

Africa: Climate, Natural Vegetation, Wildlife; Minerals

THINK AND ANSWER

The northern and southern parts of Africa have opposite seasons at any time of the year. Why ?

Answer:

A large part of Africa lies between the tropics, and, therefore, most of the continent has a warm or hot climate. However, the amount of rainfall and humidity varies from area to area.

Anoteworthy feature of the climate of Africa is that the northern and southern parts of the continent have opposite climates at any time of the year. In other words, when the northern part experiences summer, the southern part experiences winter.

Discuss

Discuss how the location of Africa has affected the climate of the country.

Answer:

Since most of Africa lies within the tropics, the temperatures are high throughout the year. The variations between summer and winter temperatures are only slight.

VALUES AND LIFE SKILLS

Africa rainforests are one of the densest forests on earth. A large number of trees grow in a relatively small area because the region receives a lot of rain and sunshine, both importance for the growth of plants. Human being also flourish when they get the right conditions.

Can you enlist a few factors that affect the growth of human beings ?

What factors adversely affect the growth of people in an area ?

Answer:

The factors that affect the growth of human beings are :

1. Proper balanced and nutritional diet.
2. Proper health and sanitary facilities.
3. Proper temperature.

The factors that adversely affect the growth of people in an area are :

1. Poor or unhealthy diet.
2. Poor sanitation
3. Poor water facilities
4. Lack of awareness.

EXERCISES

A. Write True or False. Correct the false statements.

1. Nights are very hot in the Sahara Desert.

Answer. False.

Nights are very cold in the Sahara Desert.

2. The cold Canaries Current washes the north-west coast of Africa ?

Answer. True.

3. Savannah is another name for the Sudan type of climate.

Answer. True.

4. Temperate grasslands have dry, tall grasses.

Answer. False.

Temperate grasslands have green, short grasses.

5. The Kalahari Desert is located in north Africa.

Answer. False.

The Kalahari Desert is located in south-central Africa.

B. Give geographical reasons.

Question 1.

The equatorial region has dense forests.

Answer:

The equatorial region has dense forests as trees grow in this region to different heights, giving an impression of a three-tier formation. The topmost layer is the emergent layer. The giant trees thrust above the dense layer of trees and have huge mushroom shaped crowns. The trees in this layer receive a lot of sunlight and rain. The second layer is the canopy layer. The broad irregular crown of these trees form a tight, continuous canopy 20-30 m above the ground. The branches are often densely covered with other plants and tied together with vines.

The third layer is the understorey, which receives very little sunlight and is very dark. It has young trees, shrubs, ferns, creepers, and orchids. The forest floor usually has a layer of decomposed leaves, branches, and fruits that have fallen from the trees above. As there is very little sunlight here, the growth of plants is poor. Thus, these forests are very dense and gloomy.

Question 2.

The grasses of the savannah and the veldt are different.

Answer:

Veldts or temperate grasslands are found in South Africa. The vegetation consists of short grasses, less coarse and green than those in the savannahs. On the hill slopes, poplars and willows are common.

Question 3.

Plants in the Sahara are thorny and dry.

Answer:

Plants in the Sahara are thorny and dry as these plants have thorny leaves, thick waxy stems, and long thin roots which penetrate deep for underground water.

Question 4.

Not much wildlife is found in the Mediterranean region of Africa.

Answer:

Not much wildlife is found in the Mediterranean as the forests in the Mediterranean region are not extensive and most of the natural vegetation has been cut down, not much wildlife is found in this region.

C. Answer the following questions in brief.**Question 1.**

Most of Africa is hot. Why ?

Answer:

A large part of Africa lies between the tropics, and, therefore, most of the continent has a warm or hot climate. However, the amount of rainfall and humidity varies from area to area.

Question 2.

What factors influence the climate of Africa ?

Answer:

The factors that affect the climate of Africa are latitudinal extent, land and sea contrast, ocean currents, and altitude.

Question 3.

Name a cold and a warm current that affect the climate of Africa.

Answer:

The cold Canary Current washes the north-west coast of Africa, while the cold Benguela Current washes the shores of south-west Africa and has a cooling influence on the adjacent land. Winds blowing over these cold currents become cold and do not pick up moisture.

Question 4.

What are 4 o'clock showers ? In which climatic region of Africa do they occur ?

Answer:

This type of climate is found in the lowlands on either side of the equator in the Congo Basin, the coastal region around the Gulf of Guinea and coastal Kenya. The climate is characterized by a high temperature of 27°C throughout the year and heavy annual rainfall of 200-250 cm. Thus, there is high humidity all through the year and there are no clearly marked seasons. There is a daily occurrence of convectional rainfall. This type of rainfall is the result of intense heating of the land surface. During the day, there is a lot of evaporation. By afternoon, when it starts cooling, the water vapour condenses and falls as rain. Since it pours around 4 o'clock every day, it is known as '4 o'clock showers'.

Question 5.

Which region is called an open air zoo ? Why ?

Answer:

Savannah or Tropical sub-humid type of region is often referred to as an open air zoo. The savannah has vast grassy plains with tall, coarse grasses. Many herbivorous animals such as giraffes, elephants, and zebras and carnivorous animals such as lions, cheetahs, and leopards are found here in large numbers and, therefore, this region is referred to as an open air zoo.

D. Answer the following questions in one or two paragraphs.**Question 1.**

Describe the three-tier forest of the equatorial region.

Answer:

The equatorial region has dense forests. Trees grow in this region to different heights, giving an impression of a three-tier formation. The topmost layer is the emergent layer. The giant trees thrust above the dense layer of trees and have huge mushroom shaped crowns. The trees in this layer receive a lot of sunlight and rain. The second layer is the canopy layer. The broad irregular crown of these trees form a tight, continuous canopy 20-30 m above the ground. The branches are often densely covered with other plants and tied together with vines.

The third layer is the understorey, which receives very little sunlight and is very dark. It has young trees, shrubs, ferns, creepers, and orchids. The forest floor usually has a layer of decomposed leaves, branches, and fruits that have fallen from the trees above. As there is very little sunlight here, the growth of plants is poor. Thus, these forests are very dense and gloomy. The hardwood trees are valuable for making good quality furniture as the wood is heavy, but the trees are difficult to exploit as they do not grow in pure stand.

Question 2.

Give examples of herbivorous and carnivorous animals found in the savannah grasslands.

Answer:

Herbivorous animals such as the elephant, deer, giraffe, and zebra and carnivorous animals such as the lion, cheetah, and leopard are found in large numbers.

Question 3.

Identify the hot deserts of Africa and briefly describe the climatic conditions in terms of temperature and rainfall.

Answer:

Summers are hot and winters are cool in the hot desert regions. The daily as well as annual range of temperature is large due to the absence of cloud cover and the sandy nature of the soil. There is hardly any rainfall. These climatic conditions are found both in the northern and the southern hemispheres. In north Africa it is mainly experienced in the Sahara Desert and in south-central Africa in the Kalahari Desert.

Question 4.

Why is the camel called 'the ship of the desert' ?

Answer:

The camel is called 'the ship of the desert' for the following reasons:

1. It carries goods and people across the vast sandy deserts.
2. It stores fat in its hump.
3. Its padded feet prevent it from sinking in the sea of sand.
4. It has double eyelids and long eyelashes to protect its eyes from sand during storms.
5. It can close its nostrils during sandstorms.

Question 5.

Describe the Mediterranean climate.

Answer:

The coastal areas of north-west Africa and a small area in the south-west of South Africa experience the Mediterranean climate. Summers are hot with plentiful sunshine but no rainfall. Winters are mild and wet. Shifting Westerlies bring rain to these regions in their respective winter seasons.

E. In the outline map of Africa give here, mark the features and answer the questions.

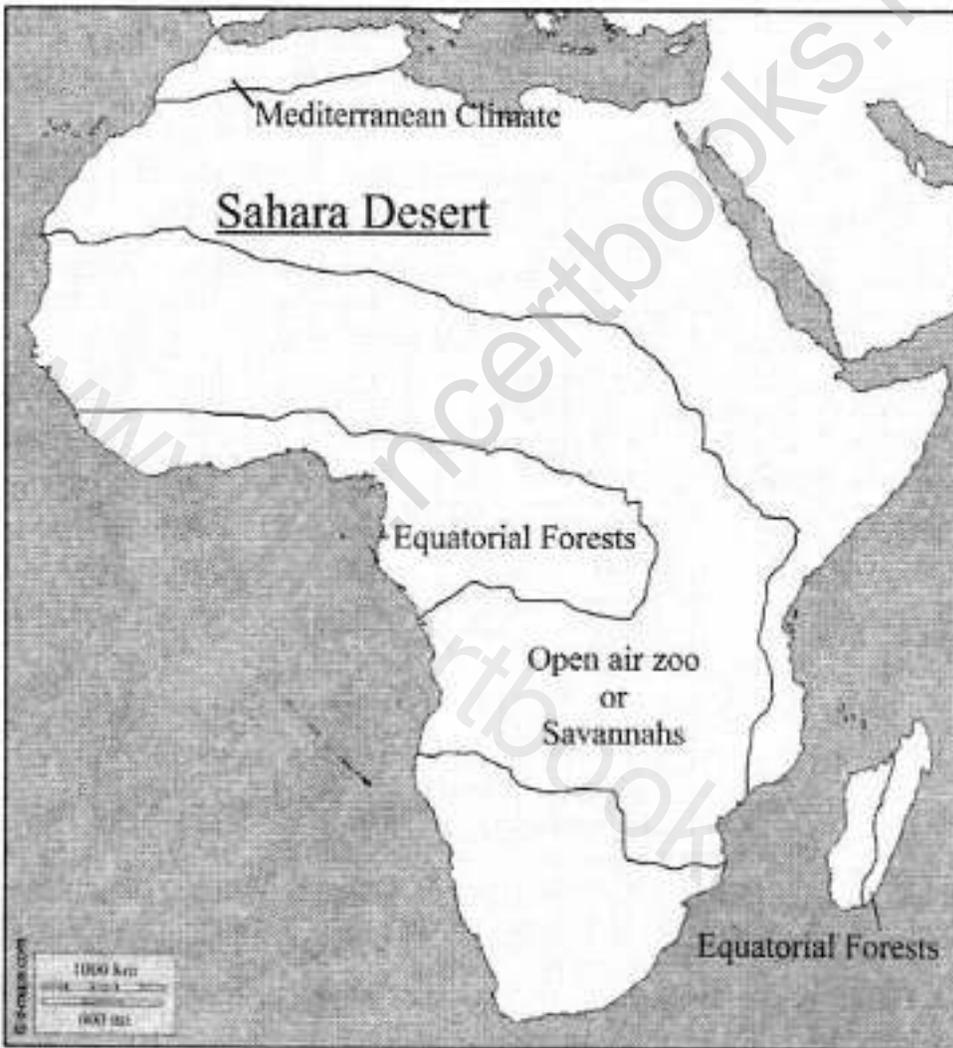
Question 1.

Colour dark green the area where equatorial forests are found. What difficulties were faced by the explorers because of rivers and natural vegetation of the region ?

Answer:

The equator passes through the middle of the continent and most of Africa lies within the tropics. It is, therefore, the hottest continent.

People faced many difficulties while exploring Africa. In the north, the Sahara, the world's largest desert, was impenetrable due to severe heat and dry conditions. Most of Africa consists of undulating plateaus, so it was difficult to reach the interior from the coastal areas. The rivers of Africa have many rapids and waterfalls, and are not fit for navigation. The extensive equatorial forests and swampy lands teeming with dangerous tsetse flies and poisonous insects discouraged explorers from entering the heart of the continent.



Question 2.

Mark the area that is called an 'open air zoo'. Name the vegetation of this region.

Answer:

These vast grassy plains with tall, coarse grasses are called the savannahs or tropical grasslands. Several varieties of grass, including elephant grass, grow here. Some acacia and baobab trees are found interspersed between the grasses. Please check Map given on Textbook page 126 (Africa : Climatic and vegetation regions)

Question 3.

Mark the Sahara Desert. Name a plant that best survives in the climate of this region. What are the characteristic features of this plant that help it survive ?

Answer:

The trees have long roots, small waxy leaves, and thick spongy bark, which help them survive in the dry summers. Examples include cork, oak, laurel, olive, and fig. Forests are not extensive as most of them have been cut down and replaced by orchards of citrus fruit trees such as oranges, lemons, and grapes.

Question 4.

Mark the area north of the Atlas Mountains where the Mediterranean climate is found. Which crops does this climate support ?

Answer:

The trees have long roots, small waxy leaves, and thick spongy bark, which help them survive in the dry summers. Examples include cork, oak, laurel, olive, and fig. Forests are not extensive as most of them have been cut down and replaced by orchards of citrus fruit trees such as oranges, lemons, and grapes.

F. Picture study



Question 1.

What kind of climate is experienced in the region shown in the picture ?

Answer:

Summers are hot and winters are cool in the hot desert regions. The daily as well as annual range of temperature is large due to the absence of cloud cover and the sandy nature of the soil. There is hardly any rainfall. These climatic conditions are found both in the northern and the southern hemispheres. In north Africa it is mainly experienced in the Sahara Desert and in south-central Africa in the Kalahari Desert.

Question 2.

What kind of vegetation grows in such a climate ?

Answer:

The trees have long roots, small waxy leaves, and thick spongy bark, which help them survive in the dry summers. Examples include cork, oak, laurel, olive, and fig. Forests are not extensive as most of them have been cut down and replaced by orchards of citrus fruit trees such as oranges, lemons, and grapes.

Question 3.

Fill in the blanks : The animal seen in the picture is often referred to as the _____ of the _____

Answer:

Fill in the blanks: The animal seen in the picture is often referred to as the **ship** of the **desert**.