Class-VII(CANCEPT MAP)

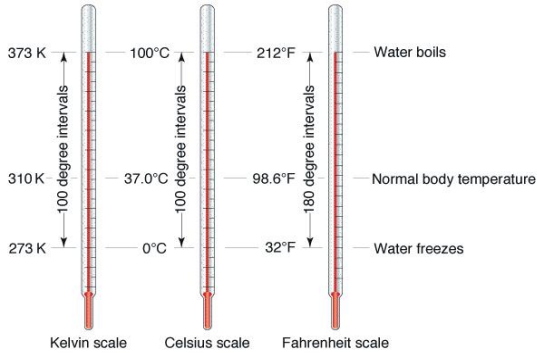
HEAT

Heat is a form of energy which causes the sensation of hotness or coldness of a body. It is represented by Q.

Temperature scale

- Celsius
- Fahrenheit
- kelvin

$$\frac{T_C}{5} = \frac{T_F - 32}{9} = \frac{T_K - 273}{5}$$



Units of heat

Calorie: one calorie is the quantity of heat energy required to raise the temperature of one gram of water through 1°C.

Bigger units : kilocalorie, kilo joule,

S.I. units : Joule

CGS units : ergs

1 calorie = 4.2 J

1J = 10^7 erg

1 kcal = 1000 cal

1 kJ = 1000 J

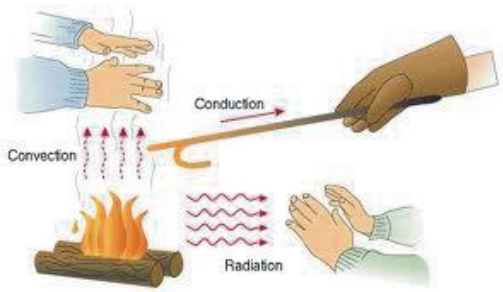
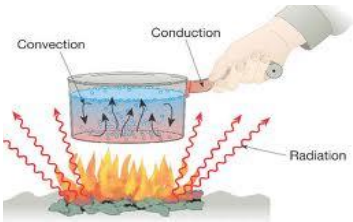
1 MJ = 10^6 J

Heat capacity

It is the amount of heat required to raise the temperature of body through 1 °C or 1 K.

Specific heat

The amount of heat required to raise the temperature of unit mass of substance through 1 °C or 1K.

Method of heat transfer

- Conduction: temperature difference should be there
- Convection: due to actual movement of particles
- Radiation: do not affect the medium