FAQ's

1. **What are the objectives of fire safety design principles?**

   The objectives of fire safety design principles are, Life safety, Property protection, Continuity of operations, Environmental protection and Heritage conservation.

2. **What are passive and active fire protection systems?**

   Passive Fire Protection (PFP) is an integral component of structural fire protection and fire safety in a building. PFP attempts to contain fires or slow the spread, through use of fire-resistant walls, floors, and doors.

   Active Fire Protection (AFP) is an integral part of fire protection. AFP is characterized by items and/or systems, which require a certain amount of motion and response in order to work, contrary to passive fire protection.

3. **What are the general guidelines for arrangement of exits & Maximum Travel Distance in buildings?**

   - An exit may also include a horizontal exit leading to an adjoining building at the same level.
   - Lifts/Escalators are not considered as Exits.
   - All exits shall provide continuous means of egress to the exterior of a building or to an exterior open space leading to a street.
   - Exits shall be so arranged that they may be reached without passing through another occupied unit.
   - Every building meant for human occupancy shall be provided with exits sufficient to permit safe escape of occupants, in case of fire or other emergency.
   - The unit of exit width shall be minimum 500mm & 250mm as half-width for additional occupants.
   - Exit doorway width shall be min. 1000 mm. except assembly buildings where min. door width shall be 2000 mm. Doorways shall be not less than 2000 mm in height.

4. **What are the special considerations for Electrical and AC systems with respect to Fire Protection in a building?**
    - Transformer Room should be louvered, cross ventilated, if required mechanical and ventilation to be provided.
    - Bus bar should be installed in dedicated electrical room at every floor, generally required for high rise towers.
    - Electrical rooms should be provided with CO2 type extinguishers.
    - Wet services to be kept away from electrical service equipment.
    - Fire hazard from electrical system is generally due to short circuit or heating due to over loading.
    - Ducted system should be design in accordance with the fire compartments.
    - In case, ducts are crossing fire walls, gaps between wall and ducts to be filled with fire sealant.
    - Ducts for kitchen extract system must be fire rated and automatic fire dampers to be provided to stop fire and smoke propagation through ducts.
    - Air Handling system to be interfaced with Fire Alarm System, the same should be shut down during fire.
    - A dedicated shaft is required beside the staircase, for pressurization during fire, this is a requirement of protected enclosure.

5. **What are the general guidelines for egress design for Auditoriums?**
    - Every place of assembly, every tier or balcony and every individual room used as a place of assembly shall have exits sufficient to provide for the capacity thereof as determined in accordance with Part-4. Door width for assembly buildings shall not be less than 2000mm.
    - Every place of assembly of having theatrical or motion picture or any other stage having fixed seats for over 1000 persons, shall have at least four separate exits as remote from each other as practicable.
        - Three exits shall be required for over 600 persons
        - Two exits shall be provided as a minimum.

- For any place of assembly having theatrical or motion picture or any other stage, at least half the required means of exits shall lead directly outdoors or through exit ways completely separated from exits serving other parts of the building.
- Seats in places of public assembly, accommodating more than 300 persons, shall be securely fastened to the floor, except if permitted in NBC or by local fire authority.
- Clear aisles not less than 1.2min width shall be formed at right angles to the line of seating.
- No seat shall be more than seven seats away from an aisle.
- Aisles should directly meet the Exit Doors.
- In case, the above is not feasible, cross aisles should be provided for every 10 rows, parallel to the rows, directly meeting the Exit Doors.
- Cross aisles shall have no steps, slopes of 1 in 10 shall be provided to overcome level difference.