

## Asia Climate and Natural Vegetation

### Exercises

#### A. Fill in the blanks

1. A few regions of South-west Asia receive winter rainfall from the **temperate cyclones** that originate over the Mediterranean Sea. (tropical cyclones, temperate cyclones, north-east winds, south-east winds)
2. The **Mediterranean** climate is ideally suited growing citrus fruits, (equatorial, warm temperate east coast, Mediterranean, tropical monsoon).
3. The **tropical rain forests** of Asia are dense and impenetrable, (steppes, mangrove forests, monsoon forests, tropical rain forests)
4. About **one-third** of the land area of Asia is covered with forest.
5. Thermal electricity is produced by burning **coal** and **petroleum**.

#### B. Match the following

A. Climateic region	B. Tree plant species	C. Wildlife species
Arctic	Magnolia, camphor	Lizards, insects
Equatorial	Thorny bushes, tufts of grass	Lynx, sable
Cold temperate	Moss, lichen	Pheasants, peacocks
Warm temperate eastern margin	Ebony, mahogany	Monkeys, apes, colourful birds
Mid-latitude deserts	Pine, larch	Walruses, reindeer

Answer:

A. Climateic region	B. Tree plant species	C. Wildlife species
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Equatorial	Ebony, Mahogany	Monkeys, apes, colourful birds
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Warm temperate eastern margin	Camphor, Magnolia	Pheasants, peacocks
Mid-latitude deserts	Thorny bushes, tufts of grass	lizards, insects

### C. Answer the following questions in brief

#### Question 1.

When does most of Asia receive maximum rainfall ? Give a reason for your answer.

#### Answer:

Most of the Asia receives maximum rainfall in the months of April, May and June. In summers, most of Asia has an average temperature of about 32°C. The hot air over the land rises and creates an area of low pressure. There is high pressure in the surrounding seas and oceans. So there is movement of warm moisture-laden onshore winds which are called monsoons. These winds cause heavy rainfall.

#### Question 2.

Name any two countries that experience Mediterranean climate.

#### Answer:

Syria, Turkey, Lebanon and Israel experience Mediterranean climate.

#### Question 3.

Explain how the climate of the cold temperate regions of Asia has affected the :

1. Vegetation
2. Wildlife

#### Answer:

1. **Vegetation of the cold temperate regions of Asia** — These regions experience long severe winters with heavy snowfall and very short, cool summers with light rainfall. So the natural vegetation has adapted very well to the climate. The evergreen softwood trees of the region are conical in shape and have needle-like leaves. They are called coniferous trees as they have cones in which they bear their seeds. The common tree species are pine, fir, spruce, larch and cedar. The forests are also called as taiga.
2. **Wildlife** — Several small to medium sized animals such as the fox, sable, bear, mink, lynx and squirrel are found here which have fur over their bodies to protect them from cold weather.

#### Question 4.

Name some wildlife species found in the taiga region, the tundra region, and the tropical deciduous forests of Asia..

#### Answer:

Wildlife species found in the taiga region are fox, sable, bear, mink, lynx and squirrel. Wildlife species found in the tundra region of Asia are polar bears, reindeer, foxes, seals and walruses.

Wildlife species found in the tropical deciduous forests of Asia are rhinoceros, elephants, bears, deer, apes, lions, tigers, leopards, etc.

**Question 5.**

Trees cannot grow or survive in the regions beyond the Arctic Circle in Asia. Why ?

**Answer:**

Trees or forests cannot grow or survive in the regions beyond the Arctic Circle in Asia because this region has long severe winters and the frozen subsoil which do not permit the growth of trees and this region is, therefore, devoid of forests.

**D. Answer the following questions in one or two paragraphs**

**Question 1.**

Identify the main factors that affect the climate of Asia. Explain any two of them.

**Answer:**

**The Main factors that affect the climate of Asia are :**

1. **Size and latitudinal extent** — Asia is the largest continent with a large east-west extent. Also, it stretches across the torrid, temperate and frigid heat zones of the earth.
2. **Distance from the sea** — Many parts of Asia are far away from the maritime influence of the seas and oceans and experience extreme conditions and continental climate. Places closer to the Coasts enjoy equable or maritime climate.
3. **Relief features** — like mountain ranges of Asia extend in the east-west direction and form barriers to the moisture laden winds and the cold winds.
4. **Wind** — Moisture bearing winds from the south and cold winds of the north affect the climate of the places.
5. **Ocean Currents** — The cold Oya Siwo and the warm Kuro Siwo ocean currents affect the temperatures of the coastal regions of Japan.

**Question 2.**

Describe the climatic conditions in Asia from October to March.

**Answer:**

From October to March, Asia experiences winter season as the northern hemisphere receives the slanting rays of the sun because of the tilt of the earth's axis. The temperature falls to 0°C and even below freezing point in many parts of the northern Asia. The air over the land is cold and heavy and sinks causing high pressure. The surrounding oceans and seas have higher temperature and lower pressure so the cold air

moves from land (high pressure) to sea (low pressure). These winds are dry and hence most of the Asia receives no winter rainfall except South-East Asia, Japan, South-Eastern India and parts of Sri Lanka, where the same winds cross the seas and pick up moisture. A few regions of South-West Asia receive winter rainfall from the temperate cyclones that originate over the Mediterranean Sea.

### Question 3.

Write about the Mediterranean climate experienced in Asia.

#### Answer:

The Mediterranean Climate in Asia is characterized by warm, dry summers and cool, wet winters.

Since these areas experience drought-like conditions in summer, the natural vegetation has adapted to the climate by developing long roots and spongy barks. The evergreen vegetation of oak, acacia, laurel, chestnut, walnut and olive trees is common. Orchards of citrus fruits such as lemons, and oranges, vineyards and farm grains have replaced the natural vegetation. In the absence of natural habitat, not much wildlife is found. Mostly domesticated animals such as donkeys, cattle and sheep are found.

### Question 4.

Describe each of these forests :

1. **Tropical deciduous**
2. **Equatorial rainforest.**

#### Answer:

**1. Tropical deciduous forests** — They are found in tropical monsoon climate. These areas have hot wet summers with heavy rainfall and cool dry winters. Tropical deciduous forests are also called as monsoon forests. They have hardwood, broad-leaved trees which shed their leaves, in the dry season, usually in winter. Teak, Sal, shisham and mango are the common tree species. These thrive in regions of heavy rainfall. Grasses and thorny bushes grow in drier regions. Elephants, rhinoceros, bear, deer, apes, lion tiger, leopard, etc are some of the wildlife species found here.

Such forests are found in India, Pakistan, Bangladesh, Thailand, Myanmar, Vietnam, Laos, Cambodia and Southern China.

**2. Equatorial rainforest** — Such forests are found in equatorial climate where the temperatures are high of about 28-30°C and rainfall occurs all year round. Such climatic conditions have resulted in dense, hardwood forests with broad-leaved tree species such as mahogany, ebony, rosewood, cinchona, coconut and rubber. There are lianas, creepers and climbers, tall grass, ferns and bamboos that grow between the tall trees, which makes the forests dense and impenetrable. The forests are dark and gloomy as very little sunlight reaches the ground owing to the tall trees whose branches spread out, forming a canopy. Mostly arboreal or tree-dwelling animals such as monkey, apes and colourful birds are found. Reptiles such as lizards, snakes, crocodiles and insects are found in the swampy floors of the forests. Large animals such as elephants and wild cats are only found in the outskirts as the forest interior is too dense.

Such forests are found in countries located close to the equator like Malaysia, Indonesia, and Southern Philippines.

### Question 5.

How has modernization changed the natural vegetation of the Mediterranean and steppe regions ?

#### Answer:

- **Mediterranean region** — Due to modernization, most of the natural vegetation has been replaced by grain farms, orchards of citrus fruits such as lemons and oranges and vineyards.
- **Steppes region (Temperate Grassland)** —Vast areas of grasslands have been converted into rich farmlands that grow wheat, barley and other food grains.

### Question 6.

How are forests useful to the people of Asia?

#### Answer:

About one-third of the land area of Asia is covered with forest. Some of these forests provide hardwood, bamboo, sandalwood and camphor. They also provide other valuable forest products such as lac, resin, turpentine, honey, medicinal plants and herbs. Natural rubber is obtained from the latex of the rubber tree. The evergreen rainforest of the equatorial region and the monsoon forests of the tropical regions of Asia are the chief sources of these products.

Softwood forests yield softwood for making paper, pulp, newsprint, matchsticks and synthetic fibers such as rayon. These are obtained from trees such as birch, pine, cedar and fir, which grow in the taiga or coniferous forests region of northern Asia, especially Siberia.

### Question 7.

Give an account of the mineral resources of Asia.

#### Answer:

Asia has vast deposits of different types of minerals such as iron ore (India, Malaysia, China, Russia, Japan, the Philippines, North Korea), coal (China, India, Kazakhstan, Russia), bauxite (India, Indonesia, Russia), and petroleum (Saudi Arabia, United Arab Emirates, Bahrain, Kuwait, Iran, Iraq, Malaysia, Indonesia, China, Russia).

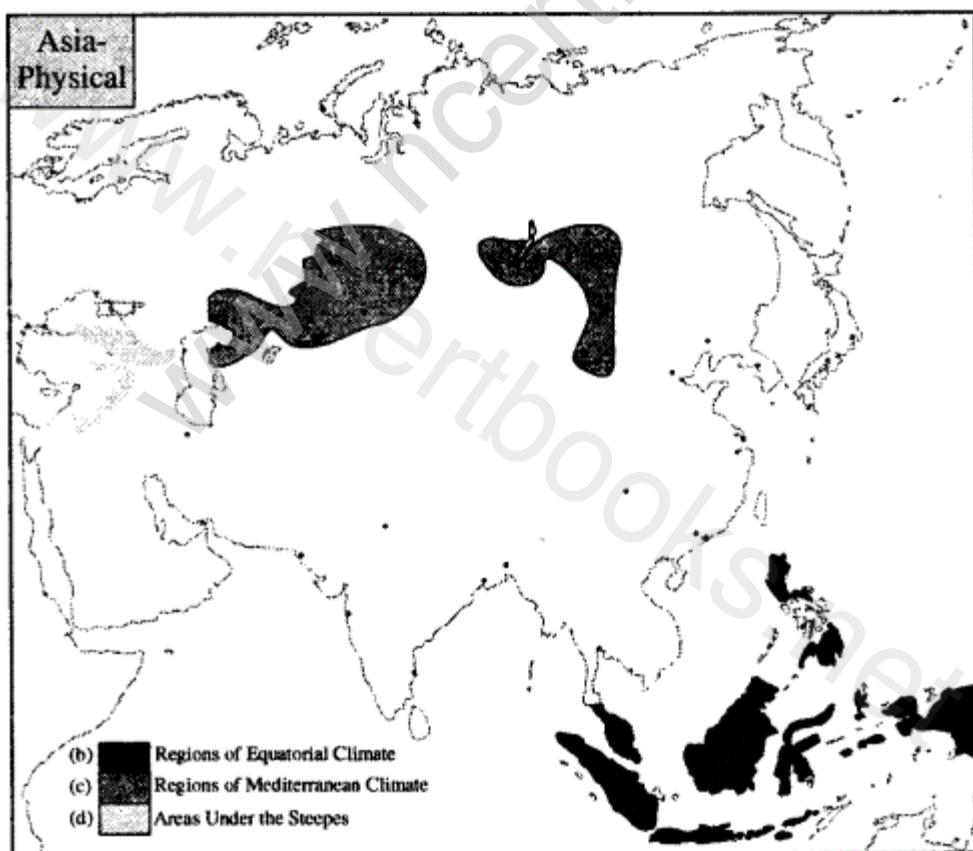
### E. Map study

On an outline map of Asia, mark the following:

- area affected by the monsoons
- regions of equatorial climate
- regions of Mediterranean climate
- areas under the steppes

**Answer:**

**(a) Area affected by the monsoons**



## F. Picture study

### Question 1.

Identify the animal seen in the photograph.

#### Answer:

Yak

### Question 2.

In which climatic region of Asia can you find this animal ?

#### Answer:

Temperate or mid-latitude Desert region of Asia.

## Extra Questions

### Question 1.

Write a short note on summer conditions in Asia.

#### Answer:

From April to June, the sun rays fall directly over the northern hemisphere. In June, it shines overhead the Tropic of Cancer, so most of the continent of Asia, except the extreme northern parts beyond the Arctic Circle is warm with an average temperature of 32°C. Most of the Asia receives maximum rainfall in these months.

### Question 2.

Why is Siberia so sparsely populated ?

#### Answer:

Siberia is sparsely populated as the climate here is very cold. Winters are long and severe with heavy snowfall which the summers are short and cool.

### Question 3.

Write a short note on the tropical or hot desert climate and the natural vegetation and wildlife found there.

#### Answer:

Tropical or hot desert climate prevails in Arabia, Iran and the Thar desert in India and Pakistan. These regions experience very hot dry summers and very cold winters. The daily and annual ranges of temperature are very high and the areas receive less than 25 cm of rainfall annually.

As climatic conditions are harsh, vegetation is scarce and only thorny bushes, shrubs, cacti and clumps of dry grasses are found scattered in the region which is largely bare and devoid of vegetation. Date palms are found in the oases. Camels, horses, mules, gazelles, insects and lizards are some of the wildlife species found in the deserts.

**Question 4.**

What type of climate do China, Japan and Korea experience?

**Answer:**

China, Japan and Korea experiences warm temperate eastern margin or China type climate. It is similar to monsoon type except that the winters are colder. Snowfall occurs in winters while rainfall occurs in summer.

**Question 5.**

Which is the most common domesticated animal in Tibet ? What kind of climate is found in the Plateau of Tibet and the Gobi Desert ?

**Answer:**

Yak is the most common domesticated animal in Tibet. Temperate (or mid-latitude) desert climate is found in the Plateau of Tibet and the Gobi Desert. Very little rainfall, very cold winters with temperatures below the freezing point and very hot summers is found.

**Question 6.**

What increases the commercial value of forests in cool temperature eastern margin climate ?

**Answer:**

Oak, beech, maple and birch are the main trees and their occurrence in almost pure stands and predominance of only a handful of species greatly increase the commercial value of these forests.

**Question 7.**

List the major types of climate of Asia.

**Answer:**

**The major types of climate of Asia are :**

1. Equatorial climate
2. Tropical monsoon climate.
3. Tropical or hot desert climate. .
4. Warm temperate eastern margin or China type climate.
5. Temperate or mid-latitude desert climate.
6. Mediterranean climate
7. Cool temperate eastern margin climate
8. Temperate grassland or steppe climate
9. Cold temperate or taiga climate
10. Arctic or tundra climate.

**Question 8.**

What are the different types of vegetation found in varied climatic conditions of Asia ?

**Answer:**

The different types of vegetation in Asian climate include dense evergreen hardwood

forests, tropical deciduous forest, thorny bushes, coarse short grasses, evergreen softwood trees and mosses and lichens.

#### 9. Fill in the blanks.

1. The areas away from the coasts experience **continental (extreme)**, climate while places closer to the coasts experience **maritime (equable)** climate.
2. World's highest surface temperature of 71°C has been recorded in **Dasht-eLut** in Iran.
3. **Mawsynram** in Meghalaya receives the heaviest rainfall in the world.
4. **Verkhoyansk** in Russia is the coldest region in Asia with an average temperature of -51 °C. '
5. Most of the Asia receives **no** rainfall in winter.
6. **Convectional** rainfall occurs almost daily around 4 o' clock in equatorial climate region of Asia.
7. **Latex** is the milky sap of rubber tree which is collected and used to make rubber for commercial purposes.
8. The equatorial (tropical) rainforests are different from the rainforests of the Amazon and Zaire basins because of their **nearness** to the sea.
9. India has **tropical monsoon** climate and **tropical deciduous (monsoon)** forests.
10. **Date palms** are found in the Oases in hot deserts.
11. The **Gobi** Desert stretches across large parts of Mongolia and China.
12. **Yak** is one of the most commonly domesticated animals in the temperate desert regions of Asia.
13. The **two-humped Bactrian** camel is a well-known animal of temperate grassland or **steppe**.
14. The temperate grassland region of Central Asia is called **steppe**.
15. The forests of the cold temperate regions, have **coniferous** trees with **needle** like leaves.
16. The coniferous forests in cold temperate climate are called as **Taiga**.
17. The treeless plains in the Arctic climate are called **Tundra**.

## Map Skills

On a physical map of Asia, show the different types of climate and natural vegetation

**Answer:**

