

LAND AND CLIMATE OF THE ISLAMIC REPUBLIC OF PAKISTAN

LONG QUESTIONS

Q.1 Describe the location and geographical importance of Pakistan?

Ans: Location of Pakistan

Pakistan is situated in Southeast Asia. Pakistan lies at latitude 24° to 36.75° north and at longitude 61° to 75.5° east.

Land stretch: The land of Pakistan stretches over 1600km north to south and about 850km from east to west.

Area: It has an area of 796096km sq.

State: It is a federation having four provinces. Islamabad is the federal capital.

Boundaries:

In the north-east Pakistan shares 592km border with China, in the north-west a strip of 16km separates Pakistan from Tajikistan, in the west about 2250km long border line known as the Durand line separates Pakistan from Afghanistan (demarcated in 1893). In the south-west Pakistan shares 800km border with Iran. In the east Pakistan has 1600km long border with Indian Punjab and Rajasthan. In the south spreads the Arabian Sea and the Indian Ocean.

Importance of Location:

Pakistan occupies a significant position in the region.

Situation: Pakistan is located between the big states of Russia, China and India. China is a rising economic power of the world and Pakistan has friendly relations with it. Pakistan lies in between India & Russia which are close allies. It is a gateway to India. Western powers attach great importance to Pakistan because of its location.

Trade:

- Most of the trade between east and west and the oil of the Gulf States is carried through the Arabian sea. Pakistan controls sea-routes from the gulf to the Arabian Sea and Karachi is the seaport that lies on this important trade route of the world.
- Only Pakistan is in a position to provide transit trade i.e. nearest sea route and transport facilities, to Afghanistan and the Central Asian countries as these countries have no seaport of their own.
- Russia needs warm waters from international trade and this can only be done through Pakistan.
- Pakistan also controls most of the air traffic between east and west.

A Centre of the Muslim World:

To the west, east and north of Pakistan lies a chain of Muslim countries. Pakistan seems as a bridge between these because of the location. This has given Pakistan prominent status among the Muslim countries.

Pakistan Neighbours & Administrative Division



Q.2 Describe the physical features of Pakistan.

Ans: Physical Features (relief)

On the basis of its land surface, Pakistan is divided into eight major physical regions.

1. The Northern Mountains.
2. The Western Mountains.
3. The Indus Plain.
4. The Balochistan Plateau.
5. The Potwar Plateau.
6. The Salt Range
7. Deserts
8. Coastal Areas

(1) Northern Mountains

These are located in the north of Pakistan and include the highest mountain ranges which are:

- a. Himalayas
- b. Karakoram

Himalayas:

The Himalayas have a length of about 2700km. these are like a bow in the north of the subcontinent and are known as the "Roof of the World". According to altitude (height about sea level) these can be subdivided into:

The Sub-Himalayas or the Shiwalik Range: These have a height of 600 to 900 meters. These extend over the southern part of Hazra and Murree. These have Rawalpindi and Pubbi hills.

The Outer or Lesser Himalyas / the Pir Panjal Range:

These have a height of 4200 to 4500 meters. These lie to the north of Shiwalik hills and run parallel to them. These have Hazara and Murree hills

The Central Himalayas:

These have an average height of 6000 meters. The highest peak is Nanga Parbat (Naked Mountain) which is 26660 feet high, these lie in the north of Pir Panjal Range between the Pir Panjal and Karakoram Ranges. The beautiful valley of Kashmir lies between the Pir Panjal and the great Himalayas.

Karakoram Range:

It is in the north of Central Himalayas. It extends 400km from Hunza to Shyok. It has an average height of 7000 meters. It has a part of Northern Kashmir and Gilgit. K2 mount Godwin Austin is the highest peak in the Karakoram Range. It is 28251 feet high near Gilgit.

(1) Western Mountains

These are north-western & south-western mountains. These include the following ranges.

The Hindukush Range: is situated in the north-west of Pakistan & most part lies in Afghanistan. The highest peak of this Range is Tirch Mir which is 7700 meters high. It has the valleys of Chitral, Dir and Swat.

Sufed-Koh Range:

The Height of Sufed Koh Range is 3600 meters. It lies in the south of the River Kabul in east-west direction. It is so called because the peaks are often covered with snow. River Kurram lies to the south of this range and Kurram Pass provides a route into Afghanistan. At the end of this pass lies the valley of Kohat.

Waziristan Hills:

These are located between Gomal and Kurram Rivers along the Pak-Afghan border. Tochi and Gomal are important passes of these hills. It has towns of Bannu near Tochi pass and Dera Ismail Khan near Gomal pass. The Kurram dam on the Kurram river is the main source of irrigation of Bannu valley. The area is mineral rich.

Peshawar valley lies to the south of the river Kabul. Warsak dam on river Kabul and river Swat irrigate the valley.

Sulaiman Range: it is located to the west of River Indus.

Takht-e-Sulaiman is the highest peak in this range.

Kirthur Range: It is located to the south of Sulaiman Range.

Kirthur Range: It is located to the south of Sulaiman Range.

(2) Balochistan Plateau:

A plateau is an area of high ground with fairly level top. Pakistan has two large plateau areas. The Balochistan plateau is the largest one. It is located in the west of Sulaiman and Kirthur ranges. Its prominent features are:

- Its maximum height is 900 meters.
- It has hills of Muslim Bagh and Ziarat.
- Its rivers are Gomal, Zhob, Hingol. Zhob is the largest river.
- Hamun Maskhel is a vast salt water lake.
- The mountains of Toba Kakar and Chaghi separate plateau from Afghanistan.
- Quetta is the most prominent city. It is also the capital of the provinces.
- It is rich in natural resources i.e. natural gas, coal, copper, iron ore.
- It has very low rainfall.

(3) The potwar Plateau:

Boundaries: On the east-river Jhelum, on the west-river Indus, in the north-Kala Chitta and Margalla hills, in the south-Salt Range.

Features:

- The plateau is poor in respect of Agriculture but very rich in minerals.
- Soan is the largest river.
- It has valleys of Soan and Haro rivers.
- It covers a vast area in Rawalpindi, Jhelum and Mianwali districts in Punjab provinces.
- It is 300-600 meters high.

(4) The Salt Range

It lies in the south of Potwar Plateau. River Jhelum is in the east of Salt Range. It crosses river Indus at Kalabagh. From there it continues towards districts of Bannu and D.I. Khan in the N.W.F.P. The average height of the Salt Range is 700 meters but at the point near Sakesar it rises to about 1500 meters.

(5) The Indus Plains:

It lies in the south of Potwar Plateau. River Jhelum is in the east of Salt Range. It crosses river Indus at Kalabagh. From there it continues towards districts of Bannu and D.I. Khan in the N.W.F.P. The average height of the Salt Range is 700 meters but at the point near Sakesar it rises to about 1500 meters.

The Upper Indus Plain:

It extends from Attock to Mithankot. Most of the Punjab is in the Upper Indus Plain. Five rivers flow and irrigate this plain. The soil of the plain is very fertile but some dry hills known as "Karana hills" appear above the plain. The land which lies between the two rivers is known as "Doab". The Punjab plain is divided into following Doabs.

- Bari Doab: area between river Beas and Ravi
- Rachna Doab: Between Ravi and Chenab.
- Chaj Doab: Between Chenab and Jhelum.
- Sindh Sagar Doab: Between Jhelum and Indus

The Lower Indus Plain:

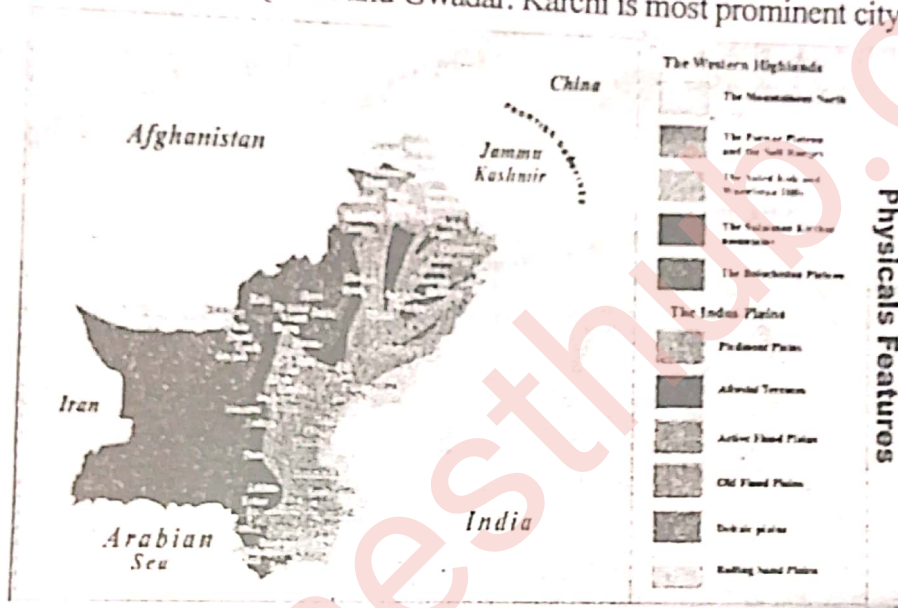
It extends from Mithankot to the Arabian sea. Most of the area of Sindh province comes in the Lower Indus Plain. River Indus is the major stream here. The Lower Indus Plain is also very fertile. Canals from river also irrigate the area. The Thar desert lies in the eastern part of this plain. The delta territory of river Indus starts from Thatha. The river divides into many branches that fall in the Arabian Sea.

(6) Deserts:

- **Thal:** Thal desert consists of areas in Sindh Sagar Doab i.e. Mianwali, Sargodha, Muzaffargarh and Dera Ghazi Khan. Most of the are is barren due to low rainfall. Dust storms are frequent and large numbers of sand dunes are found here.
- **Cholistan:** This desert is located in Bahawalpur division of Punjab. It is an extension of Indian Rajputana desert. The areas are barren due to scanty rainfall and water.
- **Nara and Tharparker:** The southern border of Khairpur district is known as Nara desert and boarder area of Mirpur Khas and Sanghar districts is called Tharparker desert. The area is barren due to lowest rainfall here.

(7) Coastal Area

Pakistan has 800km long coastal area along the Arabian Sea from Karachi to Gwadar. The seaports are Karachi, port Qasim and Gwadar. Karchi is most prominent city in our coastal area.



Q.3 Define climate. Give an account of the climate and seasons of Pakistan.

Ans: . Climate:

Climate in an average conditions of weather in a particular region over a period of 11 to 40 years generally. The weather conditions include temperature, air pressure, rainfall, winds etc. the weather is always changing whereas the climate of a region is a permanent features.

Factors affecting climate:

- Location: Distance from equator, poles, sea, mountains etc.
- Altitude: Height above the sea level. The higher you go, the cooler it is.
- Air: Wind systems create cyclones, thunderstorm, Tsunami and monsoon. Air-pressure affects winds movement, rainfall and temperature.
- Temperature: Temperature changes affect movement of winds.
- Humidity: It affects rainfall.

Other factors are also given which are as:

- Water courses i.e. river and streams.
- Forests.
- Properties of the soil and the earth crust.
- Town planning.
- Density of the population.
- Industrial establishment

Climate of Pakistan

We do not have the same type of climate in the various parts of Pakistan. In summers the plains are extremely hot whereas the hilly areas have pleasant weather. In winters, snow falls in the hilly areas and they are extremely cold whereas the plains are less cold. The places situated near the sea, e.g. Karachi, have moderate climate. The different parts of the country receive different quantities of rainfall.

The climate of Pakistan on the whole is dry and extremely. It means that it is extremely hot in summer and extremely cold in winter, and there is scanty rainfall during the year.

Seasons of Pakistan

Season is a part of the year with a particular type of weather. In Pakistan we have four main seasons in a year. These are the spring, summer, autumn and winter.

1. Spring

The spring season comes between winter and summer and remains from March to May. In this season leaves and buds appear on plants. The weather is pleasant in spring.

2. Summer

The summer comes between the spring and autumn, and remains from June to August. It is the warmest season of the year. In summer the days are long and nights are short.

3. Autumn

It comes between summer and winter, and remains from September to November. In this season the leaves turn brown and fall off the trees, and the weather is slightly colder.

4. Winter

The winter season comes between the autumn and spring, and remains from December to February. It is the coldest season of the year. In winter the days are short and nights are long.

Q.4 Describe the temperature zones of Pakistan.**(2013), (2014)****Ans:** Temperature Zones of Pakistan

On the basis of temperature variation, Pakistan can be divided into the following four major zones.

1. Highlands

This zone comprises the northern and the north western mountainous region. There are the areas of very high altitude (height above sea level) in the region. This is the coldest region of the country. The mountain peaks on very high altitudes remain snow-covered throughout the year. The winter season continues to exist from six to eight months of the year. In winter the temperature falls below the freezing point and most parts have a heavy snowfall and frost. The summer are, however, quite mild and pleasant. This is due to the height above sea-level and distance from the Equator. Every year people in quite a large number migrate from plains to Northern and North-Western Mountains to spend their summer days.

2. Lowlands

This temperature zone comprises the upper Indus Plain and the lower Indus plain. In the upper Indus Plain the summers are very hot. May, June and the first part of July are extremely hot. In these months hot winds blow during the day. In the month of June the temperature reaches its climax. In the peak summer months, i.e. May, June and July, the temperature varies from 25°C to 40°C.

In the lower Indus Plain temperature does not rise much on account of sea-level breezes. Since the land and sea breeze blow throughout the year, there is not much difference in the temperatures of different months. The winter of this region are not very sever. Compared to the Highlands the winters of the upper. Indus plain and lower Indus Plain are shorter and less cold.

3. The Balochistan Plateau and Thar Desert

The Balochistan Plateau and most parts of Thar Desert are very hot and dry in summers. The places like Sibi and Jacobabad are among the hottest points of the globe. In these cities the temperature rises up to 52°C and even more sometimes. Nights are comparatively cool. In Thar there is a great difference between the temperature during the day and that during the night.

In the Balochistan Plateau the mountainous areas receive snowfall and are extremely cold in the winter. The Quetta and Ziarat Valley has an extremely cold weather in winter. The cold winds reduce the temperature below Freezing point. Since most of the hills are dry, the air around them also becomes hot in summer.

The climate is very hot and dry in south-eastern Balochistan and the south-western desert. In these areas dust storms blow continuously from mid-May to mid-September, and the temperature is very high.

4. Coastal Areas

The coastal areas of Pakistan include the Indus Delta and the coastline of Karachi and Makran. This zone has a maritime climate which means that the climate is marked with moderate level of temperature but high level of humidity. In hot summer months the cool breeze blowing from sea to land keeps the temperature low.

In coastal Areas the mean of the monthly temperature is 32°C. The hottest months of the year are May, June and October. It is due to the dry winds blowing from the south-eastern desert that the temperature in October is very high.

Q.5 Write a comprehensive note on winds and rain falls in Pakistan.

Ans: Winds and Rainfall in Pakistan

Pakistan lies in the monsoon region. Monsoon is the seasonal wind of the Indian Ocean and South Asia. It blows from the south-west towards the land in summer and from the north-east towards the ocean in winter. The climate and rainfall in Pakistan are deeply affected by monsoon. There are three types of winds in Pakistan. The summer monsoon, the winter monsoon and the cyclones.

1. The Summer Monsoon

In summer when the rays of the sun fall vertically, the plains of Pakistan are heated quickly and become a low pressure area on account of the rise of hot air. Compared to land, the Arabian Sea and the Bay of Bengal, being less hot, form a high pressure area. As the air always blows from high pressure area to low pressure area, the winds blow from sea to land, thus in summer the winds blow from the Arabian Sea and the Bay of Bengal. These winds are called the summer monsoon and they are laden with moisture.

The Arabian Sea monsoon enters Pakistan and blows across the Indus plains unchecked till it reaches the Shiwalik hills. There these winds rise and become cooler and cause rainfall. But when these winds return southward, they have less moisture.

The Monsoon from the Bay of Bengal enters Bangladesh Bharat and strikes Assam Hills to give heavy rainfall to these parts of the subcontinent, then these winds are deflected westwards along the Himalayas. By the time the winds reach Pakistan, they are left with much less moisture. Anyhow they still give more rainfall than the Arabian Sea monsoon.

2. The winter Monsoon

In winter, the land masses are colder and the air pressure over them is higher than that over the adjoining sea. Hence the monsoon blows from land to sea in winter. Since it has no moisture in it, the winter monsoon gives no rain. But sometimes it rains even in the beginning of winter. This is due to the sudden change of weather and condensation of water vapour still left in the air after the rainy season.

Cyclones

Sometimes winds start blowing in a circle. These winds are called whirlwinds. When whirlwinds spread over an area of some kilometers, they are called cyclones. Sometimes due to the intense heat of the sun the temperature of the air at some places rises to create a low pressure area while comparatively high pressure area is formed in the surrounding region. Consequently winds start blowing in a circular form from the surrounding high pressure regions to the central low pressure region.

In a cyclone winds always blow from outside to inside. As there is a low pressure area inside, the winds continue to rise upward. When these winds reach higher regions, they are cooled and condensed to cause rain which is called the cyclonic rain.

The cyclones blowing from the Mediterranean sea and the Persian Gulf cause some rain in the western mountainous areas of Pakistan. This rain is suitable for the cultivation of fruit in the hilly areas wheat crop in plains. The farmers give the name gold dew to such a type of rain.

Balochistan also gets cyclonic rainfall in winter. For example Quetta gets 167 mm of rainfall from December to March out of a total of 236 mm in the year. Similarly Peshawar has a total rainfall of 339 mm in the year, but of this 136 mm is due to cyclones.

Elaborate the influence of climate on our life.

(2013)

3: Influence of climate on Human life

The climatic conditions are not the same in all the parts of the earth. They differ from place to place. The human life is greatly influenced by the climatic conditions and the changes occurring in the climate. We can study the different effects of climate in the different regions of our country. Some of these effects are described below.

- i. The northern and north-western highlands of Pakistan are extremely cold and they receive heavy rainfall and snowfall. In these areas people build houses with sloping roofs so that the water or snow is not accumulated on them. In Karachi, Hyderabad and other areas of Sindh the windows and ventilators are placed in such a way that the wind does not blow directly into the rooms.

- height and in such a direction that the maximum sea breeze may enter the houses to reduce the effect of high temperature.
- ii. Many people living in hot plains migrate to hilly areas to avoid excessive heat of the sun in summer. In winter many people living in extremely cold hilly areas migrate to plains where the climate is comparatively pleasant.
 - iii. The deserts are extremely hot in the day time. There blows hot winds called loo which makes the human life uncomfortable. That is why in Pakistan the deserts like Thar, Thal and Cholistan are thinly populated.
 - iv. The places having pleasant summers and scenic beauty attract tourists. In Pakistan the places such as Murree, Ayubia, Nathiagali, Abbottabad, Shogran, Naran, Kalam and a number of hill resorts in the valleys of the Hazara and Chitral in the northern highlands are a source of income for the Government.
 - v. As a result of heavy rainfall and snowfall on mountains, rivers are formed. There are a number of rivers to the south of the Hindu Kush Range. These rivers which pass through Chitral, Swat and Dir, have made the land of these valleys fertile. The people of the villages of these valleys are engaged in cultivation. The river Indus has provided Pakistan with its best irrigation system. Most of the big cities and towns are located in the Indus plains where live a very big portion of the country's population.
 - vi. In summer the monsoon causes heavy rainfall, and the snow on peaks also begins to melt. Thus there are floods in the rivers. The floods damage the crops and cause heavy loss of human life and property.
 - vii. The excessive heat lowers the air pressure in the sandy areas of Pakistan. As a result the air from high pressure areas begin to blow violently to the lower pressure areas. This causes windstorms and hurricanes followed by heavy rain and hailing which also cause damage to crops, and houses and huts, strong winds disturb the supply of electricity and damage the telephone cables. Road and railway lines are also broken due to heavy rainfall and floods.
 - viii. If an area receives no rain or less rain, the production of that area is adversely affected. Such a state is called drought. Some areas of Balochistan, Sibbi, Tharparkar and Jacobabad being hot and dry areas are often subject to drought. The drought causes great damage to farming and there grows no food. Severe drought claims many lives of human beings and animals as there is no food to eat and no water to drink. The Government of Pakistan is vigilant enough to ensure the supply of food to such areas before the situation grows dangerous.

Q.7 Define the term 'environment'. Which factors affect environment?

Ans: Environment:

All the surrounding external factors or natural conditions such as air, water, land etc. in which people, animals and plants live are called the environment.

Factors Affecting the Environment

Following are some of the important factors that affect the environment adversely.

- i. Overpopulation or dense population without enough resources to fulfill their requirements.
- ii. A large scale migration of unemployed people from rural areas to urban areas to find jobs whereas the urban areas already lack the civic facilities.
- iii. Lack of development projects in urban and rural areas to create job opportunities for the local people.

- iv. Unhealthy sanitary habits and no proper arrangements for the disposal of garbage.
- v. No proper system of drains and sewers to carry away the waste matter produced by human bodies, factories towns etc.
- vi. Too much consumption of energy in factories and vehicles emitting poisonous smoke which pollutes the air we breath in.
- vii. Industrial refuses in form of liquid that contains poisonous chemicals which pollute the subsoil in which grow the plants used as food by human beings and animals.
- viii. Cutting the forests which cause rainfall and keep the air clean by producing oxygen and absorbing carbon dioxide.
- ix. Waste matter released by industries has a lot of poisonous chemicals in them. This waste matter which is in liquid forms ultimately flows into oceans making them unfit for fish and other water animals.
- x. Radiation (heat, energy etc. in the form of rays) emitted by electronic machines and devices.
- xi. Noise produced by vehicles, horns, machines, aircraft, loud music etc.

Q.8 What are environmental pollutants? Describe major environment pollutants.

Ans: Environmental Pollutants:

The things or substances that make air, water, soil etc. dangerously impure or unfit for use are known as environment pollutions. There are numerous kinds of things that pollute the human atmosphere. Following are some of the familiar and scientifically recognized environment pollutants.

- i. The smoke released factories.
- ii. Some kinds of gases and suspended particles in the air which adversely affect the human beings and animals.
- iii. Smog the combination of smoke and fog, which is mostly found around big highways and in industrial areas.
- iv. Solid or liquid waste released by factories. Such a waste matter has poisonous chemical which make the earth and subsoil water impure.
- v. The noise produced by vehicles, horns, machines, loud music etc. the noise adversely affects the mental and physical health of human beings.

Q.9 Describe the major air pollutants

Ans: Air Pollutants

Same gases and suspended particles in the air adversely affect the human beings and animals. These substances are known as-air pollutants. Following are some of the major air pollutants:

1. Fossil Fuels

The fossil fuel includes oil, petrol, diesel, gas etc. with the increase in world population the consumption of fossil fuel has also increased considerably. Due to the farming of fuel in the factories the pollution has bee increased in the air. The smoke released by vehicles contain carbon dioxide, lead particles and other harmful materials which make the air polluted. The coal used in factories emit carbon dioxide which is added to the air to make it polluted. The carbon dioxide absorbs heat and causes increase in air temperature.

2. **Atomic Devices**

The radiation produced by nuclear reactors causes pollution in the environment and make the air injurious for human and animals life.

3. **Electric devices**

Too much use of electric devices and machines makes the air polluted and causes cancer and respiratory disease. High tension electric wires and electric transmission and networks emit radiations which may cause skin disease. High tension electric wires and electric transmissions and networks emit radiations which may cause skin diseases.

4. **Chemicals**

The chemicals such as tin, mercury, lead, zinc, aluminum etc. are used in various industries. The particles of these chemicals make the air polluted and unfit for breathing.

Q.10 Describe some well-known water polluted in different ways?

Ans: Water pollutants:

The substance that make the water polluted or contaminated are called water pollutants. Following are the major water pollutants.

1. **Biological pollutants**

Biological water pollutants include germs, bacteria, virus and other microscopic organisms that exist in large number in air, water and soil. They are also found in living and dead creatures and plants, and are often a cause of disease. When such organisms get into water they make it polluted and contaminated.

2. **Chemicals**

Dangerous chemicals such as tin, mercury, lead, zinc, aluminium etc, usually exist in the industrial waste released by factories. These chemicals take an active part in polluting the water.

3. **Open Drains and uncovered sewerage**

Open drains and uncovered sewerage system are a great hazard to the safe water being supplied through underground pipes for domestic use. The dirty water of drains seeps into the soil and somehow get into the underground water pipes.

4. **Industrial waste**

The factories release industrial waste in form of water which is polluted with poisonous substances. This water is absorbed in soil and reaches the underground water which is used by human beings. The polluted water of industrial areas is drained to the rivers and canals. Thus the water of these rivers and canals is also polluted. Such a water may contaminate the food and agricultural products.

Q.11 How land or soil is polluted in different ways?

Ans: Land pollution

In Pakistan the land or soil is being polluted in the following ways:

1. **Lack of awareness**

Due to unawareness and indecent habits people throw trash, plastic bags, empty tins, cans and household refuse at public places. Thus things not only give an ugly look to the land but they are also unhygienic and a hazard to human health.

2. **Careless Town Planning**
The substandard town planning also contributed to land pollution. An unhygienic underground sewerage system may cause the flow of dirty water on the surface of land making it polluted and unhygienic.
3. **Deforestation**
According to the international standards at least 25 percent of land in every country should be converged with forests. In Pakistan only 10 percent of land consists of forests. The forests that exists in the country are also being removed for construction purposes. The cutting of trees is also one of the main causes of soil pollution.
4. **Overgrazing**
Overgrazing spoils that land. Vegetation keeps the land intact by checking the flow of rain water. If there is no vegetation, the rain water flows speedily and takes away the layer of fertile should deposited on the land.
5. **The use of Insecticides**
The cultivators use insecticides, pesticides and herbicides to kill the insects and increase the agricultural production. These insecticides no doubt increase the production of the crops. But they damage the soil and contaminate the food crops and vegetables.
6. **Fertilizers**
Fertilizers are used to increase the yield of crops. No doubt they increase the yield, but they also affect the upper layer of the soil and increase the quantity of chemicals in the productions.
7. **Water logging and salinity**
The irrigation system has made it possible to cultivate the land in the areas which receive scanty rainfall. In the irrigation process a large amount of canal water is absorbed in the ground. This absorbed water raises the water rable (the level of underground water). This creates the problems of water logging and salinity. It means that the underground water and the salts of the soil appear on the earth's surface and the land becomes uncultivable. It is therefore necessary that the canals are cemented to avoid the seepage of water. Tube wells should be installed to lower the level of ground water in the affected areas. In order to avoid the flow of soil more and more trees should be planted on the sides of the fields and canals.
8. **Industrial Waste**
The water of urban areas is usually polluted by industrial waste. This polluted water is drained to the rivers and canals which irrigate the agricultural land. As a result the agricultural products are affected by the contaminated water. The affected soil yield such products as are injurious to human health.

SOLVED EXERCISE

- Q.1 Fill in the blanks to make an appropriate statement
- The area of Pakistan is _____ km².
 - According to 1998 census, the population of Pakistan is _____ million
 - Pakistan has _____ provinces.
 - The capital of Pakistan _____
 - The capital of Punjab provinces is _____
 - _____ is the capital of the NWFP.
 - The capital of Sind province is _____
 - _____ is the capital of Balochistan province.
 - In the northeast, Pakistan has a _____ km long border with the peoples republic of China.
 - Durand Line is _____ km long.
 - Pakistan shares _____ km borderline with Iran.
 - Length of the borderline of Pakistan with India is _____ kilo meters.
 - Nanga Parbat is _____ feet high.
 - K2 is _____ feet high.
 - The river Indus originates from lake _____ in Tibet.
 - The river Indus enters the land of Pakistan near _____.
 - Sibi and _____ are among the hottest points in the world.

1	796096	2	130.58	3	Four	4	Islamabad	5	Lahore
6	Peshawar	4	Karachi	8	Quetta	9	592	10	2250
11	800	12	1600	13	26600	14	28251	15	Mansarowar
16	Gilgit	17	Jacobabad	18					

- Q.2 Fill in the blanks by putting one of the three alternatives given in the bracket against each question.
- Durand line was demarcated in the year _____.
(1891, 11892, 1893)
 - The average altitude of Balochistan Plateau is _____ meters.
(610 meters, 750 meters, 850 meters)
 - The area of Pakistan is km².
(795095, 796096, 797097)
 - According to 1998 Census, the population of Pakistan is _____.
(128.50 million, 130.58 million, 135.60 million)
 - Durand line is _____ km long.
(2250, 2340, 2440)
 - Pakistan shares _____ km borderline with Iran.
(600, 700, 800)
 - Length of borderline of Pakistan with India is _____ km.
(1400, 1500, 1600)
 - Nanga Parbat is _____ feet high.
(25660, 26660, 27660)
 - K2 is _____ feet high.
(26251, 27251, 28251)
 - As per international standards forests should cover at least _____ of the total area
(10%, 25%, 30%)

ANSWER KEY

1	1893	2	610 meters	3	796096	4	130.58 million	5	2250
6	800	7	1600	8	26660	9	28251	10	25%

Q.3 Indicate whether the statement is TRUE or FALSE; put a circle around the correct answer.

1. Pakistan is situated in the Southeast Asian region. (True / False)
2. Arabian Sea and Indian Ocean are situated in the North of Pakistan. (True / False)
3. Karachi is one of the world's most important seaports. (True / False)
4. Pakistan is located in the midst of the Arab countries. (True / False)
5. Physiographers divide Pakistan into three major landforms. (True / False)
6. Safed Koh Range lies in the south of the Kabul River. (True / False)
7. The river Kurrum lies to the north of Safed Koh Range. (True / False)
8. Kurrum Pass provides a route to Iran through Safed Koh Range. (True / False)
9. Kohat valley is located at the end of the Kurrum Pass. (True / False)
10. Peshawar valley lies to the east of the Kabul River. (True / False)
11. Peshawar valley is irrigated by the River Swat and from the Warsak Dam. (True / False)
12. Waziristan Hills lie between the Gomal and the Kurrum rivers along the Himalayas. (True / False)
13. The area of Waziristan Hills is very rich in mineral wealth. (True / False)
14. Bannu and Dera Ismail Khan are the two most important towns of Waziristan Mountain Region. (True / False)
15. Kurrum Dam and the Kurrum River are the main sources of irrigation in the Indus valley. (True / False)
16. Sulaiman Koh Range lies to the west of the River Indus. (True / False)
17. Takht-e-Sulaiman is the highest peak in Safed Koh Range. (True / False)
18. The region of south western Mountains is mostly arid as compared to the Northern Mountainous Region. (True / False)
19. The Balochistan Plateau covers a small area. (True / False)
20. The Potwar Plateau is raised to an altitude of 300 to 600 meters. (True / False)
21. Valleys of Soan and Haro rivers lie across the Balochistan Plateau. (True / False)
22. The height of the Salt Range near Sakesar rises to about 1525 meters. (True / False)
23. The Salt Range area is very rich in agriculture. (True / False)

24. The Salt Range is an area of special interest for the geologists anthropologists. (True / False)
25. The Upper Indus Plain consists of the area for Attock to Karachi. (True / False)
26. The Upper Indus plain is about 180 to 300 meters high. (True / False)
27. Land lying between the two rivers is called Delta. (True / False)
28. There are four major Doabs in Punjab. (True / False)
29. Large tracts of land in Thal desert are arid due to scarcity of water. (True / False)
30. In Thal desert duet storms are frequent especially during the winter. (True / False)
31. The large portion of Thal desert is still barren. (True / False)
32. The southern border of District Khairpur is Sind is known as Thar desert. (True / False)
33. Vast area is Mirpur Khas and Sangarh districts are known as Tharparkar desert. (True / False)
34. Jhelum, Chenab, Ravi, Satluj and Beas rivers join the Indus at Punjab below Multan. (True / False)
35. In some areas like Jacobabad temperature raises up to 92°C and even more in summers. (True / False)
36. During rainy season in Pakistan, the climate remains hot, humid and unpleasant in the plains. (True / False)
37. Pollution means the act of polluting, i.e. to make air, water, soil, etc. pure of useful for use. (True / False)
38. As per international standards 50% area of land should be covered with forests. (True / False)

1	T	2	F	3	T	4	F	5	F
6	T	7	F	8	F	9	T	10	F
11	T	12	F	13	T	14	T	15	F
16	T	17	F	18	T	19	F	20	T
21	F	22	T	23	F	24	F	25	T
26	F	27	F	28	T	29	T	30	F
31	T	32	F	33	T	34	T	35	F
36	T	37	F	38	F				

Q.4 Put right parts together.

A	B	C
1. Area of Pakistan	a. Jacobabad, Sibi	d
2. In the south of Pakistan	b. 1983	i
3. Height of K2	c. 25%	j
4. River Indus originates	d. 796096 km ²	h
5. Hottest points of world	e. End of Kurrum Pass	a
6. Durand Line demarcated	f. Very extensive	b
7. Standard area of forests	g. Doabs	c
8. Kohat valley	h. Mansarowar Lake	e
9. Balochistan Plateau	i. Arabian Sea	f
10. Land between two rivers	j. 28251 feet	g

SHORT QUESTIONS (FROM EXERCISE)

Q.1 Answer each questions in two to four lines

(1) What is the land stretch of Pakistan?

Ans: Total area of Pakistan is 796096 km. It lies 1600km North to South and 850km from east to west. According to longitude and latitude Pakistan lies from 61-75.5° and 24-36.75° respectively.

(2) How much total land of South Asia is occupied by Pakistan? **(2014)**

Ans: Pakistan is an important country of southern part of Asia. It occupies about 18.76% of South Asia. With forms the 0.18% of the world.

(3) What is the average height of Shiwalik Range hills? **(2014)**

Ans: Shiwalik range core also known as sub Hamalayan mountains. These varies from 600-900 meters. This average height becomes 750 meters.

(4) What is the average height of Pir Panjal Range hills?

Ans: Pir Panjal Mountains are also known as outer or lesser hamalaya. This range has an average altitude of 4200-4500 meters. Murree and Hazara hills are the part of Pir Panjal Mountains.

(5) What is the average height of Safed Koh Range?

Ans: These mountains are located in the south of Kabul river. Their height ranges upto 3600 meters above sea level.

(6) Why the mountains of Safed Koh Range are called White Mountains?

Ans: Safed Koh are given this name because their peaks remains covered with snow throughout the year. That's why they are called safed not or white mountains

(7) Where has the Warsak Dam been built?

Ans: The warsak dam is built on the river Kabul at a distance of 20km from peshawer the capital of NWFP.

(8) Where the Kirthar Koh Range is located?

Ans: Kirthar range is located in the south of Suleman range. These are also known as southern mountains of Pakistan. These mountains of Pakistan these mountains range up to 2150 meters.

(9) Name four Doabs of Punjab.

Ans: Doab is the area between two consecutive rivers. Famous do-abs of Punjab are as:

- Bari (The area between Bias and Ravi)
 Rachna (The area between Ravi and Chenab)
 Chej (The area between Chenab and Jehlum)
 Sindh Sagar (The area between Jehlum and Indus)

(10) Name the major and short span seasons in Pakistan.

Ans: The major season of Pakistan are as:

- Summer from April to Oct
 Autumn from mid of Oct end of Nov
 Winter from Dec. to mid Feb
 Spring from mid Feb to end of March

Along with there is a rainy season i.e. monsoon from mid July to August

(11) Name the temperature zones of Pakistan.

Ans: The temperature zones of Pakistan are four.

- Highlands:** Comprising northern and north western mountains.
- Low lands:** Comprising upper and lower Indus Plain
- Plateau and Desserts** (Balochistan and cholistan and Thar)
- Coastal areas** (Indus delta and coastal areas)

(12) Define environment.

Ans: Everything that surrounds us and affects our life is called environment. The natural conditions such as water, air and land in which people live make the environment.

(13) What is environmental pollution? (2012)

Ans: Everything that causes impurities in our environment is known as environmental pollution like smoke, dirt, filth, salinity. It is of three types i.e. water, air and land

(14) What is smog? (2011)

Ans: It is a combination of fog and smoke commonly seam in the big cities in winter. It is a type of air pollution.

(15) What percentage of the total populated land should consist of forests, and why?

Ans: According to international researchers about 25% area of a populated territory should be consisted of forest so that a balance could be created in the environment.

Q.1 Encircle the correct option from the given multiple choices.

Location

- (1) About _____% of the total south asia is occupied by Pakistan
A. 18.78 B. 78.18 C. 17.18 D. 17.88
- (2) The Pakistan lies between _____ and 36.75 latitudes
A. 20 B. 22 C. 24 D. 26
- (3) The Pakistan lies between 61 and _____ longitudes
A. 74 B. 75 C. 74.5 D. 75.5

Neighbours

- (4) The width of narrow land strip that separates Pakistan from central Asia is _____
A. 16 B. 36 C. 96 D. 240
- (5) Border of Pakistan with Afghanistan is called _____
A. Border line B. Super line C. Dead line D. Durand line
- (6) Karachi is one of the world's the most important _____
A. Dry ports B. Seaports C. valleys D. Hill stations
- (7) In the east of Pakistan is located _____
A. China B. Iran C. India D. Turkey
- (8) In the west of Pakistan is located _____
A. Afghanistan B. China C. India D. Japan
- (9) China is in the _____ of Pakistan
A. North B. East C. West D. South
- (10) Arabian sea lies in _____ of Pakistan
A. South B. North C. East D. West
- (11) Pakistan is located between three big power i.e. India, Russia and _____
A. America B. France C. China D. Germany

Physical Features

- (12) Hamalays are known as the _____ of world.
A. Bottom B. Roof C. Floor D. stone

- (13) Murree and Hazara hills as the part of _____ hamalaya
 A. Greater B. Lesser C. Sub D. Central
- (14) Korakoram mountains extended _____ km from Hunza to Shyok
 A. 4 B. 40 C. 400 D. 4000
- (15) K-2 is _____ highest peak of world
 A. 1st B. 2nd C. 3rd D. 5th
- (16) The valley of Peshawar is located to the _____ of Kabul river
 A. North B. South C. East D. West
- (17) Waziristan hills are rich in _____ wealth
 A. Agricultural B. Mineral C. Metal D. Fruit
- (18) The main source of irrigation in Bannu valley is river
 A. Tochi B. Kurram C. Bannu D. Gomal
- (19) Suleman range lies in west of _____ river
 A. Indus B. Kabul C. Gomal D. Kurram
- (20) White Mountain are given this name because their peaks always are covered with.
 A. Clouds B. Snow C. Dust D. Trees
- (21) Kirthar range are located to the south of _____ mountains
 A. Chaghi B. Hamalaya C. Suleman D. Waziristan
- (22) The salt range begins in the _____ at Tilla Jogian
 A. West B. East C. North D. South
- (23) The dry hills located in chiniot and sanglala hill are called as
 A. Koh-e-sultan B. Chaghi hills C. Karana hills D. Sangla hill
- (24) Near Thatha the river Indus is divided into many branches and makes _____
 A. doab B. delta C. desert D. lower Indus plain
- (25) In fact, _____ desert is an extension of Rajputana desert lying in the Indian territory.
 A. Thar B. Thal C. Cholistan D. Kharan
- (26) Hamalays can be further divided into _____ ranges.
 A. 2 B. 4 C. 6 D. 8

- (27) Bari Doab is the area located between Ravi and _____
 A. Chenab B. Satluj C. Bias D. Jehlum
- (28) The area between Jehlum and Chenab is called _____ do-ab
 A. Rachna B. Bari C. Chej D. Sindh Sagar

Climate

- (29) Pakistan is divided into _____ temperature zones
 A. 2 B. 3 C. 4 D. 5
- (30) In coastal areas the average temp is about
 A. 20 °C B. 25 °C C. 30 °C D. 32 °C
- (31) The study of climate normally varies from 11 to _____
 A. 20 B. 30 C. 40 D. 50
- (32) Smog is the type of _____ pollution
 A. Soil B. air C. water D. wise
- (33) At day time trees exhale _____ gas
 A. carbon dioxide B. oxygen C. Nitrogen D. Hydrogen
- (34) May, June and _____ are the hottest months in coastal areas.
 A. July B. Aug C. Sep D. Oct
- (35) Hamun Mashkhel is a salty water lake located in the _____ desert
 A. Thal B. Thar C. Cholistan D. Kharan

ANSWER KEY

1	A	2	C	3	D	4	A	5	D
6	B	7	C	8	A	9	A	10	A
11	C	12	B	13	C	14	C	15	B
16	B	17	B	18	B	19	A	20	B
21	C	22	B	23	C	24	B	25	C
26	B	27	C	28	C	29	C	30	D
31	C	32	B	33	B	34	D	35	D

Answer these questions. Answer to each part should not exceed three to four lines.

Location

Q.1 Describe the location of Pakistan?

Ans: Pakistan is located in South Asia. It lies from 24° to 36.5° and $61-75^{\circ}$ as for as longitudes and latitudes are concerned. In the east India, in west Afghanistan and Iran in north China and in the South of Pakistan there lies Arabian sea.

Physical Features

Q.2 Name the major land forms of Pakistan?

(2011), (2013)

Ans: Following are the major land forms of Pakistan
Pakistan is divided into six major landforms, i.e.

- i. The Northern Mountains
- ii. The South Western Mountains
- iii. The Balochistan Plateau
- iv. The Potwar Plateau and the Salt Range
- v. The Indus Plain
- vi. Deserts

Q.3 Write a short note on the salt range?

Ans: The Salt Range: The Salt Range begins in the east at Tilla Jogian and Bakralla ridges and extends south-west to the north of the River Jhelum. After covering some distance it turns north-west and crosses the Indus at Kala Bagh. On the west bank of the Indus the Salt Range continues towards north covering the districts of Bannu and Dera Ismail Khan in the North West Frontier Province. Average height of the Plateau and the hills of the region is 671 meters, but at a point near Sakesar it rises to about 1525 meters above sea level.

Q.4 Give any three points of importance of Arabian Sea?

Ans: In the south of Pakistan Arabian sea is located which is the part of Indian ocean

- a. Through the Arabian sea Pakistan can get incentive of International trade.
- b. We can monitor and control the Oil trade of world as the gulf is part of Arabian sea.
- c. Through Arabian sea we can make relations with countries far east Asian Islamic.

Climate

Q.5 Name the temperature zones of Pakistan?

(2010)

Ans: The land of Pakistan can be divided into following regions on the basis of temperature

- a. Highland (Northern and north western mountains)
- b. Lowlands (upper and lower Indus basin)
- c. Balochistan Plateau and Thar desert
- d. Coastal areas

Q.6 Name any three factors that affect the climate of an area?

Ans: Different factors affect the climate of an area. Some of them are as:

- **Location:** Distance from the equator, poles, sea and mountains etc.
- **Altitude:** Height above sea level.
- **Air:** General behavior of the air which causes winds, cyclones thunderstorms, dust storms, Tsunami and monsoon. Air pressure and humidity.
- **Temperature:** Determined, mainly, by the factors mentioned above.

Q.7 Define climate?

Ans: Climate is long term average study of temperature conditions of a particular area. Usually the time period for this study is 11-40 years.

Q.8 Name any five factors which affect the environment?

Ans: Following give the 5 factors which affect the environment

- a. Density of population
- b. Ratio of urban and rural population.
- c. Urban and rural planning.
- d. Sanitary habits and disposal of the refuse.
- e. Drainage and sewerage system.

Q.9 Enumerate any three measures to prevent the environmental pollution?

Ans: The measures for the prevention of environmental pollution are as follow.

- a. By creating general awareness
- b. Prevention of urbanization
- c. By increasing Plantation

Q.10 Describe briefly the climate of coastal areas?

Ans: The coastal area have a-maritime climate due to closeness of sea the climates of these areas is moderate. Average temperature is about 32 °C. Level of humidity is high

Q.11 Write briefly about the karakorum range?

Ans: Karakoram Range:

It is in the north of Central Himalayas. It extends 400km from Hunza to Shyok. It has an average height of 7000 meters. It has a part of Northern Kashmir and Gilgit. K2 mount Godwin Austin is the highest peak in the Karakoram Range. It is 28251 feet high near Gilgit.

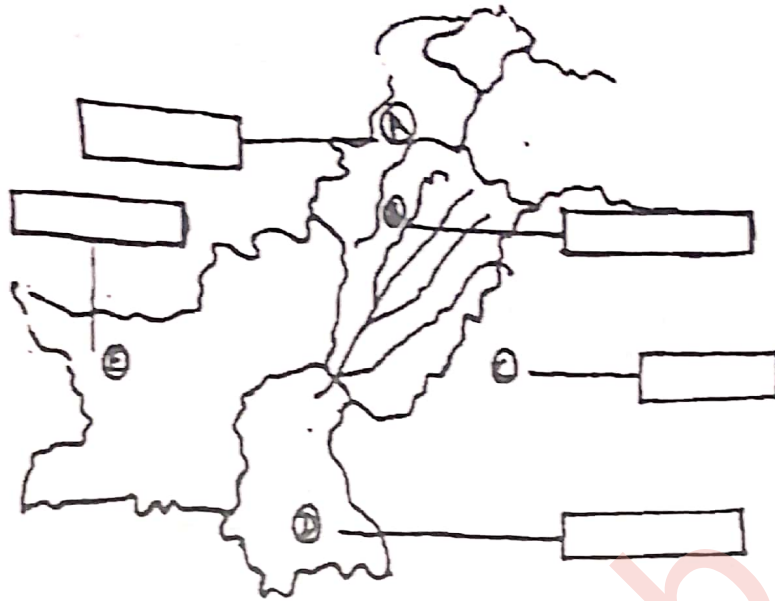
Q.12 Write briefly about the Deserts of Pakistan?

Ans: Deserts:

- **Thal:** Thal desert consists of areas in Sindh Sagar Doab i.e. Mianwali, Sargodha, Muzaffargarh and Dera Ghazi Khan. Most of the are is barren due to low rainfall. Dust storms are frequent and large numbers of sand dunes are found here.
- **Cholistan:** This desert is located in Bahawalpur division of Punjab. It is an extension of Indian Rajputana desert. The areas are barren due to scanty rainfall and water.
- **Nara and Tharparker:** The southern border of Khairpur district is known as Nara desert and boarder area of Mirpur Khas and Sanghar districts is called Tharparker desert. The area is barren due to lowest rainfall here.

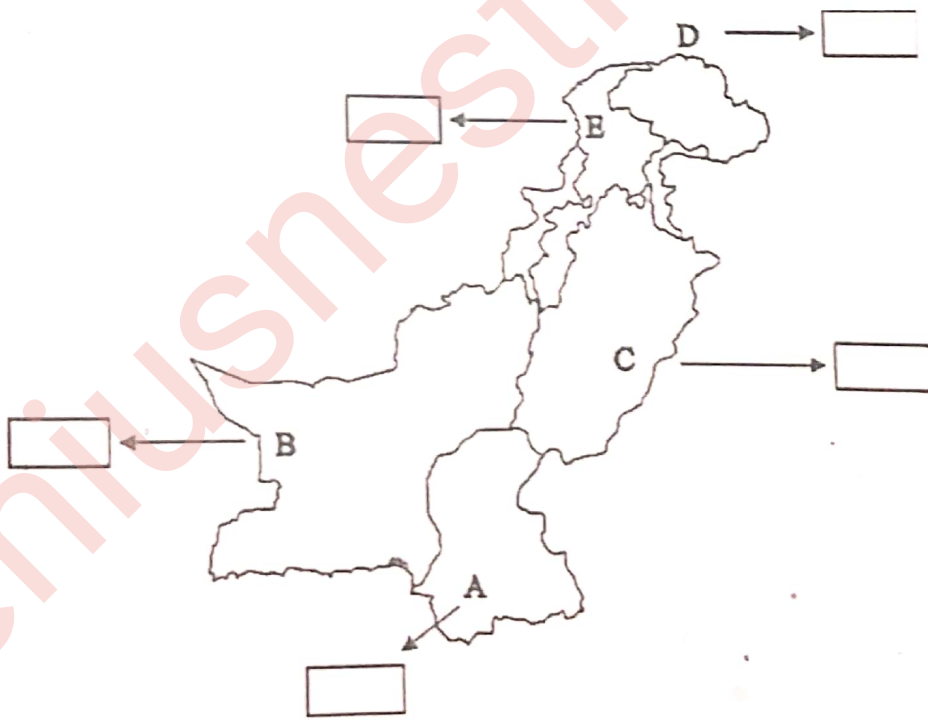
(2010)

(2012)



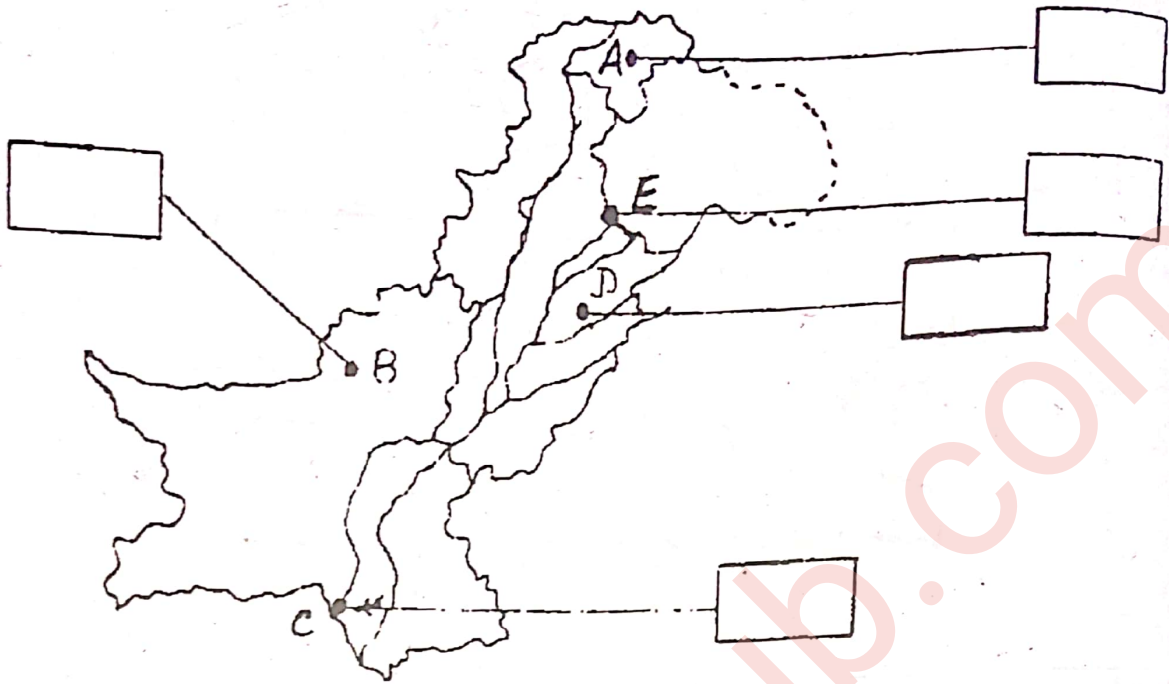
Solved Map (2010)

Provincial Capital - A	River - B	Country - C	Province - D	Desert - E
Peshawar	Jhelum	India	Sindh	Kharan



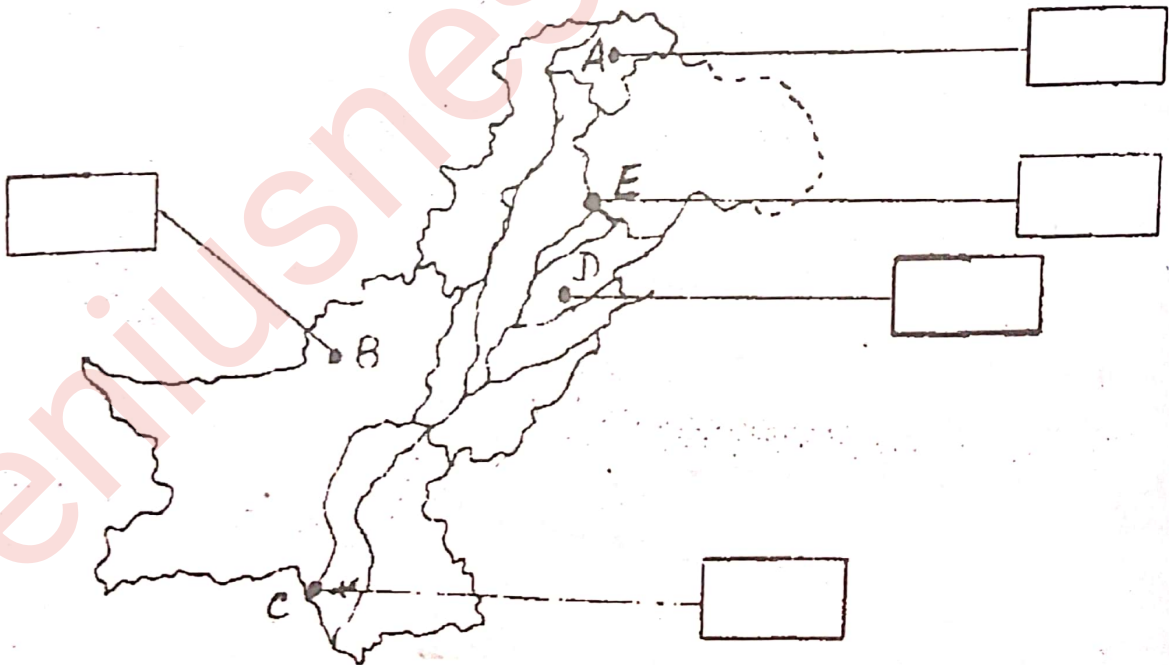
Solved Map (2012)

DAM - A	Mountain - B	Provincial Capital - C	Country - D	City - E
Hub	Koh-e-Sultan	Lahore	China	Chitral



Solved Map (2013)

Agency - A	Provincial Capital - B	Airport - C	Doab - D	DAM - E
Gilgit	Quetta	Karachi	Rachna	Mangla Dam



Solved Map (2014)

Agency - A	Area - B	Sea - C	Province - D	Disputer Territory - E
Gilgit	Baluchistan	Arabian Sea	Punjab	Kashmir