

SAMPLE CONTENT

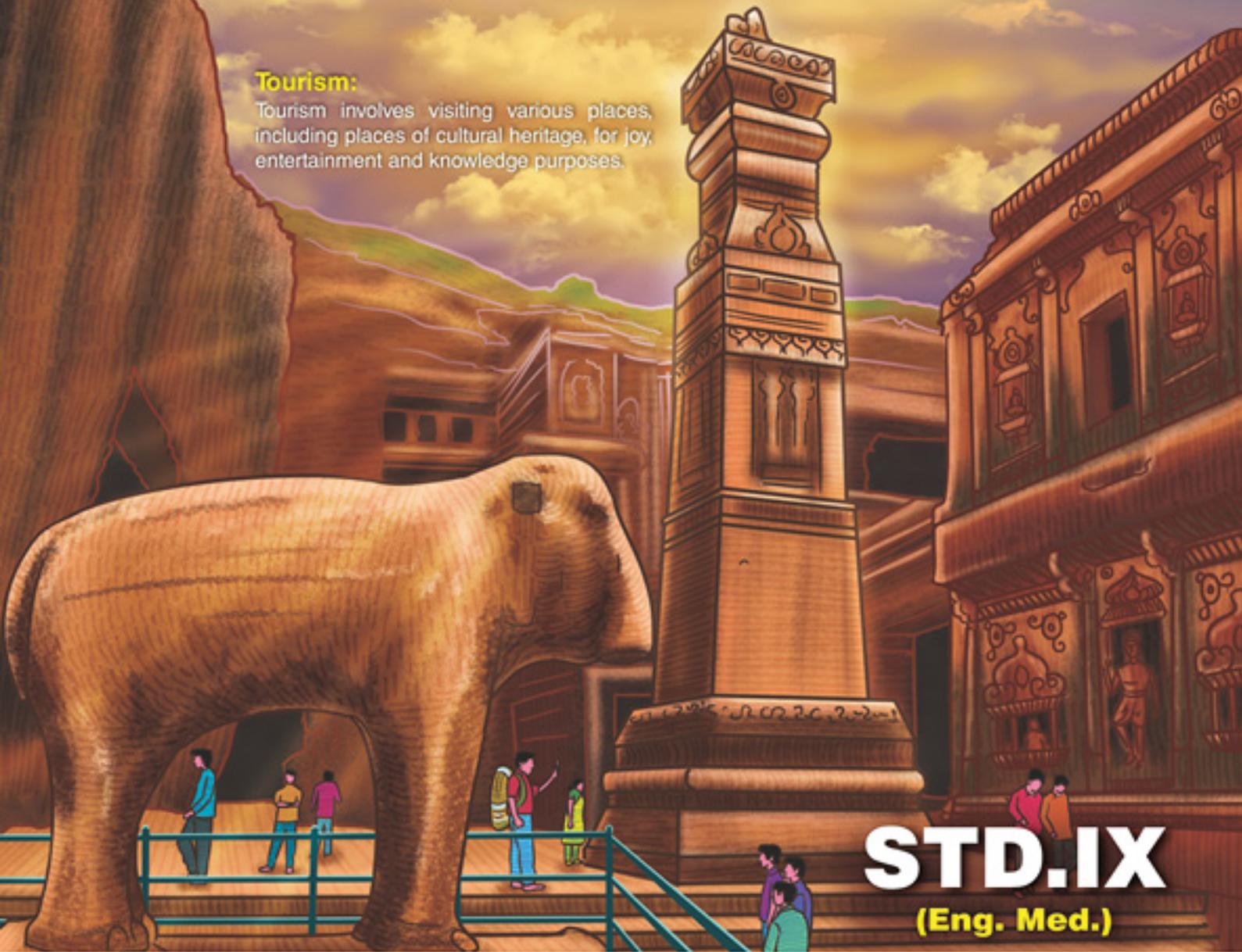


Perfect Notes

GEOGRAPHY

Tourism:

Tourism involves visiting various places, including places of cultural heritage, for joy, entertainment and knowledge purposes.



STD.IX
(Eng. Med.)

Target Publications Pvt. Ltd.

Written as per the latest syllabus prescribed by the Maharashtra State Bureau of Textbook
Production and Curriculum Research, Pune.

STD. IX

Geography

Salient Features

- Written as per the new textbook.
- Exhaustive coverage of entire syllabus as per the new paper pattern.
- Map-based questions for better geographical understanding.
- Chapter-wise assessment with every chapter for knowledge testing.
- Simple and lucid language.

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PREFACE

While designing the book, our main intention was to create a book that would act as a single point of reference for students. We wanted this book to provide students, the much needed answers for their textual questions as well as build up their knowledge quotient in the process.

Geography: Std. IX has been prepared as per the new syllabus which is more child-centric and focuses on active learning alongwith making the process of education more enjoyable and interesting.

We have infused the book with a liberal sprinkling of real life examples, pictorial explanations and additional questions. Questions titled under 'Use your brain power', 'Can you tell' and a series of 'In-text Questions', pave the way for a robust concept building.

Every chapter begins with covering all the textual content in the format of Objectives, Question - Answers, Give Reasons, Map-based questions and a host of other Objective and Subjective type of questions. The chapter also includes Activity Based Questions that explain certain concepts to students in a point-wise manner through the medium of an activity. Map-based questions help students to study and analyse the maps. The chapter eventually ends with a Chapter-wise Assessment that stands as a testimony to the fact that the child has understood the chapter thoroughly.

With absolute trust in our work, we hope, our holistic efforts towards making this book an ideal knowledge hub for students pays off.

The journey to create a complete book is strewn with triumphs, failures and near misses. If you think we've nearly missed something or want to applaud us for our triumphs, we'd love to hear from you.

Please write to us at: mail@targetpublications.org

A book affects eternity; one can never tell where its influence stops.

Best of luck to all the aspirants!

From,
Publisher

Edition: Second

Disclaimer

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*Note: Textual exercise questions are represented by * mark.*

5 Precipitation

Choose the correct alternative

- _____ part of the earth's surface is full of water.
(A) 80.7% (B) 70.8%
(C) 78.8%
- In high latitudinal and temperate regions, snowfall occurs at the _____ sea level
(A) mean (B) medium
(C) low
- In tropical areas, snowfall occurs at places located higher than the _____ altitude.
(A) sandline (B) iceline
(C) snowline
- A layer of 120 mm of ice is equivalent to _____ of rainfall.
(A) 5 mm (B) 10 mm
(C) 20 mm
- The _____ rain is harmful to the living and non-living things.
(A) convectional (B) acid
(C) orographic

Answers:

- | | |
|--------|--------|
| 1. (B) | 2. (A) |
| 3. (C) | 4. (B) |
| 5. (B) | |

Odd one out

- *1. **Orographic rainfall, acid rain, cyclonic rainfall, convectional rainfall**

Ans: Acid rain

Reason: Acid rain is a result of excess air pollution while the rest are different types of rainfall occurring naturally.

- *2. **Snowfall, rainfall, hailstones, dew**

Ans: Dew

Reason: Dew precipitates because of contact with cold objects while the others precipitate due to drop in temperature at higher altitudes.

- *3. **Thermometer, rain gauge, anemometer, measuring jar**

Ans: Measuring jar

Reason: Measuring jar is a general purpose measuring instrument while the others are measuring instruments used for specific purposes e.g. A rain gauge is used to measure the amount of rainfall in a particular region.

Right or Wrong.

If wrong write the correct sentence

- Ice and snow are the same.**
Ans: Wrong.
There is a difference between ice and snow. Massive transparent snow is known as ice.
- If we do not let 1 mm of rainwater runoff, penetrate in the ground or evaporate, then 1mm rainfall occurring in 1 sq.km gives 10 lakh litres of water**
Ans: Right.
- Snowfall cannot be measured with the help of rain gauge.**
Ans: Wrong.
Snowfall can also be measured with the help of rain gauge.
- The rainfall in India is quite regular.**
Ans: Wrong.
The rainfall in India is quite erratic.

Identify

*Identify the precipitation type with the help of the description given:

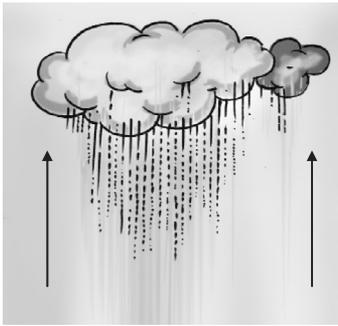
- A white cotton like layer spreads on the earth's surface. Because of this form of precipitation, the State of Jammu and Kashmir has to change its capital in winters. In Maharashtra, it does not precipitate like this.**
Ans: Snowfall
- It never precipitates like this in equatorial areas. Precipitation in the solid form sometimes causes damage to the crops.**
Ans: Hailstones
- It is the main source of the water that you use. Sometimes it is torrential and sometimes continuous. Most of the agriculture in India is dependent on it.**
Ans: Rainfall
- It seems as if water droplets are floating in the atmosphere. In London, one cannot see the Sun till the afternoon during winters because of this phenomenon.**
Ans: Fog



Identify and answer the following questions

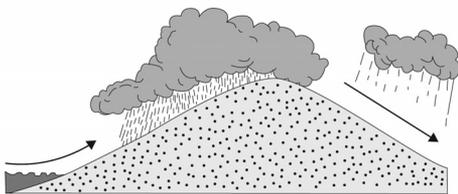
*1. Look at the following pictures and identify the correct rainfall type:

a.



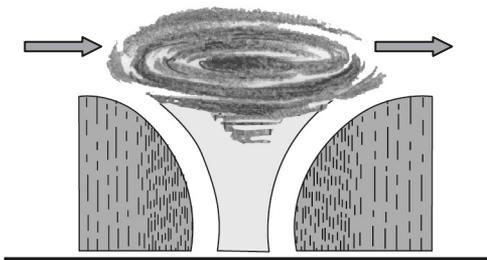
Ans: Convectional Rainfall

b.



Ans: Orographic Rainfall

c.



Ans: Cyclonic rainfall

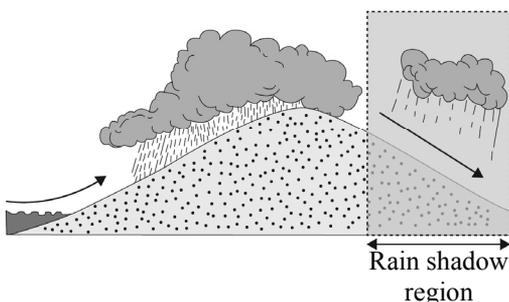
*2. Look at the figures above and answer the following questions:

i. In fig b, on which side of the mountain is it raining more?

Ans: In fig b, is it raining more on the windward side of the mountain.

ii. Shade the rain shadow region in fig b and name it.

Ans:



iii. What is the difference between a. and c.?

Ans: a. Figure a. shows precipitation from a rain cloud, while figure c. shows precipitation due the occurrence of a cyclone.

b. Thus, figure a. shows Convectional Rainfall and Figure c. shows Cyclonic Rainfall.

iv. Stormy winds and floods are associated with which rainfall type?

Ans: Stormy winds and floods are associated with the Cyclonic rainfall.

v. What type of rainfall occurs in Singapore?

Ans: As it is located near to the equator, Convectional type of rainfall occurs in Singapore.

Answer in one sentence

1. What are the major forms of precipitation?

Ans: Snow, hailstones and rainfall are the major forms of precipitation.

2. Which instrument is used to measure rainfall?

Ans: The instrument used to measure rainfall is known as a rain gauge.

3. How is snowfall measured?

Ans: Snowfall is measured with the help of a rain gauge, whereby the container full of snow particles is heated carefully and then the water obtained by melting of ice is measured.

Answer the following

1. What different changes do we see in the forms of condensation due to the changes in climatic conditions?

Ans: The changes in climatic conditions can lead to the following changes in the forms of condensation:

- i. Dew is found in certain regions during winter mornings.
- ii. In areas located at higher altitudes snowfall occurs.
- iii. It rains in areas located at normal altitudes.
- iv. Some places experience dense fog, while some places may experience hailstones.

2. How is ice formed naturally?

Ans: i. In the areas located at higher altitudes and high-latitudes, the temperatures fall below 0 °C and the precipitation takes place in the form of snow.
 ii. Snow is friable and opaque and it accumulates in form of layers on top of each other.
 iii. The upper layers of snow put pressure on the lower layers, which result in formation of homogeneous, massive and transparent form of snow known as ice.



***3. In what ways does precipitation occur on the earth?**

- Ans:**
- Precipitation occurs on the earth in the three ways, viz. snowfall, hailstones and rainfall
 - Snowfall:**
 - Precipitation in the form of friable and opaque solid particles is known as snowfall.
 - Snowfall occurs through the process of sublimation wherein the water vapour in the air directly turns into snowflakes when the temperature in the atmosphere falls below the freezing point.
 - Hailstones:**
 - The form of precipitation where frozen water droplets fall rapidly to the ground because of gravity is called as hail.
 - The process of hailstone formation is initiated when there is a lot of heat on the earth's surface. When this happens, the air on the earth's surface expands and starts blowing in the upward direction at a great speed.

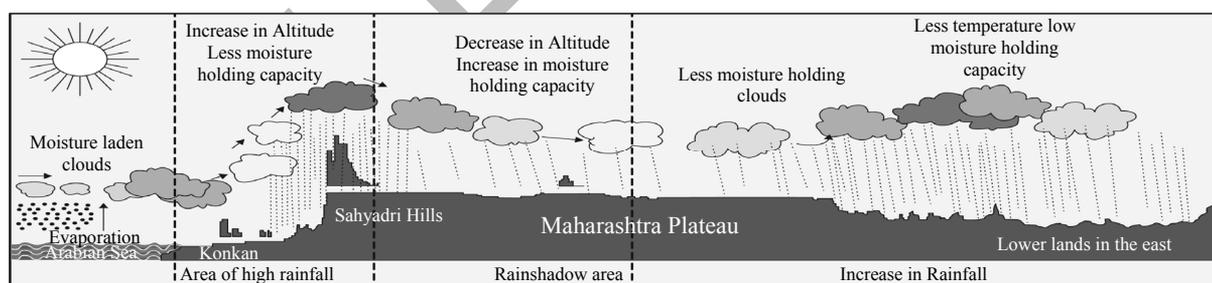
- This speedy upward flow reduces the temperature of the air and consequently the water vapour condenses and forms dark clouds.
 - However, as the air is moving upward, the water droplets in these clouds rise along with it and reach higher altitudes.
 - Here, they get solidified and form hailstones.
- Rainfall:**
 - The water vapour in the air rises higher as the temperature reduces, condenses and forms water droplets.
 - When these condensed water droplets and dust particles accumulate, clouds are formed.
 - The water droplets increase in size and reach a stage where they can no longer float in the air. It is then that they come down as rainfall.
 - Rainfall is the main source of water. Majority of the agriculture in India is dependent on it.

***4. Comment upon the rainfall occurring in the rain shadow area?**

Ans: The rain-shadow area gets lesser rainfall.

Reason:

- Moisture-laden winds blowing in a region are obstructed by the high mountain ranges. Hence, they move along the slope of the mountains and their temperature drops.
- The water droplets carried by them get condensed and rainfall occurs.
- In this type of rainfall, the windward side of the mountains (the side of the mountain that faces the wind) gets more rain.
- However, the amount of vapour in the air reduces, after crossing the mountains.
- As a result, the leeward side of the mountain (the side sheltered from the wind) gets lesser rainfall and hence this area is known as rain-shadow area.



Cross profile of Maharashtra and rainfall

***5. Which type of rainfall occurs in most of the world? Why?**

Ans: Orographic rainfall occurs in most parts of the world.

Reason:

- Orographic rainfall occurs because of the obstruction of moisture laden clouds by the mountains and areas of high altitudes. These clouds are generally blown by the winds.
- Convective rainfall occurs when the heated air from the earth's surface rises upwards along with the water vapour and

gets condensed when it reaches a higher altitude. Here the clouds carrying the water vapour are not carried away by the wind and hence it rains in the same place. Due to this, convective rainfall is limited to the equatorial calm belt.

- Cyclonic rainfall occurs only in places which get affected by cyclones.
- Thus, the conditions for the occurrence of the orographic rainfall are higher and hence orographic rainfall occurs in most parts of the world.

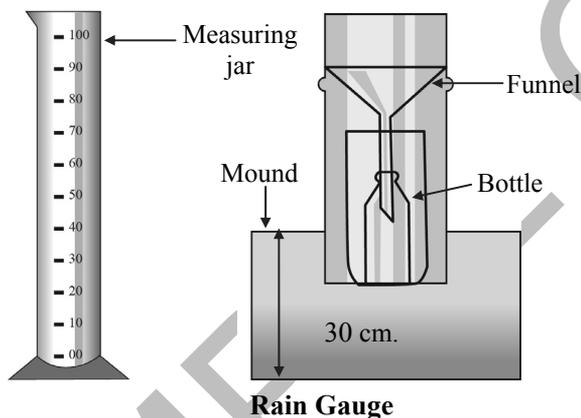


6. What are the factors which affect the amount of rainfall in a region?

- Ans:** The factors which affect the amount of rainfall in a region are as follows:
- i. The amount of water vapour in the atmosphere
 - ii. Air pressure
 - iii. Temperature
 - iv. Topography of the place
 - v. Latitudinal position of the place

7. Describe the structure of the Rain Gauge.

- Ans:**
- i. A rain gauge is used to measure rainfall. This gauge consists of a funnel, a bottle, a measuring jar and a 30 cm high mound.
 - ii. The rain falling in the funnel with a specific diameter is collected in a bottle fitted in the gauge.
 - iii. This collected water is then measured with the help of measuring jar which reads in millimeters.
 - iv. In order to collect the rainwater without any obstruction, the gauge is kept on a 30cm flat mound, kept on an open ground.
 - v. In areas receiving heavy rainfall, such readings of the rain are taken every three hours.



Rain Gauge

***8. What precautions should be taken while measuring rainfall?**

- Ans:** The following precautions should be taken while measuring rainfall:
- i. Do not let the rainwater runoff
 - ii. Do not let the rainwater penetrate in the ground
 - iii. Do not let the rainwater evaporate

***9. If condensation occurs closer to the earth's surface, what types of forms become visible?**

- Ans:**
- i. When condensation occurs closer to the earth's surface, then we can see fog, dew or frost.
 - ii. As the temperature of the layers of the air near the surface of the earth reduces, water vapour condenses. It turns into very small water particles and floats in the air.

- iii. When the density of these droplets in the air increases, fog occurs.
- iii. When moisture-laden air near the earth's surface comes in contact with very cold objects, condensation of the vapour takes place and it turns into very small water droplets. These water droplets stick to the surface of the cold objects and form dew.
- iv. If the temperature of the air reaches below 0 °C, the dew freezes. These frozen water droplets are called frost.

10. Explain in detail the effects of rainfall on an economy.

- Ans:**
- i. Rainfall can have positive as well as negative effects on an economy, depending upon whether the rainfall is moderate or extreme.
 - ii. Extreme rainfall may cause floods, loss of life and property.
 - iii. It causes flooding of fields and destruction of crops, resulting in shortfall of food.
 - iv. On the other hand, extreme absence of rainfall gives rise to conditions of drought.
 - v. Due to this, crops do not receive the optimum amount of water and can get destroyed.
 - vi. Due to rainfall, a country's economy also gets affected as a good crop production gives boost to the economy while, destruction of crop leads to loss to the economy.

11. Explain in detail the effects of precipitation.

- Ans:**
- i. Heavy fog affects the means of transportation like roads, railways, waterways and the airways as it reduces visibility.
 - ii. Train services and flights are cancelled to avoid accidents. The frost spread on the roads, makes it slippery and can lead to accidents.
 - iii. Fog and dew are beneficial to some crops while they damage some crops by spreading diseases.
 - iv. Agriculture is also affected by rainfall. While timely rainfall helps in increasing crop production, untimely rains can cause destruction of crops.

Write short notes on

1. Convectonal rainfall

- Ans:**
- i. In equatorial areas, the perpendicular rays of the sun heats up the land surface. As a result, the air near it also gets heated, expands, becomes lighter and moves upwards.



- ii. As the air moves upwards, it cools and its moisture-holding capacity reduces. Due to this, the water vapour condenses, resulting in convectional rainfall.
- iii. Convectional rainfall is regional in nature and thus covers a very limited area on the earth. Such a type of rainfall occurs almost daily in the afternoons, accompanied by lightning and thunder, in equatorial regions. There is quite certainty in the convectional rainfall occurring in these regions.
- iv. The Congo basin of the Africa, the Amazon basin in the S. America, etc. receive convectional type of rainfall.

2. Orographic rainfall

- Ans:**
- i. Orographic rainfall occurs because of the obstruction of the clouds carrying water vapour by the mountains and areas of high altitudes.
 - ii. Moisture-laden winds arrive from lakes or seas towards the mountains.
 - iii. However, the high mountain ranges coming in their way obstruct them.
 - iv. Hence, they start going upwards along the slope of those mountains.
 - v. With the increase in altitudes, their temperature drops, condensation happens and rainfall occurs.
 - vi. Consequently, the windward side of the mountains (the side of the mountain that faces the wind) gets more rain.
 - vii. However, after crossing the mountain, the amount of vapour in the air reduces. Moreover, the moisture carrying capacity of the air increases.
 - viii. As a result, the leeward side of the mountain (the side sheltered from the wind) gets lesser rainfall and hence, this area is identified as rain-shadow area.
 - ix. Orographic rainfall occurs in most parts of the world. The rainfall occurring in India is also of orographic type.

3. Cyclonic rainfall

- Ans:**
- i. A cyclone is a specific air formation which occurs when the pressure at a particular area is less than the pressure in the regions surrounding it.
 - ii. During a cyclone, the air from the surrounding region is pulled towards the centre of the cyclone due to its low pressure. This air then starts moving upwards.
 - iii. As it rises, the temperature of the air reduces, condensation occurs and rainfall takes place.

- iv. Cyclonic rainfall occurs more in the temperate zones, although it also occurs in the tropical regions to a certain extent.
- v. In the temperate zones, its area is quite extensive while in the tropical regions the rainfall is limited in extent and is stormy in nature.

4. Acid rain:

- Ans:**
- i. When the rain gets dissolved with different acids in the air before reaching the earth's surface, it is called acid rain.
 - ii. Due to the air pollution in industrial areas, various gases are released into the atmosphere, which get mixed in the air present in the atmosphere.
 - iii. The water vapour in the air reacts chemically with these gases and creates different acids.
 - iv. Acids like nitric acid, sulphuric acid, etc. gets dissolved in the rainwater.
 - v. Such rains are called acid rains and are very rare. However, these rains are extremely harmful to the living and the non-living things.

Distinguish between

*1. Snow and Hail

Ans:

| | Snow | Hail |
|------|---|--|
| i. | Precipitation in the form of friable and solid particles is known as snowfall. | Precipitation in the form of frozen water droplets falling rapidly to the ground because of gravity is called as hail. |
| ii. | The fall of temperature in the atmosphere below the freezing point causes snowfall. | Extreme heat on the surface of earth can initiate the process of formation of hailstones |
| iii. | Snow forms due to solidification of water vapour due to low atmospheric temperature. | Hailstones form due to condensation of the water droplets at higher altitudes. |
| iv. | Accumulation of snow causes disruption of transport and communication services and also causes frostbite to the people living in those regions. | Hailstones can destroy the crops and also lead to loss of life and property. |



***2. Dew and Frost**

Ans:

| | Dew | Frost |
|------|---|--|
| i. | Dew occurs because of the condensation of moisture-laden air or vapour, coming in contact with the surface of the cold objects. | Frost occurs because of freezing of the water droplets, present in contact with the surface of the cold objects. |
| ii. | When the temperature of the layers of the air near the earth's surface reduces, dew is formed. | When the temperature of the air reaches less than 0 °C, formation of frost begins. |
| iii. | Dew is basically, water droplets in liquid form. | Frost is basically, water droplets in frozen form. |



Apply your Knowledge

1. Observe the pictures given on textbook page no 41. A sentence describing each picture has been given. You have to describe the picture by writing some additional sentences. Discuss the questions.

(Textbook page no. 41)

i.



The blades of grass look like this on winter mornings.

Water droplets are seen on the grass.

From where does the water on the blades of grass come?

Ans: The water on the blades of grass is the condensed form of water vapour which appears in the form of dew drops.

ii.



Snow is found everywhere in the winters in Kashmir.

The snow falls all over the region and accumulates on top of houses, trees, etc. It covers the roads and may even cause blockage of roads.

Why isn't snow found in our surroundings?

Ans: a. Snowfalls occur only when the atmospheric temperature falls below the freezing point causing the water vapour to directly turn into snowflakes.
 b. As the atmosphere in Maharashtra is hot and humid, the temperature does not drop below the freezing point. Hence, it does not snowfall in Maharashtra.

iii.



Generally, it rains between June and September in our region.

Rain droplets fall on the earth's surface from the rainy clouds. In India, it rains in the period between June and September.

How do the rain droplets form?

Ans: a. The air contains water vapour. This air laden with water vapour goes higher. As the temperature of the air reduces at higher altitudes, condensation of the vapour occurs.
 b. Clouds are formed when the condensed water droplets and dust particles accumulate.
 c. The water droplets slowly increase in size.
 d. When they become too heavy and cannot float in the air anymore because of their weight, they come down as rainfall. This is how rain droplets are formed.

iv.



In London, there is fog like this till the afternoons in the winters.

The environment remains cool and the visibility remains affected due to this fog.

**Why don't we have fog like this till afternoons in the winters in our region?**

- Ans:** a. When the temperature of the layers of air near the earth's surface reduces, the water vapour condenses, turns into very small water particles and floats in the air. As the density of these droplets in the air increases, fog occurs.
- b. During winter, in London low temperatures are experienced till the afternoon. As a result, fog is present in this region till afternoon.
- c. However, in the regions in Maharashtra, the climate is hot and humid. Even during winters, the temperature remains low only for few hours in the morning.
- d. As a result, in this region, fogs do not sustain till afternoons even during winters.

v.

**Sometimes hailstones destroy the standing crops in the fields.**

Hailstones do not fall regularly or at frequent intervals. They fall only when climate

Why don't we get hailstones frequently?

- Ans:** a. Hailstones occur when very fast moving upward air carry the water droplets to great heights where they freeze. These frozen droplets fall down as hailstones.
- b. Since, such an upward flow of air at great speeds occurs only when there is lot of heat on the earth's surface, such a situation occurs very rarely in Maharashtra, even during summers. Hence, we don't get hailstones frequently.

2. Think about it. (Textbook page no 43)

We use raincoat or umbrella to protect ourselves from rainfall. What will you use to protect yourself from severe hailstorms?

Ans: Some of the precautions that I would take to protect myself from severe hailstorms are as follows:

- a. I would preferably stay indoors and would not go outside until the downfall of hailstones stops.

- b. While in the house I would close the blinds of the windows and stay away from them so as to protect myself from shattered or blowing glass.
- c. If outside, I would immediately take protection under a strong roof.

3. Try this. (Textbook page no 44)

Carry out the rainfall experiment given in your textbook and observe.

(Students are expected to attempt the above activity on their own.)

4. Think about it. (Textbook page no 45)

Because of the convectional process, such type (convectional type) of rainfall occurs in the afternoon in equatorial areas. But why doesn't it rain in afternoons in the oceanic areas of equatorial belt?

- Ans:** a. We know that the land surface gets heated quickly as compared to the water surface.
- b. Also, the convectional rainfall occurs in areas where the air gets heated due to the high temperature of the land surface, becomes lighter, moves upward along with the water vapour and condenses at higher altitudes.
- c. However, this phenomenon is not possible in the oceans as the water does not get heated to a great extent.

As a result, there is no rainfall in afternoons in the oceanic areas of equatorial belt.

5. Can you tell? (Textbook page no 45)

Observe the horizontal profile of Maharashtra in fig 5.5 (B) given in your textbook and answer the following questions:

- i. What type of rainfall occurs in Maharashtra?**
Ans: Orographic type of rainfall occurs in Maharashtra.

- ii. Where will the rain shadow area lie in Maharashtra?**

Ans: The rain shadow area in Maharashtra will lie on that side of the Sahyadri hills where the plateaus lie.

- iii. Considering the figure estimate the rainfall of your district. Discuss.**

(Students are expected to attempt the above question on their own based to their area of concern.)

6. Make friends with maps! (Textbook page no. 46)

Study the rainfall map of the world given in fig 5.7 of your textbook carefully and answer the following questions:

- i. Which region experiences more rainfall?**

Ans: Major parts of South America, eastern coast of central Africa, Madagascar island, eastern and southern part of Asia, East Indies islands,



coastal part of North America, parts of Europe near the Atlantic ocean and Mediterranean Sea, eastern coast of Australia and the islands of New Zealand and Tasmania experience about 1000 mm of average annual rainfall.

ii. What is the reason for low rainfall in the central Peninsular India?

- Ans:**
- India receives rainfall from the South-west monsoon winds and the North-east monsoon winds.
 - The South-west monsoon winds and the North-east monsoon winds cause rainfalls on the western coast and the north eastern coast of the Indian Peninsular, respectively.
 - Now, we know that the western coast of the Indian Peninsular is flanked by the Sahyadri ranges. When the South-west monsoon winds arrive in this region, the clouds they carry are blocked by these mountain ranges. Due to this, the clouds start moving upwards along the slope of the ranges.
 - Here, the temperature of the winds drops, they undergo condensation and rainfall occurs on the western coast of the Indian Peninsular region.
 - However, after crossing the Sahyadri ranges, the amount of vapour in the air reduces.
 - As a result, other side of the Sahyadri ranges i.e. the central Peninsula of India gets lesser rainfall.
 - A similar process occurs with the North-east monsoon winds where the Himalayan ranges block the clouds brought by the North-east monsoon winds.
 - Ultimately, by the time winds reach the central region, the moisture content is reduced to a great extent and the region gets low rainfall.

Due to the above mentioned reasons, there is low rainfall in the central Peninsular India.

iii. Why does the eastern part of central African Continent get less rainfall than the western part despite its location close to the equator?

- Ans:**
- The eastern part of the central African continent receives rainfall from the north-eastern winds.
 - On observing the location of African continent on the world map, it can be observed that it is surrounded on the northeastern side by the Asian and European continent.
 - Due to this before reaching the eastern part of the central African continent, the northeastern winds majorly blow over this land mass and not over any ocean.

d. As a result, the moisture content that these winds carry is comparatively low. Hence, though it lies near the equator, the eastern part of the central African continent receives low rainfall.

iv. Why does the amount of high rainfall in the western part of the European continent reduce in the eastern part?

- Ans:**
- The high rainfall in the western part of the European continent is caused by the moisture-laden winds from the Atlantic Ocean.
 - These winds travel from the west side of the European continent to the east.
 - However, due to the mountain ranges on the western part of the continent, the moisture laden winds get obstructed and cause orographic rainfall in this region.
 - Due to this, the eastern part of the European continent falls under the rain-shadow region of these winds.

As a result, the amount of high rainfall in the western part of the European continent reduces in the eastern part.

v. Why is the rainfall more only in the eastern coast of Australia?

- Ans:**
- The eastern coast of Australia is surrounded by the Pacific Ocean.
 - The high rainfall in the eastern coast of Australia is caused by the moisture-laden winds blowing from the Pacific Ocean.
 - Now, the mountain ranges (Australian Alps and the New England Ranges) lie on the eastern coast of Australia.
 - The moisture-laden winds from the Pacific Ocean are obstructed by these ranges and cause orographic rainfall on the eastern coast of Australia.
 - Therefore, the remaining part of Australia falls under the rain-shadow region of these winds.

As a result, the rain fall is more only in the eastern coast of Australia.

7. Think about it. (Textbook page no 47)

Why are the areas of high rainfall situated in tropical areas?

- Ans:**
- The tropical areas lie between $23^{\circ} 30' N$ and $23^{\circ} 30' S$ of the equator.
 - The sun's rays are perpendicular in this region and hence the temperature of this region is very high.
 - This results in the formation of a low pressure area in this region.
 - Also, the tropical region is majorly surrounded by water bodies like oceans which induce moisture in the winds blowing over them.



- v. These winds are pulled in this region by the low pressure created here.
 - vi. This causes a heavy rainfall in tropical areas as compared to the other regions.
- Hence, we may say that the areas of high rainfall are situated in tropical areas

8. Give it a try. (Textbook page no 48)

Obtain information regarding ill-effects of acid rain.

Ans: The rain which has acids like nitric acid, sulphuric acid dissolved in it is called as acid rain. Acid rains can cause extensive damage to the organisms living on land as well as to different materials. The various effects of acid rains are mentioned below;

- i. Acid rain affects the human nervous system, respiratory system and digestive system.

- ii. The acid from the acid rains gets mixed with potable water and can enter human body, causing a potential threat to our health.
- iii. Acid rains can also contaminate the drinking water in the reservoirs.
- iv. Acid rains are also harmful to organisms living in aquatic environments.
- v. This type of rain is also harmful to trees as well as animals.

***9. Activity:**

Using the rain gauge in your school, measure the rainfall continuously for one week occurring in your surroundings. Make a bar graph using computers to show the amount of rainfall on the basis of the data obtained.

(Students are expected to attempt the above activity on their own.)

Chapter Assessment

1. Fill in the blanks

- i. Snow, hailstones and rainfall are the major forms of _____.
- ii. Precipitation in the form of solid particles is known as _____.
- iii. A _____ is used to measure rainfall.

2. Right or Wrong? If Wrong, write the correct sentence:

- i. 70.8% part of the earth's surface is full of water.
- ii. Hailstones do not cause any damage.
- iii. Convictional rainfall occurs in most of the parts in the world.

3. Why does the rainfall in India become important to the country's economy?

Answers:

- 1. i. precipitation ii. snowfall iii. rain gauge
- 2. i. Right
ii. Wrong.
Hailstones can damage crops and also cause loss of life and property.
iii. Wrong.
Convictional rainfall occurs in very limited parts in the world, whereas orographic rainfall occurs in most of the parts in the world.
- 3. i. Economy of an agrarian country like India is dependent on agriculture.
ii. But, agriculture in India is largely dependent on the monsoons.
iii. A good rainfall at the right time increases crop production while untimely rain can cause damage to the crops which affects the economy of India.
Hence, the rainfall in India becomes important to the country's economy.



Std. IX



AVAILABLE SUBJECTS:

- English Kumarbharati
- हिंदी लोकभारती
- हिंदी लोकवाणी
- मराठी अक्षरभारती
- आमोदः (सम्पूर्ण संस्कृतम्)
- आनन्दः (संयुक्त संस्कृतम्)
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