

## 2.4 IMPACT OF NOISE IN MULTI-STOREYED BUILDINGS

It is defined as the structure whose usage levels are regular in distribution and which correspond roughly to the required for human habitation. There are four main actions which causes impact of noise in multistoreyed buildings.

Impact of noise in multi-storeyed building

### 1. Speech privacy

### 2. Background noise (e.g fan, a.c, generator, printer)

### 3. Sound masking

### 4. Orientation of buildings

(i) **Speech privacy:** It is an issue in office building, including individual work space, inside conference halls and between offices. It mainly affects the quality of work in the adjacent office.

(ii) **Back ground noise:** It can adversely impact the work space too little background noise and speech privacy is reduced letting you to hear what is going on not only on work space but also away from that.

(iii) **Sound masking:** It can blend the building systems noise levels and exterior noise levels within electronic noise systems in the middle. Traditional sound masking systems are located in loud speakers above the ceiling.

(iv) **Orientation of building:** The noise impact may also be great for rooms perpendicular to road ways because

- (a) a noise pattern can be more annoying in perpendicular rooms.
- (b) windows on perpendicular walls do not reduce noise as effectively as those on parallel walls because at the angle of sound.

Apartment dwellers are often annoyed by noise in their homes, especially when the building is not well designed and constructed.

In this case, internal building noise from plumbing, boilers, generators, air conditioners and fans can be audible and annoying.

Improperly insulated walls and ceilings can reveal the sound of amplified music, voices, and noisy activities from neighbouring units.

External noise from emergency vehicles, traffic, refuse collection and other city noises can be a problem for urban residents, especially when windows are open or insufficiently glazed.

Even our classrooms or halls for indoor games are based on the principles stated above. The reverberation time is a key factor in designing a good acoustical structure. This knowledge is the backbone of civil engineering, structural and architectural engineering.

