Class-VII

Geography, Chapter-3

A. Choose the correct answer:-

1. The air closest to the ground is denser because of ……..
b. gravitational pull
2. The movement of the Earth around its axis once in every 24 hours is called……
b. rotation
3. Temperate cyclone have …… rain.
b. heavy
4. Monsoon winds follow a …… pattern.
a. season
5. Southwest monsoon is also known as the ……. rain.
a. summer

B. State whether the sentences are true or false:-

1. Wind is the horizontal movement of air near the Earth's surface due to different in atmospheric pressure. **(True)**
2. In a cyclone the winds blow clockwise in the northern hemisphere. **(False)**
3. The process of change from a liquid to a gaseous state is called evaporation. **(True)**
4. Winter monsoon causes heavy rainfall over a period of time. **(False)**
5. The higher the temperature lower is the pressure. **(True)**

C. Fill in the blanks:-

1. Saturation point reached when the atmosphere has a relative **humidity** of 100 per cent.
2. **Doldrums** are Equatorial low pressure belts between 5^{o}N and 5^{o} S.
3. **Cyclonic** rainfall occurs due to the meeting of warm and cold air masses.
4. The **Westerlies** can bring rain because they blow over warm ocean currents and go from warmer to cooler areas.
5. Air pressure is measured in units called **millibars.**

D. Answer the following questions in 1-2 sentences.

1. What is dew point?

Ans.1 The temperature at which air gets saturated and it cannot hold any more water vapour is called the dew point temperature.

2. What are the types of rainfall?

Ans.2 There are mainly three types of rainfall:-

i. Conventional Rainfall

ii. Relief Rainfall

iii. Cyclonic Rainfall

3. What is horse latitude?

Ans.3 Stretching between 30° to 35° N and S of the Equator are the Horse Latitudes.

4. What is a barometer?

Ans.4 Air pressure is measured by an instrument called barometer.

5. Name two different forms of condensation.

Ans.5 Dew and frost are different forms of condensation.

E. Answer the following questions in 4-5 sentences.

1. What is absolute humidity?

Ans.1 This is the actual amount of water vapour in a particular mass of air at a given time and temperature. In other words it is the weight of water vapour in grams, contained in 1 kg of air.

2. What is the process of evaporation?

Ans.2 The process of change from a liquid to a gaseous state is called evaporation. Heat is absorbed in the process of evaporation.

3. What is atmospheric pressure?

Ans.3 Atmospheric pressure is the force exerted by the weight of air on a unit of surface area.

4. What is a barograph?

Ans.4 A barograph is a barometer that self-records changes in atmospheric pressure.

5. What happens to the vapour when the air is exceptionally clean?

Ans.5 If there is a situation when the air is exceptionally clean, the vapour may not condense even if it is saturated and cool.

F. Answer the following questions in 8-10 sentences.

1. Describe any two types of wind.

Ans.1 i. Permanent Winds:-These are also known as prevailing or planetary winds. They blow all over the planet, steadfastly, in a particular direction, right through the year. They blow from high pressure areas to low pressure areas. They are of three kinds:- Trade winds, Westerlies and Polar winds.

ii. Local winds:-These are winds that are truly local. They occur over a much smaller land scale and are related to the topographical features of that particular place. They blow for a short period and are caused due to the particular shape of the land or nearness to a body of water that generates a specific movement of air.

2. What are the factors that affect atmospheric pressur?

Ans.2 i. Altitude:-With an increase in the altitude, the length of the column of the overlying air on the surface of the earth decreases and hence the weight or the pressure exerted by the atmosphere also decreases.

ii. Temperature:-When the atmospheric temperature increases, the air expands and loses density and similarly when the temperature decreases the air becomes denser and naturally air pressure increases.

iii. Water Vapour:-Water Vapour is lighter than the dry air so,if the content of water vapour in the air is higher, The a.p would be lower and vice-versa.

3. What is cyclonic rainfall?

Ans.3 Cyclonic rainfall occurs due to the meeting of warm and cold air masses. When a low pressure area is created during a cyclone, winds from all sides converge towards it, making the air move spirally upwards As it goes up it cools, there is condensation and heavy rainfall along with strong winds. Cyclonic rainfall occurs in both temperate and tropical regions.

4. What are Periodic and Polar winds?

Ans.4 Periodic winds:-As name suggests, these winds blow in a definite direction during a specific season or at a particular time of the day. They reverse their direction according to the reversal of the season or the time of the day.

Polar winds:-These are a kind of permanent winds. Polar winds begin near the North and South Poles. Frigid air in the winter sinks toward the ground creating a high pressure area at the poles. These winds occur in both hemispheres.

5. What are cyclones and anti-cyclones?

Ans.5 Cyclones:-In a cyclone the winds blow anti-clockwise in the northern hemisphere and clockwise in the southern hemisphere. The eye or centre of the cyclone is a small area of low pressure and is stormy. We usually get heavy rain accompanied by thunder and lightning along with cyclones.

Anti-cyclone:-It is the reverse of a cyclone. It has a high pressure in the centre. The winds blow clockwise in the northern hemisphere and anti-clockwise in the southern hemisphere. Anti-cyclones are associated with warm, dry and more stable weather since sinking air is generally more stable than rising air.

I. Picture study.

1. Cyclones.

2. Tropical cyclones, hurricanes or typhoons form when convection causes warm, moist air above the ocean to rise. They begin as a group of storms when the water gets as hot as 80 °F (27 °C) or hotter. The Coriolis effect made by the Earth's rotation causes the winds to rotate. Warm air rises quickly.