

AIR CONDITIONING



Air Conditioning is the process of conditioning the air according to the human comfort, irrespective of external conditions.

Or

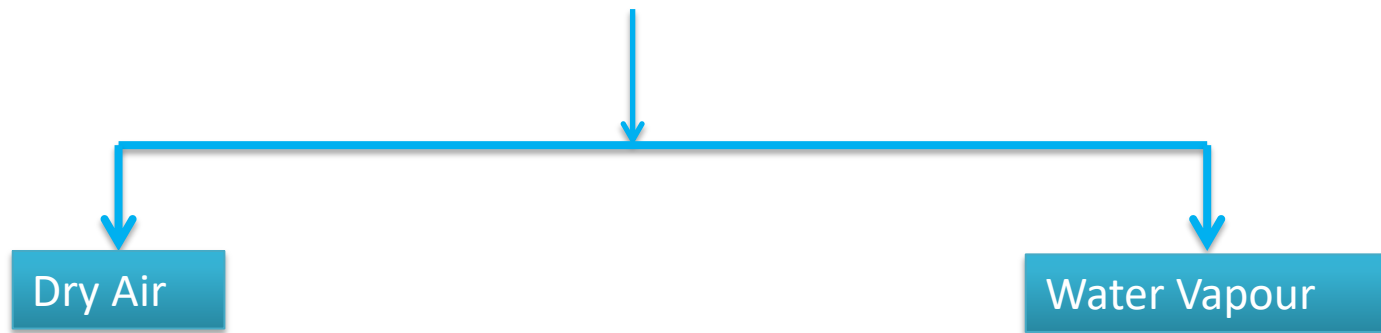
Air Conditioning is the simultaneous control of temperature, humidity, air velocity and purity of air.

Psychometric : It is the branch of science which deals with the study of properties of air

Applications of A. C.

- Offices, hotels, buses, cars.,etc
 - Industries having tool room machines.
 - Textile industries to control moisture.
 - Food industries, Chemical plants
- **Types of Air conditioners**
 - Room Air conditioners
 - Winter Air conditioners
 - Central Air conditioners

Air (moist air)



**78.08% nitrogen,
20.95% oxygen,
0.93% argon,
0.04% carbon dioxide,
and small amounts of
other gases.**

Psychrometry Terminologies

Dry air: The atmospheric air which no water vapour is called dry air.

Temperature: The degree of hotness (or) Coldness is called the temperature.

Moisture: Moisture is the water vapour present in the air.

Humidity: mass of water vapor present in 1kg of dry air

Specific Humidity / Humidity ratio (ω): mass of vapour to the mass of dry air .

Relative humidity (Φ): Relative humidity is the ratio of actual mass of water vapour to the mass of water vapour under saturated condition at in the same volume and same temperature .

Dry bulb temperature: The temperature of air measured by the ordinary thermometer.

Wet bulb Temperature: The temperature of air measured by the thermometer when it is covered by the wet cloth

Dew point Temperature: The temperature at which the water vapour starts condensing is called dew point Temperature.

Or

It is the saturation temperature corresponding to the partial pressure of water

Wet bulb depression: (DBT- WBT) (indicates relative humidity)

Dew point depression: (DBT- DPT)