Section-3

A-2 **Ventilation:** a) ventilation may be defined as supply of fresh outside air into an enclosed space or the removal of inside air from the enclosed space.

b) ventilation may be acheived either by natural or by artificial (or mechanical) means.

factors:

1) **Air changes:**
The rate of air change will depend upon the volume of structure, type of activity in the premises, number of persons occupying the premises etc.

2) **Humidity:**
for working at a temperature of 21°C, a range of 30 to 70 percent of relative humidity is desirable.
The criteria of relative humidity of air also affect the ventilating system of the structure.

3) **Quality of Air:**
The purity of air plays an important role in the comfort of persons affected by ventilation system.
The air should be free from odour, organic matter etc.

4) Temperature :
The popular values of effective temperature in winter and summer are 20°C and 22°C respectively.

5) Use of Building :
The quantity of fresh air to be supplied to a room depends on the use of building and it is to be decided by taking into consideration various factors such as number of occupants, types of activity, period of working, age or occupant etc.

* Inlet opening in the building should be well distributed and should be located on the windward side at a low level and outlet opening should be located on the leeward side near the top, so that incoming air stream is passed over the occupants.

* Greatest flow of per unit area of opening is obtained by using inlet and outlet openings of nearly equal areas.

* When the wind direction is variable the opening may be arranged so that as far as possible there is approximately equal area on all sides.