

Question No. 1Chloro Fluoro-Carbon (CFC)

CFCs & hydrochlorofluorocarbons (HCFCs) are fully or partly halo-halogenated paraffin hydrocarbons that contain only carbon (C), hydrogen (H), chlorine (Cl) & fluorine (F). They produce as volatile derivatives of methane, ethane & propane. They are also commonly known by the Dupont brand name Freon.

The most common representative is dichlorodifluoromethane (R-12 or Freon-12). Many CFCs have been widely used as refrigerants, propellants (in aerosol applications) and solvents. Because CFCs contribute to ozone depletion in the upper atmosphere, the manufacture of such compounds has been phased out under the Montreal Protocol, & they are being replaced with other products such as hydrofluorocarbons (HFCs).

[1] Including R-410A & R134a [2][3]

① AIR (R-729)

Properties —

- ① No cost involved easily available
- ② Completely safe
- ③ Completely non-toxic

uses - It is used in aircraft refrigeration.

## ② Ammonia (R-717)

### Properties -

→ It is highly toxic, flammable, irritating & food destroying.

uses - It is widely used in large industrial & commercial reciprocating compression systems where high toxicity is secondary.

→ It is used as the refrigerant in absorption systems.