

Worksheet

Weather, Water and Air

MCQs

Question 1: Which of these does not occur during the water cycle?

- (a) Evaporation
- (b) Condensation
- (c) Pollution
- (d) Precipitation

Answer :

Correct Answer is Option C

There are four main stages in the water cycle. They are evaporation, condensation, precipitation and collection.

Question 2: Water vapour condensed to form ice crystals are called

- (a) dew
- (b) snow
- (c) mist
- (d) rain

Answer :

Correct Answer is Option D

Clouds form when the invisible water vapour in the air condenses into visible water droplets or ice crystals.

Question 3: Which of the following factors is responsible for weather changes?

- (a) Sun
- (b) Rotation of earth
- (c) Revolution of earth around the sun
- (d) All of these

Answer :

Correct Answer is Option D

Many factors combine to influence weather, the four main ones are solar radiation, the amount of which changes with Earth's tilt, orbital distance from the sun and latitude, temperature, air pressure and the abundance of water.

Question 4: What kind of weather is the most uncomfortable?

- (a) Hot and humid
- (b) Hot and dry
- (c) Cool and humid
- (d) Cool and dry

Answer :

Correct Answer is Option A

Water vapour essentially suffocates our skin. On hot and humid days, your skin might feel sticky and overheated, and the air can feel so heavy.

True & False

Question 5:

- Hot air is heavier than cold air. (False)
- Temperature is higher on mountains. (False)
- Weather changes are mainly caused by the heat of the sun. (True)
- When clouds are formed close to the ground it is called fog. (True)

Tips:

- Cold air is always heavier than an equal volume of hot air.
- As air rises, the pressure decreases. It is this lower pressure at higher altitudes that causes the temperature to be colder on top of a mountain than at sea level.
- The energy that the Earth receives from the Sun is the basic cause of our changing weather.
- Fog is a kind of cloud that touches the ground. Fog forms when the air near the ground cools enough to turn its water vapour into liquid water or ice.

Name the following

Question 6:

- (a) Water vapour cooling to form water Condensation
- (b) Wind blowing from sea to land A sea breeze
- (c) It forms on plants in cold nights Ice crystals

Tips:

- Condensation is the process by which water vapor in the air is changed into liquid water. As condensation occurs and liquid water forms from the vapor, the water molecules become more organized and heat is released into the atmosphere as a result.
- A sea breeze describes a wind that blows from the ocean inland towards land.
- As the air temperature approaches freezing, the surface temperature of plants can dip below freezing, causing ice crystals to form in the same manner that dew forms on warmer nights.

Long answer type questions

Question 7: Why does wind blow from the land to the sea during the day?

Answer : During the day time in coastal regions, the air above the land gets heated faster and starts rising. As this hot air rises up, a region of low pressure is created at the surface and air over the sea moves in to this area of low pressure. Hence, the direction of the wind is from the sea to the land during the day.

Question 8: Why do you feel very uncomfortable in hot and humid weather?

Answer : Water vapour essentially suffocates our skin. On hot and humid days, your skin might feel sticky and overheated, and the air can feel so heavy that breathing becomes a chore and the less that moisture evaporates from our skin, the more uncomfortably warm we feel.

Answer the following questions in brief

Question 9: What are the factors that affect evaporation in the nature?

Factors That Affect the Evaporation Temperature:

Answer :

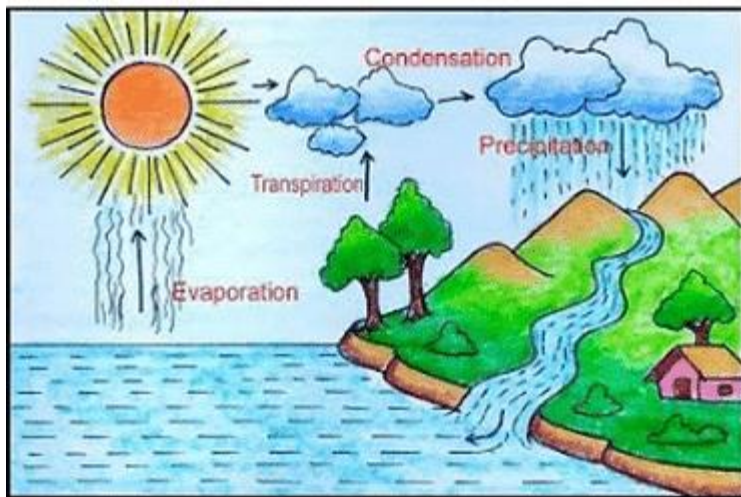
- As the temperature increases, the rate of evaporation also increases.
- Surface area: As the surface area increases, the rate of evaporation increases.
- Humidity: The rate of evaporation decreases with an increase in humidity.

Question 10: Define atmosphere.

Answer : “Atmosphere is a protective layer of gases that shelters all life on Earth, keeping temperatures within a relatively small range and blocking out harmful rays of sunlight.” An atmosphere is a blanket of gases that surrounds Earth.

Question 11: What is water cycle?

Answer : The water cycle shows the continuous movement of water within the Earth and atmosphere. Liquid water evaporates into water vapor, condenses to form clouds, and precipitates back to earth in the form of rain and snow. Water in different phases moves through the atmosphere (transportation).



Fill in the blanks

Question 12:

- (a) The tiny droplets of water present in the air is called ice crystals.
- (b) The processes of evaporation and condensation in the nature results in water cycle.
- (c) The water vapour upon cooling forms clouds.