

Section-6

Ans 1

Material used for collector can be classified as:-

- ① Thermophysical Properties such as thermal conductivity, heat capacity etc.
- ② Physical Prop. like density, tensile strength, Melting point etc. and Environmental Properties like. Moisture Penetration, Corrosion resistance and degradation due to pollutants in ~~atmos~~ atmosphere.
- ③ Some commonly used Material are crown white wool glass wool, calcium silicate, Cellular Foam
- ④ other Materials for insulation should have low thermal conductivity should be stable at high temp.
- ⑤ other Material which are used for absorber plate is copper because of high conductivity and resistance to corrosion.

* solar Flat Plate collector performance :-

It is simplest in design and it is most important part of any solar thermal energy system.

In this collector both direct and diffuse radiation are absorbed and converted in useful heat