

Topic - Psychrometry → As we know that Atmospheric air is a mixture of Nitrogen, oxygen, water vapour and other inert gases, like Helium, Neon, Argon, Krypton etc.

Therefore Psychrometry is the branch of science in which we study the property of atmospheric air and its moisture content.

Some important terms related to Psychrometry -

1- Dry Air → The term 'dry air' is used to indicate the water free contents of air having any degree of moisture.

2- Saturated Air → moist air is said to be saturated when its condition is such that it can co-exist in natural equilibrium with an associated condensed moisture phase presenting a flat surface to it. At higher temp, it requires a larger quantity of moisture to saturate it. At saturation, vapour pressure of moisture in air corresponds to the saturation pressure given in steam tables corresponding to the given temp of air.

3- Moist Air → It is a phase of air of mixture of water vapour and air.

4- Dry-Bulb Temperature (DBT or dbt) → It is the temperature of air as recorded by an ordinary dry ~~thermometer~~ thermometer (tdb).

5 - Wet-bulb Temperature (WBT) → It is the temp^o of air recorded by a thermometer when its bulb is covered by a wetted wick and is exposed to a current of rapidly moving air (t_{wb}).

6 - Adiabatic Saturation Temperature → It is the temp^o at which the water or ice can saturate air by evaporating adiabatically into it. It is ~~the~~ numerically equivalent to the reading of wet bulb temperature.

7 - Wet bulb Depression → It is the difference between dry-bulb and wet bulb temperatures ($t_{db} - t_{wb}$).

8 - Dew Point Temperature (DPT) → It is the temperature to which air must be cooled at constant pressure in order to cause condensation of any of its water vapour. It is equal to ~~steam~~ ~~table~~ saturation temp^o corresponding to the actual partial pressure of water vapour in the air (t_{dp}).

9 - Dew Point Depression → It is the difference between the dry bulb and dew point temperature ($t_{db} - t_{dp}$).

10 - Specific humidity (Humidity Ratio) → It is the ratio of the mass of water vapour per unit mass of dry air in the mixture of vapour and air. It is generally expressed as grams of water per kg of dry air.