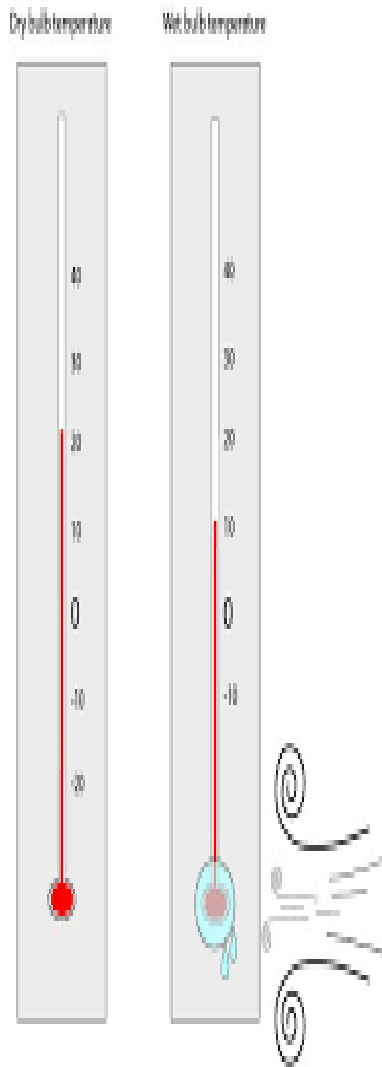


# PSYCHROMETRY PART-2



- Dry Bulb Temperature (शुष्क बल्ब तापमान)
- Wet Bulb Temperature (आद्र बल्ब तापमान)
- Dew Point Temperature (ओसांक तापमान)
- Adiabatic Saturation Process
- Sling Psychrometre

BY - SAUMYA MISHRA

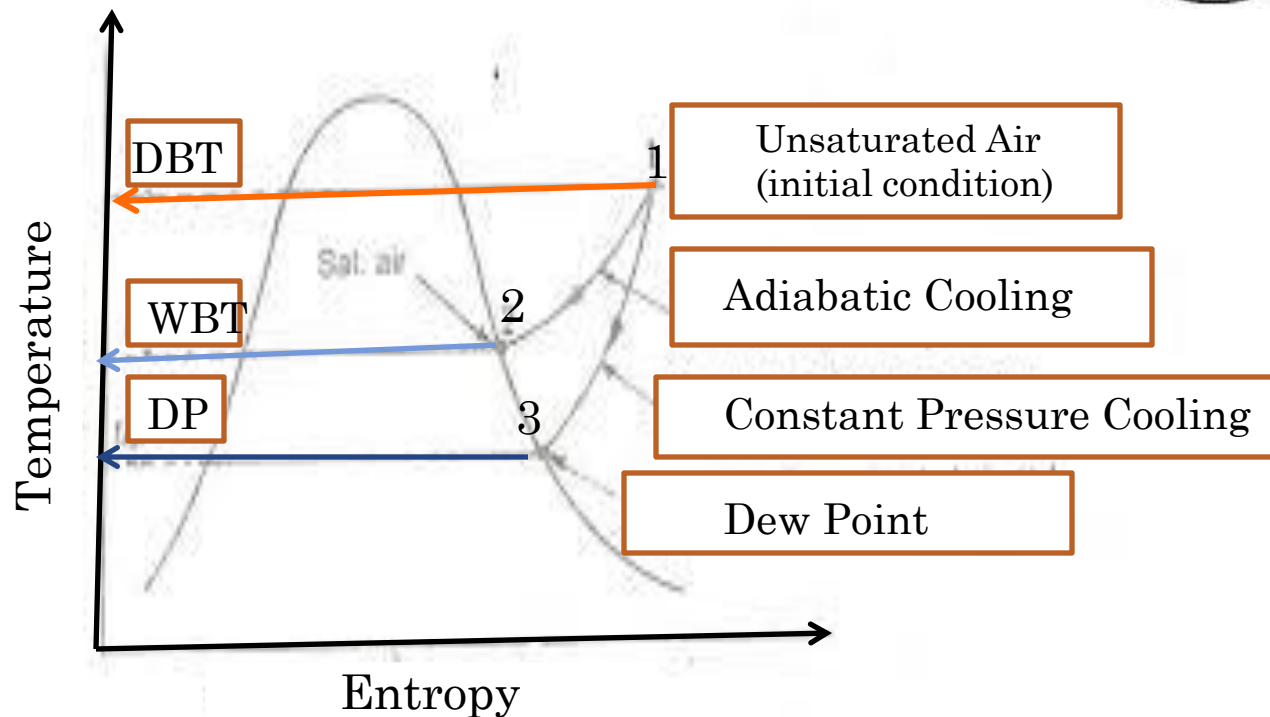
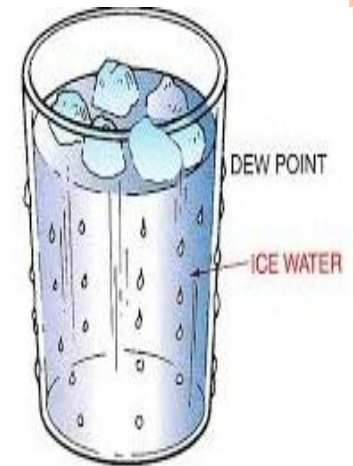


## **1.DRY BULB TEMPERATURE (शुष्क बल्ब तापमान):**

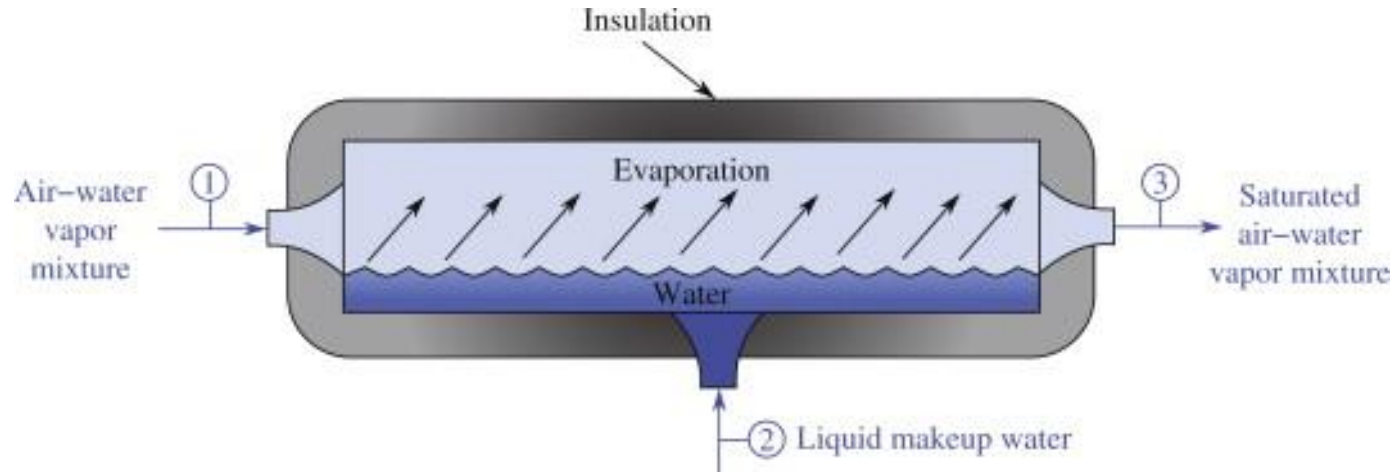
DBT is the temperature of air measured by a simple mercury thermometer freely exposed to the air, but shielded from radiation and moisture. DBT is the temperature that is usually thought of as air temperature, and it is the true thermodynamic temperature.

**2.WET BULB TEMPERATURE (आद्र बल्ब तापमान):** WBT is the temperature read by a thermometer covered in water-soaked cloth (wet-bulb thermometer) over which air is passed.

**3. DEW POINT TEMPERATURE(ओसांक तापमान) :** The dew point is the temperature to which air must be cooled to become saturated with water vapor. When further cooled, the airborne water vapor will condense to form liquid water.



**4. ADIABATIC SATURATION PROCESS :** Temperature at which water converts into air by the process of evaporation adiabatically. The device used for this type of process is known as adiabatic saturator.

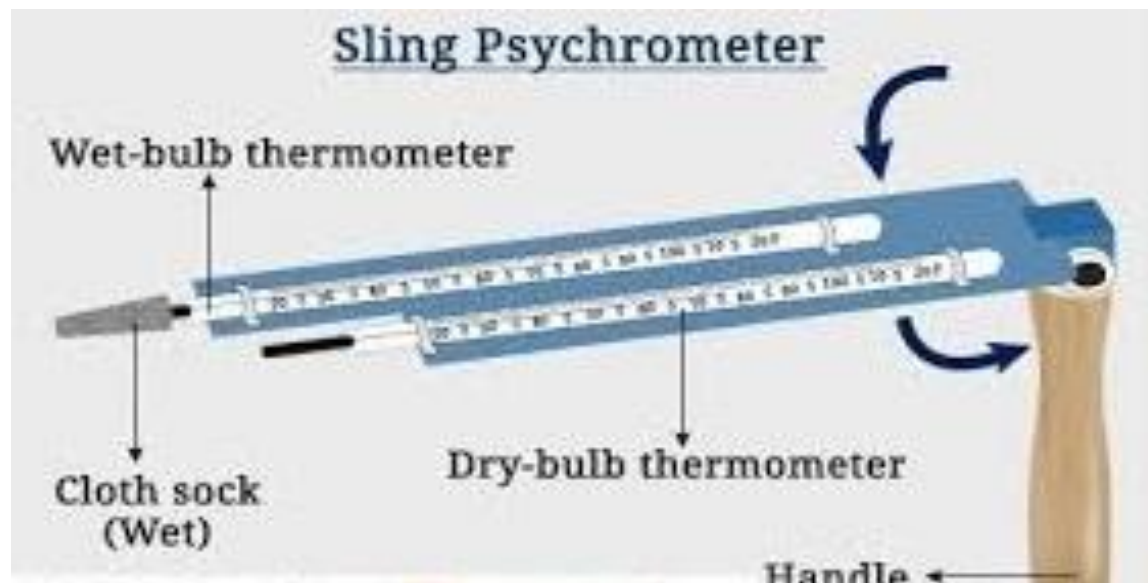


moist air is entering into the saturator device duct from the left and exiting at the right. When air comes in contact with water, heat and mass transformation takes place. For a perfect equilibrium condition, the duct should be long so that air can be fully saturated. After the adiabatic saturator has accomplished an equilibrium state condition, the temperature demonstrated by the thermometer is **wet-bulb temperature**.

When air passes through it heat will be extracted and cloth absorbs some moisture which results into the reduction of temperature of air.

# SLING PSYCHROMETER

A **SLING PSYCHROMETER** HAS TWO THERMOMETERS: A WET BULB AND A DRY BULB. THE WET BULB HAS A COTTON WICK OVER THE BULB OF THE THERMOMETER, WHICH IS MOISTENED WITH ROOM TEMPERATURE WATER. THE DRY BULB IS SIMPLY A THERMOMETER.



THANKYOU...

