FAQ's

1. **Define the unit to measure air conditioning capacity.**

   The two most common units for stating the heat quantity are, British thermal unit (Btu) and the Calorie (cal). The Btu is the quantity of heat needed to raise the temperature of 1 lb. of water by 1^{o} Fahrenheit. The Calorie is the metric unit of heat quantity. It is the heat needed to raise the temperature of 1 gram of water by 1^{o}Celcius. Since a calorie is a very small measurement, it is practical to use thousand calories as the unit for air-conditioning and it is expressed as Kilo Calorie.

2. **What are types of Air conditioning systems available in the market?**

   The types of air conditioning systems available in the market are, ductable packaged air conditioning systems and central plant systems under central air conditioning systems. Window air conditioners, split air conditioners of various types like floor mounted, wall mounted and ceiling mounted under Non-central air conditioning systems.

3. **How to estimate the Heat load for a particular space?**

   The various factors considered to estimate Heat load for a particular space are, the heat from various sources external and internal. The external heat is brought into the space by the Sun through walls, roof and glazing. Fresh air that comes into the conditioned space has a substantial heat load. The internal heat is caused by electrical equipment, machinery, lighting and from the occupants themselves. The quantum of heat added by the occupants depends on their level of activity.

4. **Explain about window air conditioners.**

   In window air conditioners, the compressor, condenser-fan, condenser and evaporator are all enclosed in a single cabinet. The unit is to be installed in a wooden frame either in a window or in a hole in the wall. The air being blown through the condenser must pass freely thorough without restriction.

5. **Explain briefly about the types of Split air conditioner and discuss the pros and cons of each type.**

Split air conditioners are classified based on the location of the indoor unit like, Floor mounted, high-wall splits and ceiling-mounted. The ceiling mounted split air conditioners are further classified based on the aesthetics as exposed, concealed and semi concealed.

Floor mounted

Pros – since units are mounted on the floor, may be on a platform. Air throw is upwards.

Cons – since floor space is at a premium, and floor-mounted units occupy real estate, such indoor units are not very widely used these days.

High wall splits

Pros –units are fixed on wall at a height of 2.5 m from floor, hence operated by remote and also space saving.

Cons – air throw is downwards and maintenance is tedious

Ceiling mounted

Pros – easy to mount and can be concealed effectively hence helps with aesthetics

Cons – these units cannot drain the condensate water as easily as other units