

HOLYCROSS SCHOOL

GEPGRAPHY

CLASS 7

Ch. 4: WEATHER AND CLIMATE

REVIEW EXERCISE

F. Answer these questions in 10 – 20 words.

1. Define (i) climate (ii) weather

Ans: Climate: - Climate is the general atmospheric conditions of a place over a period of time, say 30 to 35 years.

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

2. Why is weather a significant factor of our existence?

Ans: Weather is a significant factor of our existence as it determines the type of clothes we wear, the kind of food we eat and the type of houses we live in.

3. State the elements of weather and climate.

Ans: The elements of weather and climate are temperature, pressure, wind, humidity, precipitation, sunshine and cloud cover.

4. What is weather forecast? How is it useful?

Ans: Predictions of weather are made by careful observations and accurate calculations. The predictions, which are announced by the weather stations, are collectively called weather forecast.

Weather forecast is useful on the following ways:

- i. Weather forecast is especially useful for farmers, fishermen, aviators and navigators.

- ii. Weather forecast gives them advance warnings related to storms, floods and droughts.

5. What is temperature?

Ans: The temperature of the atmosphere is defined as the degree of hotness or coldness of air.

6. Define diurnal and annual range of temperature.

Ans: The difference between maximum and the minimum temperature of the day is called the diurnal range of temperature.

The difference between the maximum and minimum temperatures recorded in a year is called annual range of temperature.

7. Name the two most commonly used scales for measuring temperature. What is the melting point of ice and boiling point of water in these two scales?

Ans: Celsius and Fahrenheit scales are the two most commonly used scales for measuring temperature.

On these scales, the melting point of ice and boiling point of water are 0°C and 100°C and 32°F and 212°F , respectively.

8. What is atmospheric pressure?

Ans: Atmospheric pressure can be defined as the force exerted by a column of air due to its weight, at a particular place on the Earth's surface.

9. How is humidity of a place related to its temperature?

Ans: When temperature of a place is high, the rate of evaporation will be high and humidity too will be high. Similarly, low temperature will result in low humidity.

10. What are (i) absolute humidity (ii) relative humidity?

Ans: (i) Absolute humidity - Absolute humidity is the actual amount of water vapour in a given volume of air at a given temperature.

(ii) Relative humidity - Relative humidity is the ratio between the absolute humidity and the maximum amount of water vapour which the same volume of air contains at that temperature.

11. What is the purpose of rain gauge?

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

12. What do you understand by precipitation?

Ans: Continuous condensation of water vapour in the air results in the formation of minute droplets of water. When these droplets join together, they form bigger drops, which become too heavy to float and start falling down. This process is called precipitation.

13. State the various forms of precipitation. Which is the most common form?

Ans: There are four types of precipitation - rain, snow, sleet and hail.

Rainfall is the most common form of precipitation.

14. How does rain occur?

Ans: When the condensed water vapour in the clouds falls down in the form of water drops, it is known as rain.

15. State the two types of barometers.

Ans: The two types of barometers are aneroid barometers and mercury barometers.

G. Answer these questions on 50-60 words.

1. Name the two types of barometers. Which is the more common types?

Ans: The two types of barometers are aneroid barometers and mercury barometers.

Aneroid barometer is more handy and most commonly used.

2. Explain atmospheric pressure.

Ans: Atmospheric pressure can be defined as the force exerted by a column of air due to its weight, at a particular place on the earth's surface.

3. What are the various types of clouds?

Ans: Cirrus clouds, Cumulus cloud, Stratus clouds, Nimbus clouds are the various types of clouds.

4. What is the need for a wind vane?

Ans: Wind vane is used to measure the direction of wind.

5. Compare absolute humidity and with relative humidity.

ABSOLUTE HUMIDITY	RELATIVE HUMIDITY
i.Absolute humidity is the actual amount of water vapour in a given volume of air at a given temperature.	i.Relative humidity is the ratio between the absolute humidity and the maximum amount of water vapour which the same volume of air contains at that temperature.
ii.It is measured in grams per cubic metre.	ii.It is expressed in percentage.

6. Describe the working of rain gauge. What precautions should be taken during its installation?

Ans: The instrument used to measure rainfall is called a rain gauge. It consists of cylinders and graduated jars. The rain water collected is measured with the help of a measuring jar. The reading time is fixed for 24 hours.

The precaution necessary for installing a rain gauge are:

- (i) Rain gauge should be installed away from trees and buildings so that extra does not get collected.

- (ii) In addition, the rain gauge should be fixed on raised platform to avoid extra water from getting into the instrument and prevent water logging.

H. Answer these questions on 75-100 words.

1. State the various types of condensation. Explain each form.

Ans: Clouds, dew, frost and fog are various forms of condensation.

Clouds are formed when water vapour in the air condenses around dust particles into tiny droplets of water.

Dew is formed when moist air comes in contact with a cool surface such as grass, and condenses into droplets of water.

Frost is formed when dew occurs in the form of ice crystals.

Fog is formed when condensation takes place in the lower layers of the atmosphere, close to the land surface or above water bodies.

2. Write a note on humidity and the instrument used to measure it.

Ans: The amount of water vapour present in the atmosphere is called humidity. Most of the water vapour in the air comes through the process of evaporation from water bodies and the land surface.

The instrument used to measure humidity is dry and wet bulb thermometer. The hygrometer is an automatic instrument that records humidity on a graph paper.

3. What is weather map? How is it useful?

Ans: A weather map is a representation of the distribution of meteorological data of a given area on the Earth's surface.

It shows all the elements of weather represented by different symbols. Meteorologists use weather maps to show patterns in the data available. This helps them in the forecasting of weather.

I. Why do you think so?

1. Weather is not constant.

Ans: Weather is not constant because:

- (i) Weather is the condition of the atmosphere at a particular place over a short period of time.
- (ii) It may change from day to day or even within the same day.

2. Farmers and fisherman regularly follow the weather bulletin.

Ans: Farmers and fisherman regularly follow the weather bulletin because weather forecast gives them advance warnings related to storms, floods and droughts.

3. Wind is an important element of weather and climate.

Ans: Wind is an important element of weather and climate because:

- (i) Winds help in carrying the warmth or cold from one place to another.
- (ii) They also help in bringing rainfall, as they carry moisture from water bodies.

4. Nimbus clouds bring continuous rain or snow.

Ans: Nimbus clouds bring continuous rain or snow because:

- (i) Nimbus clouds are found at the height of less than 2000m.
- (ii) They are very thick and dark clouds.

5. Alcohol or mercury is used in thermometers.

Ans: Alcohol or mercury is used in thermometers because the liquids expand and contract with the rise and fall of temperature.

6. Climate and weather have tremendous influence over our lives.

Ans: Weather and climate is a significant factor of our existence as it determines the type of clothes we wear, the kind of food we eat and the type of houses we live in.

7. The level of humanity of a place is determined by geographical location of a place, time of day and temperature.

Ans: The level of humanity of a place is determined by geographical location of a place, time of day and temperature. When temperature of a place is high, the rate of evaporation will be high and humidity too will be high. Similarly, low temperature will result in low humidity.