PAGE NO. :
DATE : / /

⇒ Heat exchange between hot object and a cold object :

1) Heat transfer :- The hot object loses heat energy, while the cold object gains heat energy.

2) Temperature Change - The temperature of the hot object decreases, and the temperature of cold object increases until both objects reach the same temperature

3) Principle of Heat Exchange - If the system is isolated (like inside a heat - resistant box shown in the diagram), not heat is lost to the environment, and the heat energy lost by the hot object is equal to heat energy gained by the cold object.

Formula :-

Heat energy lost by the hot object = Heat energy gained by the cold object.

This principle is important in real life application like calorimetry, thermal insulation and heat exchange.

SIGN. :

J.J.M.C.O.E.

PAGE NO. :
DATE : / /

⇒ The different ways of heat transfer are:

1) Conduction - Heat transfer through direct contact betⁿ particles without the movement of the substance itself. Example:- A metal rod gets heated when one end is placed in flame.

2) Convection - Heat transfer through the movement of fluids (liquids or gases) due to temprature differences. Example Water heating in a pot, where hot water rises and cold water sinks

3) Radiation - Heat transfer through electromagnetic waves without the need for a medium. Example:- The sun heating the earth.