has the installed capacity of 137 Mw and has generated 314 gwh during the July-March 1997-98 compared with 223 gwh during July-March 1996-97. The second nuclear power plant, a 300 Mw Chashma Nuclear power plant (CHASNUPP) is being constructed under a contract between pakistan Atomic Energy Commission and China National Nuclear Corporation. The plant is expected to be commissioned by 1999.

Q. Discuss distribution of population and factors for uneven distribution of population in Pakistan?

Ans. Distribution of Population:

The distribution of population in a country is controlled mainly by agricultural commercial and industrial possibilities and resources. In an agriculturard and developing country such as Pakistan it bears a close relation to the agricultural resources. These in

their turn depend partly on such Geographical factors as relief. Soil, climate water supply, forest cover and the area available for cultivation. The distribution of population is determined by economic factors such as the amount of capital available for investment and method of cultivation.

Factors for Uneven Distribution:

In Pakistan, population is distributed very unevenly.

The following factors are responsible for this uneven or unequal distribution of population.

1. **Fertility of the Soil:**

   The distribution or the density of population depends greatly on the fertility of the soil, because fertile soil always produces good crops. The Indus valley is

therefore densely populated due to fertile soil there. On the other hand, density is the lowest in Balochistan peau, because the soil in not fertile and not suitable for agriculture.

2. **Irrigational Facilities:**
The density or distribution of population also depends greatly on irrigational facilities. In our country there is very close relation between irrigation and population. The density has increased remarkably in Punjab and Sindh province as the result of the development of a good system of irrigation.

3. **Topography:**
Topography is also an important factor for the distribution of population. Plains attract a dense population than hill tracts or forest region. This explains the high density in Punjab plain and lower density in Balochistan plateau.

4. **Rainfall:**
The density of population also varies with the amount of rainfall. Population is thick in the areas which receive considerable amount of rainfall and as north eastern parts of Punjab. On the other hand in dry areas such as Thar, Cholistan deserts and dry areas of Balochistan, density of population is low.

5. **Transport Facilities:**
The density of population also depends upon the transport facilities of a place. For example Punjab with its plain land provides good roads and railways, but Balochistan plateau has comparatively bad transport facilities. So the Punjab plain is denser than Balochistan plateau.

6. **Development of Trade, Commerce and Industries/ Economic Factors:**
Apart from the above geographical factors, the distribution of population in any region depends upon the growth of industries, trade and commerce. The industrial Town. Cities and Trade Centers of Pakistan are density populated.

Q. Define Density of Population concept, specially about Pakistan.

Ans. Density of Population:

Density of population refers to the number of person living per sq. Km or sq. Mile. The density of population depends largely on the external environment of a region such as climate, soil, topography and natural resources etc.

Pakistan's Density:

Pakistan is essentially, dry with large area of unproductive and barren land. For example in the hills and sandy wastes of Sindh and Balochistan the population is very sparse. By contrast, the fertile Indus plain supports a fairly dense population by growing good crops there.

1. **Areas of High Density of Population:**
In Pakistan the highest density of population over 2000 persons per sq. km is found in Karachi. This is of course, due to that city's great urban, commercial and industrial development. In the same way, other industrial districts like Lahore. Faisalabad, Multan, Sheikhupura, Peshawar, Mardan are densely populated. The land in these areas is also fertile and has been well irrigated.
Other areas of high density include the long-settled districts of Sialkot, Gujrat, Gujranwala and Rawalpindi. Here a fertile soil, fairly good rainfall and much irrigation from canals have greately raised the agricultural product and ultimately the density of population is high.

2. **Sparsely or Thinly populated areas:**

There are three notable thinly populated areas in Pakistan.

a. The dry plates of Balochistan.
b. The desert of Thar, Cholistan and Thal.
c. The northern and western hill tracts.

In these areas, low rainfall and soil that is either sandy or stony have resulted in barren and waste lands. For these reason cultivation is difficult. As a result the density of population is less than 50% per sq. km. In the more barren region of Kalat division there are only 10 persons per sq. km and in Chagi and Kharan districts where less than 3% of the area is under cultivation, the density of population falls as low as 5 persons per sq. km.

3. **Distribution of Rural and Urban Population:**

As Pakistan is primarily an agricultural country the majority of its people live in villages, close to the land they cultivate. Apart from farmers and agricultural labourers, the village communities also include small number of such craftsmen as carpenters, black smith and weavers who provide local skilled services. Out of the total population of 84.3 million in 1981, about 60.4 million (71.7%) live in villages and the urban population is 23.8 million (28.3%).

Q. What are the remedies to overcome the population of over population?

Ans. At the moment the food supply is inadequate the size of population and that there stand us little opportunity of over-night, industrial progress we can say that there is a tendency towards over population in Pakistan.

Remedies of Over-Population:

As we see that there is a tendency towards over population in Pakistan and it can be very acute in nature if the agriculture industries and commerce are not developed snoopy side. So in order to get rid of evil effect of over population. Pakistan should adopt a plan of all round development.

The following measures may be seen to solve this problem.

1. **Rapid Industrialization:**

It can support a large population ad thereby can solve the problem of over population. Industrialization will not only increase the amount of wealth of the country but also will provide large labor force in the industry.

2. **Re-distribution of Population:**

In Pakistan, population is very unsenly distributed. There can be transfer of population regions which have potentity of development. The re-distribution ofpopulation may solve the problem of over population by increasing per capita national income.

3. **Deliberate Birth Control:**

The number of members of a family should not be allowed to increase beyond the income of the family. So deliberate birth control is another measure of solving over population. To have a knowledge about family planning illiteracy should be removed from the country.

Q. Discuss importance and various main road ways of Pakistan?

Ans. Road Ways:

From time immemorial road transport constitute an important part of transport system of a country. Roads are of greatest importance for short distance traffic. In regions where railways are less developed roads are proportionally more important.
The roads in Pakistan are unusually Classified under four major heads.

1. **The National High Ways:**
   They link the big cities of the country with ports and are under the administrative control of the Federal Government.
2. **Provincial High Ways:**
   They interlink different roads in the province. They are maintained by the Provoncial Government.
3. **District Roads:**
   The Roads connect the villages in the Districts are also linked with main roads. They are maintained by District Councils.
4. **Corporation or Municipal Roads:**
   These roads are in the areas Administered by the Municipal committees or corporation and managed by them.

Importance of Road Ways:

Roads in an agricultural country like Pakistan are essential for carrying farm produce from the village to the markets, raw material to the factories and for distributing manufactures products to the near by village, thus roads serve rural areas best. The roads enable movement of passengers and goods oer public highways, to or from practically any point in a country.
They provide door to door service they thus function on the most flexible and diversified manners.
The significance of Road Transport may be Judged from the fact that the roads carry about 80 percent of the total passengers traffic and about 55prcent of the freight traffic in the country.

The Principal Highways And Roads:

1. **Karachi-Lahore-Peshawar:**
   This is the longest and most important road of Pakistan having a length of 1762 km. from Karachi to Torkham near Afghanistan border. From Lahore to Peshawar, a part of this highway is known as Grad Trunk Road (G.T.R) which was built by Sher Shah Suri, At one end GT. Road enters Afghanistan Passing through Kyber Pass and on another end from Wagah enters India. Karachi-Peshawar is the busiest highway and the volume of traffic is highest along this road. This road passes through densely populated areas, through the following cities of Pakistan. From Karachi to Thatta, Hyderabad, Nawabshah, Rori Rahimyar Khan Bahwalpur, Multan Sahiwal, Okara, Lahore Gujranwala, Gujarat, Jehlum, Rawalpindi, Nowshera and Peshawar.
2. **Karachi-Khuzdar-Quetta-ChamanHighway:**
   This highway has a length of 800 km. From Karachi to Chamana small town near Afghanistan border. This road passes through the remoe areas of Balochistan serving the rural and urban areas of Balochistan. This highways is gaining impotance day by day.
3. **Jamshoro-Larkana-Peshawar Highways:**

This highways runs on the right bank of Indus Rivers. It has a length of 1247 km. passing through Dadu, Larkana, Shikarpur, Kashmor, D.G. Khan, D.I. Khan, Bannu and Kohat.

4. **Lak Pass (Quetta)-Nokundi-Taftan Highways:**

This highway runs parallel to the Railway line Westward for Quetta to Taftan and then enters Iran. As this highway passes through sparsely populated areas of Baluchistan it is not heavily traveled. Its length is 610km. and passes through Nushki, Dalbadin, Nokundi and Mirjawa.

5. **Kuchlak-Zhob-Dera Ismail Khan Highway:**

Its length is 906km. this road Connects the area of Balochistan and N.W.F.P. and it has strategic economic importance. It passes through Zhob and Fort Sandemam.

Rohri-Sibi-Quetta-Highway:

This highway runs from Rohrilocated on the Karachi, Lahore highway. If runs north wast direction passing through Sukkur, Jacobabad, Dera Bughti. Sibi through Bolan Pass to Quetta. Its length is 385km.

Qila Saifullah-Dera Ghazi Khan-Mulatn Highway:

Its length is 447 km from Qila Saifullah to Multan. This road is heavily traveled in the Punjab sector but little used in Balochistan.

Hassanabdal-Gilgit-Khunjrab Highway:

The highway has a length of 806 km. It is also called Karakuram highway or silk route highway. This highway runs through rugged topography of high mountains and passes through Abbottabad, Manshera, Gilgit,Hunza and then enters Siankiang province of China. It is called silk route because in old days silk from China was taken by the traders of caravan to the Middle East and European countries. Now a days this highway plays an important role in the trade of the Northern Parts of Pakistan and China.

Discuss importance of railways in Pakistan and important routes.

Ans. **Importance:**

Railways are the most important form of inland transport. Roads compete with railways over short distance, but in carrying of bulky and cheap goods to long distance railways have no rivals. Long journeys on railways involve little loss of time and heavy freight can be carried easily. Besides their economic and stratebic value railwaus also provide employment for many people.

In Pakistan like roads the railways have been constructed in the more heavily populated parts, of the plain, where there is great deal of traffic. Railways, construction is easy

and cheaper in the lowlands, hardly any line has been laid in hilly regions excepting some strategic railways like those through the Bolan Pass or to Landi Kotal.

Historical Feed Back:

The first track of railway was laid down between Karachi and Kotri covering a distance of about 160 Km. in year 1861 by a private company. The expansion and modernization of railways was taken over by the Government of British India.

Statistical Feed Back:

Pakistan had 8554 Km. of railways in 1974. at present the total railway route is 8775 Km of which 7766Km are broad gauge (5 ft 3″ wide), 446 Km metre gauge (3 ft 3″

wide) and 563 Km narrow gauge (2 ft 6″ wide). The system of railway is operated by Pakistan railways, which has about 551 locomotives, 4250 passengers' coaches, 32000 Freight wagons. Total number of railway stations is 781.

Main Functions:

The main function of the railways in Pakistan is to collect the agricultural products of the Indus Valley and the mineral products of some hilly areas and to take them to the industrial areas of the country. Similarly the manufactured goods are distributed by the railways in the different parts of the country. The bulk of freight carried by the railways is wheat, cotton, rice, coal, fuel oil, fire-wood, cement, marble stone, salt etc.

Present Situation:

Pakistan railways network has deteriorated over the years due to lack of invisible funds financial constraints, operational inefficiencies, over staffing and mismanagement. The condition of its assets is not satisfactory as 65% of rails 55% of sleepers 60% of diesel locomotives and 100% of steam and electric locomotives are over age on the system. They have not been replaced, rehabilitated and reconditioned. The system is also loosing constantly its passenger Coaches, freight wagons and locomotives to handle passenger mobility and bulk load of oil, fertilizers, cement, wheat and container traffic. Colossal investment and strict discipline in the helm of affair is required to improve and rehabilitate the system.

Principal Railway Routes:

1. **Karachi-Lahore-Peshawar Routes:**
   This is the main railway line of the country. Its distance from Karachi to Peshawar is 1682 km. important stations on this route are Hyderabad, Nawabshah, Khairpur, Rahimyar Khan, Khanpur, Bhawalpur, Multan, Khanewal, Sahiwal, Lahore, Gujranawala, Gujrat, Lala Musa, Jhelum, Attock, Nowsjera, From Khanewal an alternate route (482 km) runs via Faisalbad and Sargodha to rejoin the main route at Lala Musa. An extension (21 km) from Sargodha connects Shorkot.
2. **Rohri-Quetta-Chaman Route:**
   This route runs from Rohri via Sukkur, Shikarpur, Habib Kot, Jacobabad, Sibi, through Bolan pass to Quetta and then to Chaman covering a distances of 400 km.
3. **Karachi-Kotri-Larkana-Habibkot Route:**
   This route runs via Kotri and Dadu along the western bank of River Indus, to join Rohri-Quetta route at Habib kot, where it links with the route to Quetta covering a distance of 520 Km.
4. **Lahore – Mari Indus Route:**
   This line runs via Faisalabad, Sargodha, Khushab, Kundian, Mianwali to Mari Indus covering a distance of 444 Km.
5. **Multan – Kudian Route:**
   This route is along the eastern side of the Indus River running through Muzaffargarh, Leiah, Bhukker upto Kundian covering a distance o f400 Km.
6. **Quetta – Spezand – Mirajawa Route:**
   It is a long route covering a distance of 710 Km but it is little used becayse it passes through sparsely populated region of Balochistan. It runs from

Spezand which is south of Quetta via Nushki, Dalbandin, Nokundi to Mirajawa near the border of Iran. This line extends upon Zahidan in Iran.

Jacobabad – Kot Addu Route:

This route runs along the western side of the Indus River via Kashmor, Rajanpur, Dera Ghazi Khan then to Kot Addu covering a distance of 480 Km.

Q. Discuss the importance of Sea Ports in Pakistan and list them.

Ans. **Sea Port**:

The country ha stwo major sea ports viz Karachi Sea Port and Port Qasim. Besides, two Fish Harbour cum-Mini Ports are being developed at Gawadar and Keti Bunderand Sumiani.

Karachi Port:

It is located west of the Indus Delta along the cost of Arabian Sea. It is provided with a splendid natural harbour,located in the triangular Bay of Karachiwhich is separated from the mainland by the rocky head land of Manora and sheltered behind Kemari Island. The vast hinterland of Karachi port comprises not merelypakistan and Azad Kashmir but also Afghanistan. The port of Karachi is connected with its hinterland by broad-gauge railway line and highways. The port is well equipped with terminal facilities and has more then 25 berths plus a petroleum dock. The East Wharf constructed over 50 years ago has been modernized. The West Wharf and a dry dock for the construction and repair of ships have been built. A fishing harbour has been attached to the port. The responsibilities of the port has been increasing with the passage of time since 1947-48. In that year the port handled 3.5 million tons of cargo, which increased to 14.6 in tons in 1980-81 and to 15.8 tons in 1985-86 and further increased to 23.4 tons in 1996-97. The work assigned to Karachi port has grown beyond its capacity, therefore a master olan for further expansion of the port has been taken up. The execution of the project together with improvements in cargo and ship handling operation will enable the port to effectively meet the future shipping and cargo handling traffic.

Port Qasim:

The second largest Sea Port of Pakistan is named after the great conqueror of Sindh, Muhammad Bin Qasim. The port is located at Pitti Creek east of karachion the cost of Arabian Sea. This port was planned in connection with the Pakistan Steel Mills close to the port. However due to the operation of this port, the congestion at Karachi port has been considerably reduced.

Port Qasim is the first integrated port of Pakistan. It combines the functions of a multipurpose deep sea port and a designated industrial zone. It offers the following facilities.

i. 45 Km long navigation channel which can accommodate vessels up to 50,000 dead weight (dwt).
ii. One iron ore and coal berth for 50,000 dwt vessels.
iii. One oil terminal for 35000 dwt vessels.
iv. Marginal wharf with four multipurpose cargo berths for vessels of up to 25000 dwt.
v. One container terminal for 35000 dwt vessels.
vi. Full range of floating craft and cargo handling equipment.
vii. Access road to land national highway and connection to rail network.
viii. 12000 acres of land in western and eastern zones for industrial development.

Q. Discuss the role of Soils / Topography in the development of Pakistan and enlist its types?

Ans. **Definition:**

Soil is a complex of minerals formed by the breakdown of rocks and organic substances, on which the plants grow. It is a store house of food and water for the plant. In their turn the plant manufacture feed for animals and food and fibre for man.

Soil has four major components – Mineral or parent matter, organic matter, soil water and soil air. The mineral matters form about 90% by weight of soil solids.

Soil Formation:

Climate, parent material, relief, biosphere (vegetation, organisms and man) and time are the main factors which constantly act together to produce soil.

Rocks on the earth's surface are weathered to form the basic constituents of soil.

Role of Soils:

Relief plays an important part in the formation of soil. With change in height, conditions of temperature and humidity also change. Consequently different types of soil, are formed at different altitude . climate ha sa dominant role in soil formation. Temperature and rainfall largely determine the character of soil. With increasing temp. The clay content of the nitrogen and carbon content increase. Rain as a factor of erosion produces thin soil on steep slopes and deposits thick layer of soil at the foothill zone.

Soil forming processes are complex and continuous. As a result, soils vary in their chemical composition, colour, texture and organic contents from place to place. Soil texture varies with the size of the soil particles. Coarse textured soils are sandy fine textured are clayey and a mixture of the soils and clay is called loany. Since most of Pakistan is and or semi arid, the soils contain little organic matter.

Classification of Soils of Pakistan:

The various types of soil that are found in Pakistan by the wide diversity in geology, topography and rainfall. On the whole, the soil of Pakistan is loamy and moist to a great extent. But due to dry climate and scanty rainfall soil necessities irrigation for cultivation. The soils of the country vary in colour from redish brown in the north to red or grey in the south.

The soils of Pakistan can be classified into the following types:

1. **Alluvial Soil:**
   The alluvial soils are laid down by the great river Indus and its tributaries. Thus the whole of Indus valley is covered with alluvial soils.
2. **Grey – Brown Soils:**
   These soils cover the coniferous forest belt of the N.W.F.P. and Murree region. In the north under the sub-humid condition the soil contains high organic matter, but under arid and semi-arid conditions, the soils are usually calcareous with low organic matter, with plenty of water, these soils are relatively productive.
3. **Glacial Soil:**
   The Glacial soil is formed in northern mountain about 5000 meters above the sea – level. These soils are not fit any vegetation.
4. **Desert Soils:**

The desert soil cober the parts of Cholistan and Thal in the Punjab, Thar in Sindh and Kharan is no organic matter in the soil.

IMPORTANT SELECTED QUESTION FROM FIVE YEARS

1. Define Geography, Human geography, economic geography, and commercial geography.
2. Note on growth distribution and density of population.
3. Factors that can produce high population, density and growth
4. Write a note on population transition.
5. Define commercial activity and its classification.
6. Note on subsistence farming.
7. Define agriculture and types of agriculture
   a) Mediterranean Farming b) Arabic Agriculture c) Market Gradening
8. Define commercial activity in detail also give its classification.
9. Factors that influence fishing a) Physical factors b) Economic Factors c) Social Factors.
10. More productive fishing areas of fishing ground
11. Kinds of fishing.
12. Marine (92%b) fresh water (08%)
13. Short note on agulhas bank or doggar bank or the grand bank.
14. Detail of cotton textile, iron steel, and fertilizer industry.
15. Detail on major crops of the world.
16. Energy resources of power resources.
    a) Coal b) Petroleum c) Nuclear Power
17. Note on OPEC and member countries Iran, Iraq, Kuwait, Saudi Arabia, Venzuela, Algeria, Angola, Ecuador, Libya, Nigeria, Qatar.
18. Location and boundaries of Pakistan.
19. Physiography of Pakistan. Physical regions of Pakistan.
20. Climate and climatic regions of Pakistan.
21. Define forest, its types, and forest of Pakistan. (Vegetation type grassland, desert vegetation forest), kind of forest.
22. Irrigation, irrigation kinds or methods.
23. Discuss Indus Water Treaty
24. Water logging and salinity. Dams and barrage.
25. Hydel and Thermal Electricity.
26. Note on natural gas field. Oil refinery.
27. History of population in Pakistan.
28. Transportation. Road and railway transportation.
29. Export and import of Pakistan.
30. Short Note: a) Food Autarky b) Economic Activity c) Uranium d) Gold.
31. Write a note on interrelation of commercial activities.
32. How does intensive agriculture differ from extensive agriculture.
33. The Eskimo hunters are distinguished for special aptitude and methods. Comments.
34. Great Britain is the pioneer in textile manufacturing. Comments.
35. Write a note on interrelation of commercial activities.
36. Describe canal system on the right (west) bank of Indus.
37. Although contributing a lesser share in GDP, the primary sector plays an important role in Pakistan's Economy. Comments.
38. Banger soil is the best soil for agriculture in the country comments.
39. Write a note on geothermal energy and wing energy.

40. Reasons for downfall of railway in Pakistan.
41. Describe deforestation.
42. Write a note on renewable and non renewable substances.

SECTION "A"

(MULTIPLE CHOICE QUESTION – SOLUTION)

1. Choose the correct answer for each of the following:

i) Southern Punjab and Sindh are the major areas of the cultivation of this crop.
a. Rice b. Sugar cane
c. **Cotton** d. Tobacco

ii) This pass connects Chitral and Peshawar.
a. **Lawari Pass** b. Khyber pass
c. Tochi Pass d. Gomal Pass

iii) It is the coldest place in Pakistan:
a. Murree b. Abbotabad
c. Narran d. **Skurdu**

iv) The climate of Pakistan is:
a. **Hot and Dry** b. Very Hot
c. Hot and Humid d. Cool and dry

v) Trade is an example of :
a. Territary activity b. Primary activity
c. Secondary activity d. Primary activity

vi) The largest palm oil producing country in the world is:
a. Malaysia b. Indonesia
c. India d. Afghanistan

vii) This region is leading the world in rice cultivation.
a. North Africa b. Southern Europe
c. Monsoon Asia d. North America

viii) It was discovered in 1492 A.D. through Atlantic ocean route.
a. Australia b. Americal
c. North Pole d. Antarctica

ix) Rubber plant is planted here:
a. Polar region b. Mountainous region
c. Equatorial Region d. Temperate region

x) The per square km population density of the world in 2010 A.D. was:
a. 95 b. 75
c. 49 d. 25

xi) This Indian regions is famous for tea plantation:
a. Hyderabad Deccan b. Assam
c. Bengal d. Maharashra

xii) The world leader in Iron-are production is:
a. Canada b. Brazil
c. USA d. China

xiii) Commercial use of natural gas was first practiced in 1820 A.D. in:
a. Russia b. USA
c. Germany d. Iran

xiv) This country produces 99.5% of its power requirements through hydro electricity:
a. Norway b. Sweden
c. Canada d. Cuba

xv) Qadirabad Barrage is built on this river.
a. Jhellum b. Chenab

c. Indus d. Ravi

SECTION "B"
SOLUTION

2.

i) **RENEWABLE RESOURCES** : the resources which can be replenished by Physical or biological means, they can be expected to remain available forever if consumed in sustained manner is called renewable resources.

e.g: air, water soil, wild life, forest, agriculture products, fishes, lives stocks. These renewable resources support million of humans all over the world. Moreover, tempering with the natural environment and pollution also endanger their continued existence and availability.

NON RENEWBLE RESOURCES: the natural resources which once used or exhausted cannot be recovered is called non-renewable resources.

e.g: fossil fuels (oil, natural gas, coal), metals, industrial material.

The demand of non-renewable resources is constantly increasing not only because of population growth rate but also because the rise in the per capita demand. Due to world wide demand of petroleum and natural gas sits supplies are declining.

ii) Climate is an automospheric factor which does effect and influence the industrial development, climate influence the labour power and strengthen to work. Climate also affects the pattern of manufacturing. For example, climate favours the leather and flour industries. It has been also observed that development of industries is favours in the region of temperate climate as in plain and smooth areas of the world.

iii) NO doubt rubber plant is a plant of equatorial region, because most of the rubber producing countries are with or near to equator. The rubber producing trees and plants are present in the Amazon Basin region and homeland of rubber plant is Brazil. Along with Brazil, Malaysia, Indonesia, Sri Lanka, Thailand, India, Vietnam, Nigeria are present with equation near to equator. Equatorial climate and rainfall influences directly in the growth of rubber plant and give good result. That is why, rubber plant is a equatorial plant.

iv) Mining is a primary economic activity of men. Exploring and mining of minerals then its use has played always a vital role in the economy and development of a country. In the same way, use of transport network has always an important possible to transport the minerals from its original place (mines) to the center where it is being used for different purpose especially in industrial sector.

v) E-commerce is a new field conducting business electronically, using networks and the internet. It has been defined as the process of buying and selling or exchanging of products, sevices and information via computer networks including the internet. The main areas of e-commerce are (i) electronic market (ii) electronic data (iii) internet commerce. There are number of benefits and use of e-commerce heads.

i) To Organization
ii) To Consumers
iii) To Society

vi) In fact, the largest tea producer have major role in the world trade of tea. China is the home land of tea, but in the world trade of tea up to 1887, china has the monopoly. But today, Sri Lanka, India, Kenya are the top in the world trade of tea. Along with Sri Lanka, India, Kenya, Indonesia, Uganda, Bangladesh, Malavery are the major tea

producing countries and they are also main producing and exporting countries of the world. Then how can we say that largest tea producers do not have role in the trade of tea.

vii) The electronic media has got significant importance in the modern world. The electronic media refers to the electronic mode of communication using various methods. The following are the main categories of electronic media:

a. Television
b. Cell Phones
c. Internet

The television is one way simple communication for a large audience. Cell phones and public switch telephones networks are the two way communication media and internet provides audio, video and text communication. The electronic media is providing a remarkable service to the world. It is used for business, commerce and all the activities related to different spheres of life. The electronic media is playing a vital role for advertisement.

viii) Nature has provided different elements to our earth, which helps the crop for its growth and nourishment and gaining healthy yield. When a crop is grown in any land its productivity reduces with the time year by year and yield becomes less with consumption of elements. So to this deficiency is our come by use of chemical fertilizer, such as:

a. **NITROGENOUS FERTILIZER:** it is used and manufactures in abundance as co-paired with other. It is manufactures mostly 80% from Nitrogen present in the air and 20% from Ammonia.

b. **PHOSPHATE FERILIZER:** Its raw material is rocky phosphate. Phosphate fertilizer is prepares in 62 Countries.

c. **POTASH FETILIZER:** Rocky Potassium is the raw material. It is produced in 30 countries of the world. Germany, France, U.S.A are the top.

Q#3

i) Elements of climate are wind, temperature pressure and rainfall an humidity. Average condition of weather is called climate of any region. In Pakistan, climate differs from place to place and time to time to changing factors. Distances from sea, equator, altitude, vegetation are the main factors influencing climate of Pakistan. Pakistan has been divided in the following four climate regions.

i. Sub-tropical continental high land type of climate.
ii. Sub-tropical continental plateau type of climate.
iii. Sub-tropical continental low land type of climate.
iv. Sub-tropical coastal type of climate.

ii) River Indus of Pakistan is the biggest and longest river of Pakistan. It travels a distance of about 1600 miles from Mansarwar Lake to Arabian Sea. In short, its direction of low is towards west but reading in mountains of Kalsh it gets turn to south. While flowing river from both sides. West and east. Right bak tributaries of river Indus are:

i. River Kabul
ii. River Swat
iii. River Gomal
iv. Zohb River

iii) Monsoon rainfall play and important role in the life of people of Pakistan. As Pakistan is an agricultural country which required rain water in sufficient quantity. Due to

deficiency of rainfall in monsoon. Pakistan received the tail end of the monsoon wind, which enters the Pakistan after crossing India. Monsoon reaches Pakistan in early July and gives rainfall from July to September. The highest monsoon rainfall is recorded in muree (813 mm) and lowest is in Nokundi (2.5 mm). the monsoon rainfall varies in our country yearly but even 25% of our land is agriculture from monsoon rain. In way, monsoon has importance in our agricultural and economy and also in occupation.

iv) In Baluchistan, total population is 65511358 people out of which 23.3% is urban and 76.6% is rural. As compared with other provinces the total are is biggest, but the population very much scattered and low. The main reasons of low population in Balochistan province are as under:

i. Most of the area of Baluchistan plateaus and hilly. Therefore, it is very difficult for settlement agriculture and climate is also not suitable.
ii. Soil fertility is very low and water is also not available for use and agriculture.
iii. Low population is also a result energy resources which is very low and in the result industries are not localized.
iv. Basic needs of people are not available.
v. Medica, educational, transporting means are also cause of low population in Baluchistan.

v) Technology of Nuclear power plant is very much complicated and useful system. In Pakistan, two nuclear power plants are working in which 462 mega watt. Electricity is being generated with the use of uranium. Only 2.2% electricity is generated in total production.

1. **KARACHI NUCLEAR POWER PLANT (KANUPP):** This project started in 1971in Karachi. First Canada helped in this project. Its production capacity is 137 mega watt. Electricity of this project is supplied to KESC.
2. **CHASHMA NUCLEAR POWER PROJECT:** this nuclear power plant was installed with the co-operation of china in Mianwali near RAVI Indus. This project is generating 325 Mega watt of electricity Since 2000. Production may be increased up to 900 mega watt.

vi) In 1947, when pakisan came into existence, Pakistan was producing food grain more than its requirement and exporting surplus grains. At that time province of Punjab was considered as grain basket of India. After 1953 – 54, Pakistan started to import food grains autarky in Pakistan present position of food autarky is not favorable for the people of Pakistan. Pakistan is considered as an agriculture country. 67% of people are engaged in agriculture 56.94 million are area is cultivable irrigation system is present but still food autarky is not satisfactory. To avoid the food autarky last 50 years of agriculture of Pakistan is be considered and problem must be solved for future solid resolving system.

vii) In Pakistan, as water is scarce, irrigation has become a necessity. Both ground and surface water is used for irrigation. Following are the different means of irrigation practiced in Pakistan.

i. Wells and Ponds. Water of wells and ponds are used for irrigation since old days. Wells and ponds depend on the quantity of rainfall.
ii. Small dams: in small dams, water stored, it is profitable in Balochistan and Potwar regions.
iii. Lift Irrigation: it is one of the oldest system practiced in Pakistan. In this system, saduf, chwsa, rahat.

iv. Tube Wells: this system is biggest after canals. At present more than 703074 tube wells are working in all provinces to irrigate the land.

v. Karez: this under ground system practiced only in province like Baluchistan. In this system, covered dyes are prepred to supply water.

CONCLUSION:

With the information gives for the distribution of cotton textile industry it is concluded that this industry is oldest. It plays a tremendous role in the economy of world. It is a big source of earning foreign exchange. It also helps in the development of a country.

(ii) Fishing is a primary economic activity of man. T is considered as apart of hunting but like other department fishing is a profitable commercial activity at present.

The development of fishing industry in the world is due to its use as foods, in supplying protein, oils, fats, making mediones, vitamins A and D is being supplied from fish.

Due to growth of population fishing is also growing and 6% growth of fishes is recorded. There are different factors which influences. The development of fishing industry and the main factors are as under which play an important role in catching of fishes. Most of the fishes are caught in the regions which are favorable for the presence of and development of fishes.

The development of fishing industry is due to physical, social, economical conditions which are as under:

1- **PRESENCE OF FISH FOOD:** most of the fishes are caught in the region of water where major food (plankton) of fish is present especially nearness of forest as in Dogar bank of North Oceans and in Atlantic Ocean with USA.

2- **NATURE OF SALE SHORE:** if the sea coast of any sea or ocean is with deep creek and idented or broken then it will be most suitable for fishing industry. Because conditions of coast provides shelter for fish and facility for construction of lockers.

3- **TROPOGRAPHY OF LAND:** in these countries, where topography of the land is not suitable for agriculture then it is possibility that main occupation will be fishing. Such as in Norway or in New Found Land.

4- **MOVEMENT OF SEA WATER:** if sea water moves frequently in the result of water or current, it helps to collect the food by fishes. Therefore, such areas are suitable for the development and catch of fish.

5- **CLIMATE:** climate also influences fishing industry cold climate is best for fishing.

6- **DEPTH OF WATER:** depth of sea water also influences the fishing; fishes prefer to hide in shallow or less deep water where sufficient food and light is present. Therefore, up to 600 feet depth is best.

7- **OCEAN CURRENT:** the region where cold and warm current of sea water meets is considered as the best for fishing industry. As coast of Japan and U.S.A.

8- **NEARNESS TO FOREST:** forest providing food also help wood material used to construct sea ships and boats, which help for fishing industry.

9- **AGRICULTURAL LAND NOT AVAILABLE:** If he land with sea is not favourable for doing agriculture then people will adopt profession of agriculture as in Norway, Japan and Ire Land.

In spite of above mentioned factors which influence the development of fishing industry in the world. Since other factors also help in Fishing Industry. For e.g. food habitual of people, presence of developed fish labour, capital modern techniques of fishing, availability of latest equipments, ships , trawlers and advance source of transportation along with labour storage for fish and fish market.

(iii) Iron ore is one of the most important usefull and cheap metal. Iron ore is a raw iron, which is mixed from the monitor of the earth. There are some impurities in iron ore. History gives information that before 5000 B.C iron was used by human being and iron-ore was mined. In Old days, iron ore was mined. In old days, iron ore was used to manufacture weapons, utensils and ornaments. Modern use of iron started in 14th Century in central Europe. In present days, industrial development of the world depends on iron. Total reserves of iron ore in the world is 30000 m.m. tons. Iron is a hard metal and its melting point is 15350C.

PROCEDURE OF IRON ORE: most of the world's iron ore deposits are found into countries of North hemisphere, including China and Brazil which is at the top. Australia is top producer of iron ore in southern hemisphere.

DISTRIBUTION OF IRONORE IN CHINA-BRAZIL-AUSTRALIA: There are 150 big reserves of iron ore in 49 countries. In 1962 these reserves were 128000 m.m. tons which is ceased to 300000 m.m. tons in 2001. It is expected that it will increase time by time. Important and big producers of iron ore of the world are china, Brazil and Australia. They produce 55% of iron ore in the world.

CHINA: china is leading iron ore producing country in the world.. china produced 261.1 m.m tons in 2003. China produces best quality iron ore magnetite and also limonite. China has more than 10000 m.m. tins.

The most important producing area of chine is Manchuria or areas lie in Yangtze-Kiang and Hwang Ho-valley, beside these areas iron ore is also mined at Ki-Kiang, Swan-HuaHiva Aan Shan.

BRAZIL: In South America, Brazil has a huge cheap of high grade iron ore. Brazil produces 245.6 mm tons (2003). Minas grass area is biggest in producing iron ore in brazil other areas are Matograso, Italira, Carajas. Best quality of iron ore is present in these centres brazil is the biggest exporter of iron ore in the world after Australia. Most of the iron ore, brazil exports of USA.

AUSTRALIA: Australia is third iron ore producer in the world, during 2003, Australia production of iron ore was 212.9 mm. there are big areas of iron ore producer in Australia. Australia is at the top in iron ore exports because local consumption of iron ore is very little. In 2003, Australia exported 186.12 mm tons of iron ore, Japan is big importer. In Australia, mine of middle bak, Nab, Monoauch are important.

(iv) **INTRODUCTION:** Wheat is being cultivated before Christ for the food.history says that wheat was first time cultivated in the land of the Pakistan and Afghanistan or in western Asia. Wheat is the most important food grain of temperate region at present, wheat is cultivable in most of the countries of the world.

In 2003, wheat was cultivated in 205 million hector area of the world. It is much more as compared with any crop.

Physical and economical conditions required or necessary for the cultivation of wheat are as under:

PHYSICAL CONDITION:

For high quality yield wheat is cultivated in particular physical conditions. The character and quali3ty of wheat varies fro region to region. In physical required conditions climate, temperature, water, soil is discussed.

CLIMATE: Climatically wheat is cultivated in the region where extreme climate is not present. Temperate or cold climate favours the growth of wheat as in the areas of India, U.S.A. and Pakistan. In early days, wheat required cool and moist climate.

TEMPERATURE: Wheat is a crop of winter season therefore; it is cultivated in dry and cold season and harvest in the beginning of hot and dry season.

For the cultivation of wheat the temperature for 100 days should remain 150C to 170C. In cultivation period, wheat needs 600F to 700F. at the time of sowing 500F to 600F and in harvesting period, temperature needed 600 F to 800F.

RAINFALL / IRRIGATION: In most of the countries wheat cultivation depends on rain but in dry region cultivation depends on irrigation system in warm countries 20 inch annual rain is sufficient and in cold region 10 inches.

Where irrigated water is being supplies 4 to 5 time water given.

SOIL: Wheat is a crop which is grown in all kind of soil but fertile soil or flooded soil is most suitable, lava soil, loamy soil, clayee soil is also favourable.

ECONOMICAL FACTORS: wheat cultivation is done to produce food grain and also on commercial basis. Therefore to obtain these two objectives economical factors required play an important role in this cultivation. Following are the economical factors required and favours the cultivation of wheat.

PREPARATION OF LAND: before seeding, the farm is cleared, ploughed, watered and leveled then seed is given to the farm. Preparation of land influences the growth of the wheat.

PROPER TIME AND SED RATIO: Proper time and seed quantity also effects the growth therefore, 50 to 60 Kg seed he used in 01 Acre of Land.

METHODS OF CULTIVITION: methods of seeding also effect the cultivation. Therefore, when land is prepared the seed must be given in row with interval of land.

IMPROVED SEED: High quality seed must be used for the health and good yield. Best quality of seed which gives food must be used; seed which resists deceases is also good seed.

USE OF FERTILIZERS: Profitable wheat is only collected with the use of chemical fertilizer. Fertilizer must be used when required in maximum quantiry.

CROP PROTECTION: Protection from different diseases, pesticides are to be used when used at the same time weeding is also be carried out (removal of glasses).

STORAGE OF WHEAT: Storage of grain must be constructed so that wheat may kept safe. In spire of this capital, labour use of machinery market, transportation facilities and government facility and security are also important condition required for the cultivation of wheat.

Q#4 -

Q#5 -

i) POPULATION OF PAKISTAN: has been break down into major groups. Largely high level of dependency because 30% of population in Pakistan have occupations in different fields. In agriculture, major population has heir occupation which is more than 54% of the total. Next occupation structure in majority is industry, with less than a quarter of that figure. Almost 27% are involved in the tertiary sector in Trade, commerce, transport and service activities.

Women is a significant element in the activities of agriculture as their occupation, making up about 10% of the work force with many more working as an extension of their domestic duties on subsistence holding or as casual labour assistance of their husbands. In non agriculture, they formed 6% of total on 1961 mostly in service occupation women also work in cottage industry where they work with in and family group.

In Pakistan, society urbanization may mean greater freedom of choice for men in wheat they do and how they live.

MAJOR OCCUPATION GROUP STRUCTUE (1976- 77)

Estimated Population	73425000
Occupational participation rate	29.26%
Labour force	21.70%
Agriculture, forestry, fishing	54.3%
Mining	0.41%
Manufacturing	13.25%
Electricity and gas	0.51 %
Construction	4.97%
Trade, Commerce	11.23%
Transport , communication	5.02%
Banking, Insurance	0.66%
Community, Social Service	9.62%
Others	0.32

With the above data it becomes very much clear and information about the occupational structure of Pakistan.

ii) INTRODUCTION:

Natural gas is great blessing of God for our country. The search for Oil in Pakistan resulted in the accidental discovery in 1952 of a gas field at Sui in Baluchistan. This gas field was considered to be one of the largest in the world. After the discovery of gas, its use was introduced a pipe lime from Sui to Karachi having a distance of 347 miles has been completed by Indus Gas Company, and then another company Northern Gas Company completed a pipeline from Sui to Multan 21.7 miles long.

Natural gas is second largest source of energy in Pakistan if imported petroleum is set aside. In 1999, estimated reserve of natural gas was 492 billion cubic feet.

MAIN GAS FIELD OF PAKISTAN: there are three major natural gas regions in Pakistan.

1- East central Baluchistan and Upper Sindh
2- Lower Sindh
3- The northern region.

1- EAST CENTRAL BALUCHISTAN AND UPPER SINDH

This region of Pakistan where Sui gas field is located at the foot hill of man Bughti. It is the oldest and most productive gas field of Pakistan. Pir Koh field was discovered in 1977, it is located 100 km north to Sui. Zin and Uch are two other gas field of Baluchistan. Mavi gas field was discovered in 1957. It is located in upper Sindh gas field is used for the manufacturing as fertilize and generating electricity (mostly).

2- LOWER SINDH GAS FIELD:

This region is second largest region for producing natural gas. Khorwah, Bozdar, Turk, Bulchari and Bhatti are the important gas fields. Bhatti is most important.

3- THE NORTHERN REGION:

The northern gas producing region is third most important region in Pakistan. DHodak, Adhi, Pindori and Meyal gas fields are important gas field of this region.

USE OF NATURAL GAS IN DIFFERENT INDUSTRIES:

Beside the use of natural gas domestic purpose and vehicles. It is used to run different industries of Pakistan.

USE OF GAS IN THERMAL PRODUCING:

In Beginning the use of gas in generating electricity was very limited in 1995-96 use of gas in generating electricity was about 25% which increased to 32.8% in 2003-04. Thermal power station near Hyderabad, Guddu, Multan, Faisalabad and Shadrah near Lahore are main users.

USE OF GAS IN CEMENT INDUSTRY:

In beginning, furnace oil was used in cement industry. Now in various cement industries use of natural gas is common.

Valika cement industry in Karachi, Zeal Pak Cement factory in Hyderabad. Cement factory, Rohri are big user of natural gas.

USE OF GAS IN FERTILIZER INDUSTRY:

In start fertilizer use was not common in the agriculture of Pakistan; therefore, not a single fertilizer making industry was present. In 1959 first fertilizer industry was established at Daud Khel (Mianwali) by PIDC.

In 1962, fertilizer factory of Multan started to work. Fertilizer factory of Shaihupura, Fauji Fertilizer in Rahim yar Khan, Pak Saudi Factory in Mir pur Mathelo are using natural gas for the production of fertilizer.

Beside these natural gas is also used in following industries.

1- Glan ware and bangles industry
2- Manufacturing of Bricks
3- Chemical Industries
4- Rubber and Plastic Industries
5- Seramic Factories
6- Small iron foundries
7- Textile industry uses gas in their process.

SECTION "A"

MULTIPLE CHOICE QUESTIONs

Q1: Choose the correct answer from the given options:

i) Truck farming is a type of:
a. Shifting Cultivation b. Marketing Gardening
c. Mixed Farming d. Mechanized

ii) Webers model is about the location of:
a. Grass land b. Deserts
c. Industries d. Cities

iii) In Pakistan. Most of the Eceetricity is produced from:
a. Hydel Power b. Nuclear Energy
c. Thermal Power d. Solar Energy

iv) North West Pakistan and Afghanistan is the native land of :
a. Rice b. Sugarcne
c. Cotton d. Wheat

v) Construction is an example of the following commercial activities:
a. Tertiary b. Primary
c. Secondary d. Quaternary

vi) Dogar Bank is famous For:
a. Maximum interest Rate b. Offering Commercial Loans
c. Fishing Activity d. None of these

vii) About 80% of this power is produced in Europe and North America:
a. Nuclear b. Hydro Electric
c. Solar d. Thermal

viii) In the world, about one third of total fish is caught in:
a. North East Asia b. South Asia
c. Polar Regions d. Mediterranean Region

ix) Cotton was cultivated for the first time in:
a. Middle Eastern Countries b. Indo-Pak Sub continent
c. European Countries d. Far Eastern Countries

x) Linear Plantation is a type of:
a. Bela Forest b. Coastal Forest
c. Irrigated Forest d. Natural Forest

xi) Climate of Sri Lanka is:
a. Hot and Dry b. Very Hot
c. Hot and Humid d. Cool and Dry

xii) The Amazon Basinis situated in the continent of :
a. Europe b. South America
c. Africa d. North America

xiii) Tea Plantation is found in the hills of the following areas:
a. Hot and dry b. hot
c. Dry d. Hot and Humid

xiv) The biggest industry of Pakistan is:
a. Iron and Steel b. Cotton Textile
c. Sugar d. Cement

xv) Coal stone (Mineral Coal) was used the first time in:
a. Germany b. China

c. India d. U.S.A

SECTION "B"

Q2: Attempt any Five of the following questions:

(i) Write the basic function of fertilizer:

Ans: Fertilizer is basically used to increase the fertility of the soil to develop plants and crops. To fulfill the need of crop farming is done more than once in a year, it is only possible to maintain the fertility with use of fertilizer so that the need of food and raw material for industries may be collected.

Like animal and human beings, plants also need food for their nourishment which are based on 16 elements such as nitrogen, phosphorous, potash, calcium, sulphur, oxygen, hydrogen, etc. which are provided to the soil of agricultural land.

With the use of fertilizer, yield per acre increases along with in income of farmers Fertilizer also helps to remove the poverty of farmers.

(ii) What are the major differences between Economic activities and commercial activities.

Ans: Economic Geography and Commercial Geography are very clost to each other as defined by geographers. There are minute differences in between the two brances of geography which are as under:

ECONOMIC GEOGRAPHY	COMMERCIAL GEOGRAPHY
1) It is the study of economic activities of man in relation to his environment 2) It deals with the production, distribution and exchange of commodities. 3) It is influenced by man's physical environment. 4) It determines the economy which a man changes for his requirement. 5) It is attached with transport. 6) It has analytic approach.	Commercial geography is the subject helping traders for placing and production of trade substances. It helps the traders to learn about places and condition of trade. It is influences by environment for development of trade. If finds out places and conditions of commercial goods. It is descriptive in nature. It is a part of economic geography.

OR

ii) Differentiate between economic activity and commercial activity?

Ans: ECONMIC ACTIVITY:

Activities of an individual or group in which money, allowances, benefits etc are earned. These activities may be legal or illegal, may also be in large or small scale.

Government may support or ban this activity. Human wants and needs are fulfilled in response to economic activity.

COMMERCIAL ACTIVITY:

Commercial activity is in large scale economic activity. A number of people are engaged in this activity. This is inter regional or international activity. In the performance of this activity usually legal certificate, license, permit is being obtained from the authorities, and rules are followed.

As in industries, cultivation of crops and grass or in railway.

(iii) Farming is not practiced in polar and desert region. Comments.

Farming of the world depends and generally by different factors such as physical, social, economic political and miscellaneous factors.

Most of the above factors donot favour the farming in polar and desert areas of the world.

There is no soil in polar region as only water and ice is at the surface. Deserts soil donot have fertility in soil.

Availability of water is nor present in desert region. Extreme climate coldest in polar region and hottest in desert also unfavourable for farming.

Poor literacy in desert and inhabitants in polar region also donot allow the practice of farming in these regions.

Market, transportation, capital, political system, supply of seet, fertilizer, technical knowledge is not available in these areas therefore farming is not possible as in arctic, antartic region and in sahara, thar and Rajpulana deserts.

(iv) Which region of the world is the front runner in rubber production now a das? Write three points of support your answer:

Ans: Homeland of rubber plant is Brazil and after Columbus discovery of America rubber plant was introduced in Britain, Thailand, Malaysia, India, Vietham, Nigeria, Srilanka, Indonesia etc.

Now a days Asia produces 72% of rubber and Thailand is at the top and Indonesia is second.

Rubber plant naturally found in Equatorial region. Therefore it is agricultural in the countries where rainfall and temperature is maximum such as Thailand, Indonesia and India where rainfall is about 40 to 60 inches and temperature remains 70 degree F.

Secondly soil with nitrogen, phosphorous, iron (red soil) is favourable and such type of soil is present in main producing areas.

Thirdly rubber plant develops in the slope surface so that water may not stand as standing water damages the roots.

These countries are front runner in rubber production of the world.

(v) The sugar industry is located close to the sugarcane plantation because of general factors. List any four factors for this:

Ans: Sugar industry is based on sugarcane. 70% of sugar is manufactured from cun. Sugar is an important component of our food. Homeland of sugarcane is india (Ganges Vally)

Brazil is at the top in producing sugarcane and sugar in the world.

Most of the sugar industries are located in tropical equatorial regions of the world due to the major sugarcane producing areas in which following factors are involved.

- In equatorial region best qualities of sugarcane is produced that is why industries are localized for sugar industry.
- Hot and Humic climate favours the production of sugarcane therefore sugar industries are located in Brazil, India, China, Thailand, Pakistan etc.
- Smooth and fertile soil increases the growth of sugarcane therefore industries are located in such region.
- Economic and social factors also influences the installation of sugar industries where sugarcane is cultivated.

(vi) State four points for the importance of the study of commercial geography for the commerce students.

Ans: Study of commercial Geography at present gives the information for all basic resourced along with the development of commercial activities. Study of commercial geography is also very much important for commerce students too for the following four points.

- Commerce students study commercial geography to learn that how they can be a successful traders, bankers and industrialists.
- Commercial geography is studies by commerce students to know that how he or she can get awareness to solve economic problem and commercial resources.
- Commercial geography also helps and give the knowledge for the development of agricultural crop, specially for getting more yield and protect the crop from diseases.
- By studying commercial geography students acquire a complete knowledge and information for selecting a suitable field for their earning so that a happy ad pleasant life may be adopted.

(vii) Why are temperate grass the leader of wheat export. Give any four reasons:

Ans: Wheat is mostly grown in Northern Hemisphere between 30 degree to 60 degree N. Latitude and in Southern Hemispere in between 27 degree to 40 degree south latitude.
Homeland of wheat is Pakistan, Iran and Afghan. In temperate grassland mostly stapes grassland, Pampas and Pairy grassland and present.
North America, Argentina, Uragnay, Paraguay, Canada, China, Australia are the main wheat producing countries. Temperate grassland areas of the world are leader is wheat export due to the following reasons:

1. Wheat is cultivated as commercial crop for example in USA, Canada, Argentina.
2. Physical and economical conditions for the wheat crop is ideal in the result yield per acre is highest.
3. Agricultural education and research institution are to promote the export and production.
4. Production of wheat is much more in temperate grassland as compared with other countries because modern machinery, plant protection, use of good seeds and fertilizers are sources to produce wheat for export after local use.

(viii) USA and Canada are both are importers and exporters of iron ore. Comments.

Ans: Iron Ore provides a base for the establishment of industries and iron ore is used to manufacture machine, plant spare parts and accessories.
Iron ore is a cheap and common mineral iron ore is present since the formation of earth.
USA and Canada stand second and third producer of iron ore in the world.
Lake superior and Albana regions are famous field in USA>
USA produces 8003 m.m tons and Canada 4631mm tons. Both often exports and import iron ore based on quality of iron ore.
Magnetite iron ore produces in surplus is being exported while they impact Heamatite iron ore as use of Haematite iron ore is maximum.

Q3: i) Draw a sketch to show the physical region of Pakistan.

ii) Run of water and dams are the two ways to produce Hydroelectricity. Explain the statement.

Ans: The electricity for the production of which water resources is used to run the generators or machines is called hydro electricity.
The generation work with the help of kinetic energy of water from water run or water falling from great speed or great height to lower along with the upper of turlime and dynamo is used to generate electricity is called Hydroelectricity. Most of the Hydel Plants in Pakistan

are located on the rivers in mountains of North where rugged topography provides a good head for the generation of electricity.
Run of water (Regular flow) is also essential to ensure the year round generation of electricity.
Run Water is mostly used in rainy or flood season white dams provide electricity through the year as Turela and Mangla.
According to WAPDA Hydel Power Potential of Pakistan is 30000 MW.

iii) Why quetta is not suitable for cotton textile industry. Give any four reasons.

Ans: Cotton textile industry is the largest industry in Pakistan. At the time of independence, only Valica textile in Karachi was present.
Since then hundred of textile industries are localize in various cities due to favourable conditions.

1. The raw material cotton is not produced in Quetta (Baluchistan)
2. Capitalist or investors donot have motivation for textile industry.
3. Transportation facility and market is not available.
4. Skilled Labour and water is also not available.

iv) Write a note or sugarcane growing regions of Pakistan:

Ans: Sugarcane is a tropical crop that can also tolerate short periods of frost. It is grown widely throughout Pakistan from Punjab, Sindh and Pakhtoon Khuwa.
Sugarcane requires large quantities of water, it is usually grown under heavily irrigates areas. Sugarcane is also grown in variety of soil but suitable soil is with nitrogen, phosphorous and potash. There are three main sugarcane growing regions:
East Central Punjab : (Rahim Yar Khan)
South Central Sindh : (Hyderabad, Badin)
Peshawar and Mardan Districts
Main Producing Districts are:
Punjab: Sargodha, Faisalabad, Multan, Bahawalpur, Lahore, Gujranwala, Rawalpindi, R.Y Khan,
Sindh: Hyderabad, Nawabshah, Sanghar, Thatta, Bukkur.
K.P.K: Mardan , Peshawar, Bannu D.I Khan.

v) Write the names of four barrages built on the left bank tributaries of River Indus:

Ans: In Pakistan for the irrigation of different crops from River Indus and its tributeries about 40 brrages have four barrages built at the left bank tributeries of River Indus are as Under:

1. Cheshma Barragae
2. Guddu Barrage
3. Sukkur Barrage
4. Kotri Barrage

vi) Karachi records lower temperature in summer and higher in winter as compared to Lahore. Comments

Ans: in Pakistan, summer season starts from March to June for four months.

KARACHI		LAHORE	
March 24.5°C	November 23.9 °C	March 20.5°C	November 19.5 °C
April 28.2 °C	December 19.5°C	April 26.8 °C	December 14.2°C
May 30.00 °C	January 18.10°C	May 31.2°C	January 24.3 °C

June 31.00 °C	February 20.00 °C	June 33.9 °C	February 12.8 °C

vii) Canal irrigation system causes loss of water and water logging and salinity. Comments.

Ans: Canal irrigation system has been mixed blessing it has created loss of water due to evaporation of canal water and permeability of water means going water under surface of earth. Along with this canal system has created a very draw back in the agriculture of Pakistan that is water logging and salinity. Which is a curse in agriculture and very draw back in the agriculture of Pakistan that is water logging and salinity. Which is a curse in agriculture and had made thousands acre of land barren.

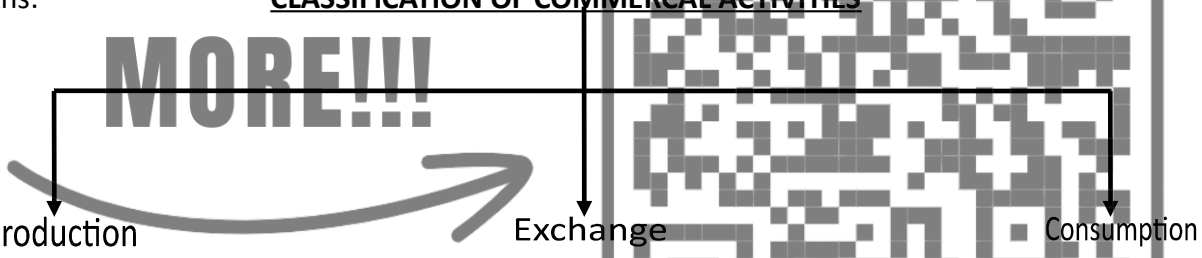
In Order to decrease the loss of water, water logging and salinity it is necessary to bring down the water table. In 1959-60 the Indus basin was divided into 28 reclamation zones. Tube wells were to pump out water to keep the water level down, but all efforts were of no use and benefit.

This problem of agriculture in Pakistan requires serious measures to adopt, so that agriculture products may be raised.

SECTION "C"

Q4: i) Draw a chart to show the classification of commercial activities. Give a comparative analysis of tertiary commercial activities in the developed and developing countries.

Ans: **CLASSIFICATION OF COMMERCAL ACTIVITIES**



a) Primary Production b) Secondary Production c) Tertiary Production d) Quaternary Production e) Quinary Production 1. High Level Position 2. Development Services	a) Increasing Value Commodities b) Face to Face Contract c) Satisfaction of need d) Warehousing and distribution e) Wholesale Trade f) Retail Trade	a) Primary activities b) Hunting and Fishing c) Herding

TERTIARY COMMERCIAL ACTIVITIES:

This type of commercial activity is different from the primary and secondary activities relating to production of goods.

The tertiary activities refer to "Services" such as clerical, business, trade and transport services.

In commercial activities human being uses the product of primary and secondary activities and promotes the use of these products.

In old days man used to work in different fields at the same time. A man after doing his agriculture, used to manufacture cloths, but when the job opportunity was not possible for him to work in every field. So the exchange of substances (Barter System) started.

From exchange of substances upto the present international trade, with the transportation and services are called tertiary commercial activity.

Comparative Analysis:

Commercial economic activity in developed and developing countries may be studied with two comparison.

Business / Trade Activities:

All the countries of the world develop and specialized in production of goods in large quantities for which they have natural resources, raw material, capital and manpower available. They have surplus material for export and earn foreign exchange.

Similarly all countries need goods which are not locally produced and they import.

Transport Activities:

These activities of tertiary help to transport manufactured goods, raw material from one place to another or from market to market.

Transport Activities are of four types:

(i) Road Transport
(ii) Railways
(iii) Water Ways (Inland and Ocean Transport)
(iv) Air Transport

All Above means of transport help in developing tertiary commercial activities. Specially road transportation for inland transport and shipping for export and import.

Road transport is cheap and provides door to door services, it is very common due to presence of network of roads in every country of the world.

Comparision of tertiary commercial activity may be made with developed and developing countries of the world with above facts and condition of tertiary activities.

(ii) Give a detailed account on any two of the following producing regions

1. South East Asia 2. American Region c. North Africa

Ans: In the world the reserves of petrol is estimated upto 1034673 billions barril and production is more than 2723650805 barril annually.

South East Asian Countries are not important in producing mineral oil. Only Indonesia produces maximum in this region and Indonesia is also a member country of OPEC.

Malaysia, Brunai, Vietnam, Thailand is other producing countries of South East Asia. Indonesia and Brunai also exporters of petroleum.

AMERICAN REGIONS:

Central America, South America, North America are important petrol producing regions. Countries of Central America and South America donot have more reserve of Petrol except Venzuela. Other important countries are Brazil, Argentina, Columbia and Equadore.

In North America, USA is main producing country. Other countries are Mexico, Canada, USA has a production of 20977.124 millions barrils, Mexico produce 1159.68 M.B. While Canada produces only 792.26 m.b.

(iii) What is Population Transition? With the help of diagram, explain the different stages of population growth?

Ans: **POPULATION TRANSITION:**

The process of changes in a society's population is called "Population Transition". The population transition is a process with several stages and every country is in one of the stages.

1. HIGH STATIONARY STAGES:

This is the first stage of population transition consists of highly crude or high birth fertility and death (high rate). As a result the natural increase rate is very low. In this stage shortage of food, unfavourable climate and diseases result low output. Now a days no such country remains.

2. EARLY EXPANDING STAGE:

This is stage second stage of population transition, in this stage death rate plummets while crude birth rate remains the same. The difference in cude birth and curde death is high. Natural increase rate is also high countries of Europe and North America enteres in second stage.

3. LATE EXPANDING STAGE:

This is third stage of transition. In this birth rate is decline with continue decline in death rate. Birth rate is higher than the crude death.

European and North American Countries moved from second to third stage during first half of 20th Century. In recent years, some countries of Asia, Africa and Latin America has moved to third stage.

4. LOW STATIONARY STAGE:

A country reaches the forth stage of transition when crude birth rate declines and natural growth becomes zero, and countries population declines.

Several countries of west and North Europe has reached in forth stage such as Sweden, Austia, Poland, Greece, Italy, Germany etc.

GRAPHICAL REPRESENTATION OF DIFFERENT STAGES OF POPULATION GROWTH:

iv) Write a note on the types of agriculture, and point out their major areas and crops.

Ans: Great differences occur in various countries in respect of the factors favouring agricultural activities therefore following types of agriculture or farming is adopted.

1- SHIFTING FARMING

Shifting farm is the main type of farming, found in the worlds tropical regions, such as amazon area of South America, Central and West Africa and in South East Asia.

Rice, Sugarcane, coconut, tea and seed oil are common.

2- HUMID FARMING (RAINFALL):

This land of farming is practiced in Europe, Asia and America where rainfall is sufficient, India, China, Japan, UK, Italy, USA, Canada are main countries.

Wheat, Rice, Sugarcane, Seedoil, Cotton are common.

3- IRRIGATION FARMING:

Russia, India, Pakistan, Egypt are main countries. Monsoon and sub-tropical regions are famous. Wheat, Rice, Cotton, Sugarcane, Tea, Tobacco are major crops.

4- DRY FARMING:

Where rainfall is poor such as USA, South Africa, Australia, Pakistan.

Wheat, Rice, Cotton, Barley, Peanut are common.

5- SUBSISTANCE FARMING:

This type of farming depends on economic conditions practiced in Pakistan, India, China, Japan and other countries of Asia.

6- MIXED FARMING:

In west Europe, East USA North and West USA, Mexico, Brazil, Scotland, China, Argentina, Russia, Wheat, Maize, Oats, Root Crops and ray hay are common.

7- Commercial Farming:

In this type of farming, the crop for commerce as wheat in USA, Canada, USA, Australia, Pampas of Argentina, Stepp of Russia, Large quantity of wheat, rye, Barley, Maize, Vegetables are cropped.

8- PLANTATION FARMIG:

In the tropical region of south East Asia, Africa and South America, Rubber, Sugarcane, Tea, coffee, cocoa and Banana.

9- INTENSIVE FARMING:

Monsoon land of Asia Indo-Pak, Japan, Indonesia, Malaysia, Bangladesh are important regions Rice, Wheat, Oil Seeds, Barley, Sweet Potato, Vegetables and Fruits.

10- SHIFTING FARMING:

South east Asia, Central Africa and Tropical America are important for farming. In this farming land is cultivated for first to this year then left away. In this way one after the other land is cleared and used for cultivation. Food crops, vegetables, banana, and fruits are cultivated.

11- TRUCK FARMING:

Coastal areas of USA. In all big countries of world, truck farming is done. Vegetable is the main crop cultivated to meet the need.

12- FRUIT FARMING:

Generally rugged land is used to crop different fruit crop around all the big cities.
Citrus fruits and deciduous fruit are common.

Q5:

i) Name Eight main Highways and motorways of Pakistan. Write four characteristics of Motorways.

Ans: INTRODUCTION:

Roads of Pakistan are the main source of transportation of goods and travelling of people from one place to the other. It provides door to door services. It is cheap, fast and available round the clock. The roads of Pakistan link all the major cities, towns and villages of the plains. The network of road in mountainous, Plateaus region is poor.

NATIONAL HIGHWAY AUTHORITY:

NHA was formed in a meeting at Karachi. NHA has the responsibility to construct road in Pakistan and look after the roads and make sure to maintain the roads in order for transportation.

MAIN HIGHWAY OF PAKISTAN:

According to economic survey of Pakistan, in 1990 -9 1 total length of roads in Pakistan was 170823 and in 1999-2000 it was 248340 km. which reached to 25961 km in 1910.

National High Authority has the responsibility of building new roads and make required repair to roads in Pakistan.

NHA has the authority for Looking after and repair 18 National Highways and Motorways.

PRINCIPAL ROADS OF PAKISTAN:

1- KARACHI TO TORKHAM VIA LAHORE (N5)

It is also called Grand Trank road. The length of GJ road is 1756 km, this road connects Karachi Port with the interior parts of the country. It is totally metlic highway.
This road has importance with economic and defense point of view.

2- KARACHI TO CHAMAN VIA QALAT, QUETTA (N25)

It is 834 kms long, connects Karachi port with Bela, Khuzdar, Mastang, Queta, Pighim and Chaman, This road was completed in 1982. This road facilities Pakistan for trade with Afghanistan.

3- ROHRI TO QUETTA VIA SUKKUR< JACOBABAD (N64)

The length of this road is 385 kms. This road links Punjab, Sindh with Baluchistan and gives the facility for tade, Shikarpur, Jacobabad, Sibi, Dera Murad Jamali are main cities with this road.

4- SILK ROUTE / KERAKORAM HIGHWAY (N35):

This road is a symbol of friendship with china. It is 803 Kms long. It was built in 1982 by Chinese engineer and Pakistan army. It links Pakistan with sinkiang Province of China.

It has became important trade route of Pakistan with china. It liks Islamabad, Abbotabad, Gilgit, Hunza with China.

MOTORWAYS OF PAKISTAN:

In Pakistan 90% of trade goods travelling of people is being carried out through roads. Therefore there is a heavy road lies, with the roads. Pakistan has planned to build 9 motorways ot manage trade with Central Asia (Muslim Countries), Afghanistan and Cruna.
Following are some of the important motorways of Pakistan:

1- LAHORE – ISLAMABAD MOTORWAYS (M2)

This motorway is 367 kms long. It was completed in 1997.

2- ISLAMABAD –PESHAWAR MOTORWAYS (M1):

It is 154 kms long

3- PINDI – FAISALABAD MOTORWAY (M3):

It is 52 Kms long.

4- FAISALABAD –MULTAN MOTORWAYS (M4):

This is also one of the main motorway of Pakistan and recently is has been build. Along with this another important road is to be completed very soon from Gawadar to Ratu Deru.

CHARACTERISTICS OF MOTORWAYS:

1. Main characteristics of Motorways is it help in inland trade and trade with other countries by transportation of trade goods.
2. It promotes the relationship with neighbor countries and for the promotion of trade.
3. Motorways also earn through the recovery of tax and increases the national income.
4. Motorways are fast and safe and government has provided security for travelers and transporter. It also attract the investors.

SECTION A
MULTIPLE CHOCE QUESTION

1. They have developed the art of hunting to a high state of differentiation:
   a. Eskimos b. Incas c. European Hunters d. American Cowboys
2. It is the largest country by industrial outputs:
   a. The USA b. Japan c. Germany d. China
3. This country produces 99.5% of its power requirements through hydro electricity.
   a. Canada b. Norway c. Sweden d. Cuba
4. Monsoon forests are mainly found in:
   a. East Asia b. Europe c. Australia d. India
5. This Indian region's is famous for tea plantation:
   a. Bengal b. Maharashtra c. Hyderabad Deccan d. Assam
6. This type of climate is required for sugar cane cultivation:
   a. Cold Dry b. Cold Humid
   c. Hot equatorial d. Humid tropical
7. Rubber is planted in:
   a. Mountainous region b. Polar region
   c. Temperate region d. Equatorial
8. It is the biggest railwy junction of Pakistan.
   a. Khanewal b. Khanpur
   c. Rohri d. Kotri
9. The four main rivers of Punjab meet at:
   a. Guddu b. Mithan Kot
   c. Panjnad d. Warsak
10. Commercial grain farming is practiced in the grassland of:
    a. Frigid region b. Equatorial region
    c. Temperate region d. Tundra region
11. Water rainfall in Pakistan is caused by:
    a. Tropical cyclones b. Monsoon
    c. Western depression d. Tundra
12. Demographically, the biggest city of the world is:
    a. Shanghai b. Mumbai
    c. Tokyo d. New York
13. The total land of all the continents is approximately this part of the world:
    a. 29% b. 25%
    c. 35% d. 32%
14. There are twelve crossing points on the border of Pakistan and :
    a. Afghanistan b. China
    c. Iran d. India
15. This is not a grassland.
    a. Canterbury b. Veldts
    c. Downs d. Greenland

SECTION "B"

SHORT ANSWER – QUESTIONS

Q2: Attempt any five questions:

1. Explain the importance of commercial geography for an industrialist.

Commercial geography gives a complete knowledge and benefits to every industrialist for running their production smoothly. The industrialist needs skilled and technical to work on machines. Industrialist get help with commercial geography to have suitable type of labour for his industry. Industrialist needs good quality of raw material. Commercial geography enables the industrialist to check good rat material in quality and cheap in price. The industrialist get the knowledge about foreign market for selling the products both in country and outside the country. Commercial geography helps the industrialists in this regards.

Commercial geography provides true guidelines for industrialist about commodity, markets and business which helps him to promote trade.

2. Define the growth rate of population. How is it calculated.

The global growth rate in world population increased during three periods around 8000 B.C, A.D. 1750 and AD 1950. Around 1800 AD global population reaches its first billion. Today world population reached to 1 billion about every 12 years the 20th century began with 1.6 billion. Population growth rate at present is 1.10%

Annual growth rate reached its peak in late 1960's when it was 2%.

For the calculation of growth rate of population, total increase and total decrease is observed total increase means increase of population. Through natural birth and migration while total decrease means decrease by death or by shifting from any place. So rate may be calculated through.

Total increase in population – total decrease population present.

3. Write a note on interrelation of commercial activities.

The commercial activities are interrelated with an another. It is not operated with isolation. It is related with physical and cultural environment.

Sometimes commercial activities attract each other and sometimes repel each other. The sugar industry generally installed near to sugarcane field, while chip board factory located near sugar mills. The wholesale center is very close to retail market. The transport, repair workshops go together with transport.

The petrol stations are located on roads with different traffic.

Banks, Head Offices are located in CBD of mega cities

Five Star hotels are located in the are of big cities.

Thus location of every commercial activity is selected to push and pull factors.

4. How does intensive commercial agriculture differ from extensive grain production:

INTENSIVE COMMERCIAL AGRICULTURE:

Intensive commercial agriculture differ from extensive grain production in the sense that it is practiced in Europe, E.North America, Part of south Africa, S.America, Australia ad New Zealand.

In these regions moderate rainfall is available.

This kind of agriculture has verities of agriculture, crps, dairying, market gardening, ad fruit production.

In this type of agriculture low labour and large amount of capital is needed. Farms are small in size and gives high production.

EXTENSIVE GRAIN PRODUCTION:

This type of agriculture is found in N. America, Prairies Steppe, S. Africa, Plateaus of Newzealand, part of E. Europe and Pampas in Argentina. Some little part of North china is also fit for this category in this area, precipitation is very low, farms are large in size, production is low.

5. The Eskimo hunter are distinguished for special aptitudes and mehos due to unique life and environments.

Eskimos have varieties in implements, weapons and methods of hunting. Eskimos have developed the art of hunting in using different methods. That is why Eskimos stands supreme among hunting race.

Eskimos are controlled be seasons, daily weather, ice conditions and habits of the game. In shinning summer, Eskimo line intent of reinder skin along the coast, using nets, hooks, harpoons for fishing especially for women, children and old men. The autumn season's excellent for hunting birds are also caught.

Eskimo often travel long distance for polar bear hunting.

6. The total crop duration of spring wheat is lesser than winter wheat. Write two major reasons in support for this statement.

Wheat is a cereal grain, now cultivated throughout the world. It is second to rice. Winter wheat is cultivated in early winter. That is September to December. Spring wheat is cultivated in spring season when wind is cool and moist and harvested in late summer or early autumn winter wheat is harvested in May to July. Spring wheat is generally cultivated in higher latitudes where severe winter is experienced.

Therefore it is the fact that spring wheat has lesser duration than winter wheat.

7. Write a note on solar energy technology and its types:

Solar energy is the need of world for using solar heating. It is estimated that solar energy can provide a third of global final energy demand after 2060. Now days it is becoming very common in different countries. It is very useful in the region where sun shines maximum and atmosphere remains clear with clouds.

TYPES OF SOLAR ENERGY:

1. Solar healing
2. Solar photovoltaic
3. Solar thermal electricity
4. Solar Agriculture

8. List the major fishing grounds of the worlds and describe any one fishing ground of the USA.

Following are the major fishing grounds of the worlds:

1: East Asia
2: South and South East Asia
3: North Western Europe
4: Eastern North America
5: North Western North America
6: West Central South America

FISHING GROUND OF USA

Fishing ground of USA stretches from Alaska to California with North East Pacific it is fourth larges fishing area of the world.

Mostly Salmon, Pilchard, Tuna are common fishes of the area.

USA is the mot important producer of fish in the North East Pacific region.

Q3: Answer any four from the following.

1. The monsoon and the western disturbances are two main factors which effect the climate of Pakistan's economy. Comments.

The two major factors which effect the Pakistan's economy are monsoon and western disturbances.

These climatic conditions directly influences the agriculture and industrial production on which economy of Pakistan depends. The major part of Pakistan is effected by dry climate throughout the year.

Major part of Punjab and Northern part whole of Sindh Receive less than 250 mm rain.

Monsoon takes place from July to September and western depression from December to March.

The climate of Pakistan's economy always effects directly or indirectly the economy of Pakistan.

2. Describe the canal system on the right (West)Bank of Indus.

In Pakistan almost 75% of agricultural land is covered. With irrigation system. In the right bank (west) of Indus, Canals, Dams, Barrages Play an important role to supply the water for agricultural activities.

Right Bank of river Indus includes:

a) The river swat canals.
b) Warsak multi purpose project on river Kabul.
c) The kurran Garhi projects on the Kurrun river.

As Pakistan is a agricultural country and its economy depends on agriculture. Therefore the right banks of river Indus effect the agriculture and economy of Pakistan.

3. Why is Pakistan important in respect of its marine location:

Marine location is blessing of God for Pakistan and its people in different aspect. In respect of marine location of Pakistan which includes coastal areas of Sindh and Baluchistan province is very important in its marine location.

The coastal or marine belt is 1046 km long, which includes coastal area of sindh and Baluchistan. Pakistan is always influenced by the monsoon winds, seabreeze and land breeze climatically. In response to these climates and location, temperature, rainfall, pressure is always controlled by the winds entering from south, and blowing from south to North. Trade of Pakistan has established due to its marine location, specially from Karachi port and Gawadar Port, due to marine location climate, rainfall, agriculture, trade and life activity is always influenced.

4. Although contributing a lesser share in GDP, the primary sector plays an important role in Pakistan's economy. comments.

Primary activity includes agriculture, mining forestry, farming, grazing, hunting and gathering fishing.

The major share in the economy of Pakistan includes the primary sector productions, that is why it plays an important role. The planning for economic development began after 1951. The goal of economic plans were to boost the economy. The highest economic growth was achieved during 1960's and 1970's.

But the cause for failure to achieve the target was wars with India in 1965 and 1971 in Pakistan economy failures main cause is inflation that is measured in CPI, WPI, SPI and GDP.

The inflation rate in Pakistan remained at an all time low.

Although the primary sector contributes a low share in GDP.

Being an agricultural country, this sector has no important role to share a high share in GDP.

5. Write a note on any ONE of the following.

a) The functions of NHA b) Markan Coastal Highway.

THE FUNCTION OF NHA:

The NHA is the main road management which has the responsibilities of managing 17 national highways, 10 motorways and all kinds of road.

The speed limit of national highways is 80 Km/hr.

The NHA was started in 199 through an act of Parliament for planning, developing, operation, repair and to maintain the NHA.

Total roads under NHA now stands about 8780 KM.

NHA has the responsibilities to provide a safe, modern and up to date transportation system/ NHA repairs, constructs new roads and maintains the roads, it is the responsibility of NHA. NHA has also the responsibility to produce safe transportation for travelers, goods and different products.

6. Give a four government oriented solution for agricultural problem in Pakistan.

Agriculture is the mainstay of Pakistan's economy. The reative importance of agriculture has decreased over the years, it is the largest contributor to pakistan's economy.

Its share in GNP has dropped from 52% in 1950 to 25.1% in 99 -2000.

The agriculture sector has many problems. Some of them are natural while others are man made or government oriented.

Government oriented solutions for agricultural problems in Pakistan are as under.

i. One of the main problems in the agriculture of Pakistan is lack of fertilizer and manure, in 1951 chemical fertilizer was unknown in Pakistan, since then use of fertilizer started in agriculture.

ii. Water logging and salinity are the two serious problems I the agriculture of Pakistan. The main cause of this disease are canal water seeps in the surface water table and makes the water logging and salinity.
To resolve this problem government as built lined canals and installed thousand of tube wells to low down the water table.

iii. Improved seeds can increase crop yield by 10 to 20 percent. Government has made various research center in Pakistan to provide improved seeds specially good seeds of wheat, rice, cotton, maize and grams.

iv. Government also had made solution in a agricultural problem, traditional wooden plough, iron sickles are being replaced by tractors and threshers. Tractors play key role in mechanization. The make possible the use of disc plough. The government policy towards mechanization has fluctuated over the years. Government also provides subsidies for the purchase of tractors.

7. What is a pass? List any two passes and their connective areas.

PASS:

In mountainous regions there are routers for joining two areas. Passes are routes specially through mountains range of high point.

Passes play a key role in trade, war and migration of people.

i. THE LOWARI PASS:

It is one of the important pass of Pakistan. It has high mountainous region. This pass connects Peshawar and chitral. It is 10230 feet long.

ii. THE KARAKORAM PASS:

It is another important pass situated in Karakoram mountain region. This pass is 18290 feet long. This pass connects the area of Lehand yarkand.

BONGAR SOIL:

Bongar soil is the best soil in the agriculture of Pakistan. Bongar soil is present in Indus plain region. The bed of Indus. This soil covers a vast area of Indus plain.

Bongar soil are mostly present in Punjab, Peshawar, Mardan, Bannu and Karachi plain. Major parts of sindh also consists of Bongar Soil. This soil gives a good production.

SECTION C
DETAILED ANSWER – QUESTIONS

1- Describe any four of the following:

a) RUBBER PLANTATION IN SOUTH EAST ASIA:

Favorable conditions required for the rubber plantation is available in South East Asia, rapid growth also occurs in S.E. Asia.

Rapid growth in automobile industry transportation facility, availability of cheap labor, capital, medicines have played important role in rubber plantation in S.E. Asia. Thailand, Malaysia, Indonesia, India, Singapore, Srilanka, Vietnam are important producers.

b) WHEAT TRADE OF THE USA:

USA produces only about 10% of the world wheat but it is consistently the world's largest wheat exporter

In last decade USA produced wheat export 10 million metric tons, consisting 70% of world wheat export.

In most of the years USA remained leading exporter is wheat.

c)CLIMATE FOR TEA CULTIVATION:

Climate is one of the most important physical condition required for the cultivation of tea. Tea does best in tropical and sub tropical region of the world.

Tea gives best in warm and humid climate conditions.

Tea crop is cultivated from sea level to the elevation of 9000 feet.

The highest elevation the better quality. Climate does influence maximum upon the growth of tea tremendously.

Frost is injurious for tea plant growth:

d) SOCIO-ECONOMIC FACTORS FOR SUGARCANE CULTIVATION:

For sugarcane cultivation and all stages great deal of manual labor is required. Therefore abundance and cheap labour is essential for the cultivation of sugarcane. Cheap and efficient transportation system is essential. Mill should be near to the farm. Machinery, ploughing, preparation of land, plantation, spraying to contrl pests and disease, harvesting is done with machine. Scientific farming, fertilizer and irrigation areneeded for high yield.

2- Write a note on fossil fuels as non renewable resources of energy. Also list the major world deposit of any one of these:

3-

Fossils fuels (non-renewable energy resources) is an important source of energy and plays an important role in the economy.

Generally, fossils fuels are formed with trees, plants, grasses, shells and animals after thousands of years buried in the each in the result of physical and chemical changes.

a) COAL:

Coal is a non renewable resource of energy. It is formed with plant, trees, grasses, boxes and shells. Maximum presence of carbon in coal considered as the best presence of sulphur, humidity and also low down the quality.

Coal is classified in the following four Kinds

i. **ANTHRACITE COAL:**

Best quality of coal, more than 80% contets of carbon is present, heating power is highest.

ii. **BTUMINOUS COAL:**

Ranking is 2nd position highest use, generally used for generating electricity and in iron steel industry, carbon present from 60 to 80 %.

iii. **LIGNITE COAL:**

Popularly known as Brow coal. Carbon contents are 40 to 60%. Light brown in colour, moisture exerts while burning used in industries for making bricks.

iv. **PEAT COAL:**

It is the most inferior quality of the coal. It is formed through very low decomposition contains 30 to 40% carbon.

It generates very little beat, gives much moisture and smoke during burning, it is generally used to warm rooms and cooking purpose.

Main producers are China, USA, India, Australia, S. Africa, Russia, Kazikistan etc.

v. **PETROLEUM:**

It is generally called crude oil when mixed. It is also a farm of fossil fuel, which is non renewable fossil.

Found in large quantity in the in the interior of the earth. It is used as fuel nd raw material in chemical industry. Also used in making medicines, fertilizers, food stuff, plastic and building materials, thermal electricity depends on petroleum and its products.

Once petrol formed it flows up ward in earth. It is a hydrocarbon. The largest789 oil reserves are present in USA venzuela, Canada, Saudi Arabia etc.

vi. **NATURAL GAS:**

Natural gas is also a fossil fuel formed since millions of years. It is mixture of hydrocarbon gases that occur with petroleum deposits specially with methane it is used as fuel and in manufacturing organic compounds.

It is a cheap and clean source of enrgy. Major forms of natural gas are CNG, LPG and LNG.

Main producers are Russia, Iran, Qater, USA, Saudi Arabia, Venzuela, Algeria and Pakistan.

vii. **NUCLEAR POWER:**

It is used to generate heat and electricity. Nuclear power provides about 6% of the world's energy and 1314% of the world's electricity. USA, Japan, France, generates 50% of the world electricity.

Main Producing countries are USA France, Japan, Russia, S. Korea, Canada Etc.

WORLD DEPOSITS OF COAL:

Coal is widely distributed over the earth the major deposits of coal lie in the northern hemisphere mainly between 35 to 50 centigrade N-Latitude.

Commercially coal deposits occur in sedimentary rocks between layers. In 1997, world coal reserves were 9.98 trillion metric tons. China is the largest producer of

coal in the world, while USA contain world largest coal reserves. Other important coal producing countries are Australia, India, S. Africa, And Russia.

USA:

In USA, Allegheny mountains, appalalusan mountain have main coal deposits most coal now mined in western surface mines.

Q5: Point out the reasons for downfall of railway in Pakistan. Suggest the steps of uplift service of passengers.

The railway inherited by Pakistan 1947 was laid down by British in 1861. In 1947 Pakistan had 8554 km long. The main reason of downfall of railway was use of loco motive engine or steam used.

Other cause is railway workshop which failed to maintain the use of railway. Railway sleeper used were always in short. Pakistan railway declined in productivity because of over staffing. Number of passenger started reducing due to bad services of railway.

Earning started to fall down since 1999 in millions. By 1999- 2000 the amount fall down to 5 millions.

SUGGESTIONS TO UPLIFT RAILWAY SERVICES:

Eastern Punjab has a great network of railway. Meter guage and board guage both need improvement.

Parallel railway line must be laid from Karachi to Peshawar.

Railway Engine must be durable along with wooden sleeper.

Railway Workshop needs major improvements.

Railway staff must be reduced to uplift the railway transportation for passengers.

Further main necessities for travelers must be made up to the mark and usable.