FAQS

1. Define climate and weather.

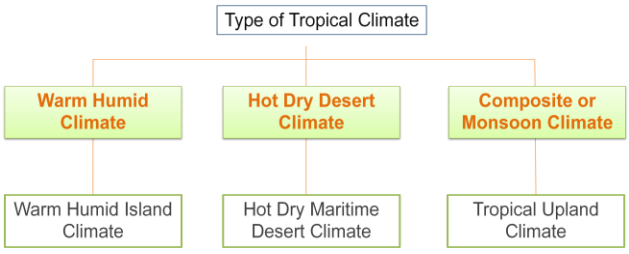
- **CLIMATE**: The climate of an area or country is known through the average weather over a long period of time. If an area has more dry days throughout the year than wet days, it would be described as a dry climate; a place which has more cold days than hot days would make it known to have a cold climate

- Weather describes the condition of the atmosphere *over a short period of time* e.g. from day to day or week to week, while climate describes *average conditions over a longer period of time*. Humidity, air temperature and pressure, wind speed and direction, cloud cover and type, and the amount and form of precipitation are all atmospheric characteristics of the momentary conditions we call weather.

2. List the factors that decides the climate of a place.

- Elevation or Altitude effect climate
- Prevailing global wind patterns
- Topography
- Effects of Geography
- Surface of the Earth
- Climate change over time

3. What are the classification of tropical climate and explain any one category in detail.



WARM HUMID CLIMATE:

- Found in a belt near the Equator extending to about 15º North and South
- Examples: Malaysia, Jakarta, Singapore, Hawaii, US

1

- Air Temperature
- During the day b/w 27ºC and 32ºc At night, b/w 21º and 27ºc

2

- Humidity
- Relative Humidity (RH) remain high – 75% for most of the time, but vary from 55% to almost 100%

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- Vapour Pressure
- Between 2500 to 3500 N/m2

4

- Precipitation
- High precipitation (rainfall) throughout the year
- Generally becoming more intense for several consecutive month.
- Annual rainfall – 2000 to 5000 mm in one year
- Occurrence of gusty winds and electric storms

5

- **Sky Condition**
- Are fairly cloudy throughout the year
- Cloud cover – 60% to 90%

6

- **Solar Radiation**
- normally high / maximum party reflected and partly scattered by the cloud
- higher sun and longer days is distinctly wettest (as at Palembang, Indonesia) or the time of lower sun and shorter days may have more rain (as at Sitiawan, Malaysia).

7

- **Wind**
- Wind velocities are typically low, calm periods
- Strong wind can occur during rain squalls.

8

- **Vegetation**
- Grows quickly due to frequent rains & high temperature
- Difficult to control
- High humidity accelerates mould and algae growth, rusting and rotting.

4. What is physics of heat loss?

- For the body to remain at a constant temperature the metabolic heat produced must balance the heat lost by:
- Convection (air temperature, air speed)
- Radiation (surface temperatures)
- Evaporation (temperature, humidity, air speed)
- Conduction

5. List few examples of controls that occupants can adjust to suit their thermal comfort.

- Occupants can use controls offered by the building to change the environment to suit their needs
- Window-opening, fans, shading devices, are such controls. They are available but there may be constraints on their use such as conflicts between occupant needs, accessibility etc.