**Science Notes**

**Class-VII**

**Chapter-15 Wind storms and cyclone**

**Very short answer Type question.**

**Ans-a)** Wind vane.

**Ans-b)** When the wind speed increases the air pressure reduces.

**Ans-c)** Anemometer.

**Ans-d)** Eye of Cyclone.

**Short answer type question**

**Ans-a)** Wind current is generated on the earth due to uneven heating of land and water between the equator and the poles. Cooler air from the regions of 0-300 latitudes on either sides of the equator moves in .These winds are called trade winds.

**Ans-b)** When hot air from above the land rises up, creating a low pressure area. Water vapour rises and condenses to form tiny droplets of water, which freezes to form ice at higher altitude. The droplet of water and ice particles falls very fast towards the earth which strikes with the rising air. The lightning heats the surrounding air and the air expands very fast producing loud sound called thunder .all these events occurring together lead to thunderstorm.

**Ans-c)** A tornado is a dark funnel-shaped cloud reaches the ground from the sky. It is formed when a column of cold air sinks down from a dark rain cloud. Warm air from the surface of the earth rises up, whirls around the column of cold air there by resulting in high speed winds. Tornadoes are mostly weak and travel at high speed of about 300 km/hr.

**Ans-d)** The hot air from the equator rises and becomes cooler and heavier. It comes down near the 300 N and 300 S latitudes and blows towards the much colder regions .These winds that blow towards 60 0N and 600 S latitudes are called westerlies.

**(Draw diagram of wind flow pattern of the earth pg no-185)**

**Long answer type question**

**Ans-a)** Air moves from the region of high air pressure to the region of low air pressure. Air pressure reduces when the wind speed increases .That’s why High speed winds are accompanied by reduced air pressure. The roofs of huts or thin sheet roofs of godowns get blown off when the wind speed is very high. This happens because when the high speed winds blow over the roofs ,it reduces the air pressure above the roofs .The higher air pressure below the roofs exerts large force to lift up the roof and thus blowing it off.

**Ans-b)** Effects of thunderstorm are as follows:-

1. It can uproot trees, electric poles and blow away light structures like thatched roofs.
2. Heavy rains that occur along with thunderstorm cause flash floods and water logging.
3. People may die if lightning strikes them.

**Ans-c)** Safety measures against cyclones are as follows:-

1. Warning issued by the meteorological department through TV and radio should be taken seriously.
2. People who live near sea coasts should move to safer places once a cyclone warning is issued.
3. Emergency phone numbers like hospitals, fire brigade, police station,etc should be kept handy.
4. After cyclone alert and cyclone warning is issued there is enough time to take safety measures.

**Ans-d)** Take a tin and fill it with water. Heat this tin with water on a burner, till the water starts boiling .Remove the tin from the burner and cover the mouth of the tin with its lid tightly. Put this tin in the sink and pour cold water on it. You will observe that the the tin looses its shape. This happens because when the water in the tin boils, it gets converted to steam (Water vapour).when cold water is poured over the tin, the steam condenses and changes back to liquid state, thereby reducing the amount of air inside, thus reducing the air pressure inside the tin. The air pressure inside the tin becomes lesser then the air pressure outside, causing the tin to get compressed.

**(Draw diagram of Activity-I Pg no-182)**

**Ans-e)** The destructions caused by cyclones are as follows:-

1. Cyclones cause damage to houses, electric poles, crops, vehicles and other properties.
2. Flood water brought in by a cyclone destroys road, railway tracks, drowns animals and humans thus causing damage to life and property.
3. Floods pollute the sources of drinking water and cause waterborne diseases like dysentery and typhoid.

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