

Understanding Weather

A. Choose the correct option:

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|-----------------------|-------------------|
| 1. (a) Tides | 3. (c) Humidity |
| 2. (b) wind direction | 4. (c) Rain Guage |

B. Fill in the blanks:

- | | |
|-------------------------|------------------------------|
| 1. Atmospheric Pressure | 3. Anemometer |
| 2. Weather stations | 4. Cherrapunji and Mawsynram |

C. Very short answer type questions:

1. Rain Guage measures the amount of rainfall received in an area.
2. Atmospheric pressure is the pressure exerted by weight of air on the Earth's Surface.
3. Automated weather stations automatically measures and records weather data using sensor without human help.
4. Thermometer measures temperature by detecting the rise or fall of liquid or electronic sensors based on heat.

D. Short answer type questions:

1. Weather is the condition of the atmosphere at a Particular place and time. Five types of weather are Sunny, Cloudy, Rainy, Windy, Stormy.
2. Rain is a form of precipitation in which water droplets fall from clouds. It forms when water vapour condenses into droplets that become heavy and fall to the earth due to gravity.
3. It makes the weather feel hotter, causes sweating and discomfort, slows the drying of clothes, can spoil food faster, and often leads to cloudy weather or rain.
4. The two natural signs that help predict rain are:
(i) Animal behaviour: Ants move their eggs to higher ground and frogs croak loudly before rain.

(ii) Clouds: Dark grey nimbus clouds usually indicate approaching rain.

E. Long answer type questions:

1. Weather is the condition of the atmosphere at a particular place over a short period of time.

Benefits of weather are:

1. Weather helps farmers decide the best time for sowing, watering, and harvesting crops.
2. People can plan travel, outdoor activities, and daily work according to the weather.
3. Weather forecasts warn us about storms, heavy rain, or heatwaves, helping us stay safe.
4. Rainfall and sunshine help plants grow and provide water for animals and humans.

2. The five elements of weather are:

- a. Temperature: Temperature measures how hot or cold the air is. It affects clothing, lifestyle, and agriculture.
- b. Precipitation: Precipitation is water falling from the sky as rain, snow, hail, or graupel. It is essential for water supply and farming.
- c. Wind: Wind refers to movement of air from high to low pressure. It distributes heat and moisture.
- d. Humidity: Humidity refers to amount of water vapor present in the air. It influences comfort and cloud formation.
- e. Atmospheric Pressure: It refers to weight of air on Earth. Changes in pressure influence wind, storms, and rainfall.

3. The amount of water vapor present in the air is known as humidity.

Effects of humidity are:

- a. High humidity makes the air feel sticky and hotter, sweat evaporates slowly.
- b. Low humidity makes the air dry and can cause skin dryness.
- c. Humidity affects cloud formation and rainfall.

d. Farmers and meteorologists use humidity data to predict rain and crop conditions.

4. Importance of Weather Stations are as follows:

- a. Collect accurate data on temperature, rainfall, wind, humidity, and air pressure.
- b. Help in forecasting weather for daily life, agriculture, aviation, and fisheries.
- c. Issue early warnings for natural disasters like cyclones, floods, and heatwaves.
- d. Study climate patterns and environmental changes over time.
- e. Meteorologists analyse the data from instruments and satellites to detect changes in the atmosphere and predict future weather conditions.