

### Points to note:-

\* Thermal conductivity of some materials:-

$$\rightarrow K_{\text{metals}} > K_{\text{non-metals}}$$

$$\rightarrow K_{\text{solid}} > K_{\text{liquid}} > K_{\text{gas}}$$

\* Conduction:- In this heat transfer, medium is required but bulk of medium does not transfer.

\* Convection:- In this heat transfer, medium is required and bulk of medium transfers during transfer of energy.

\* Radiation:- In this heat transfer, medium is not required.

\* Stefan-Boltzmann law:-

$$E = \sigma AT^4 \quad \therefore \sigma = 5.67 \times 10^{-8} \text{ W m}^{-2} \text{ K}^{-4}$$

★  $T$  must be in Kelvin

\* Kirchoff's law:-

$$E(\text{blackbody}) = \frac{E(\text{body})}{a(\text{body})}$$

$a$  = absorptive power