GLOSSARY

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1. **Noise**

   Any sound that is unwanted, annoying or discordant, or that interferes with one's hearing of something.

2. **Sound**

   The sensation stimulated in the organs of hearing by mechanical radiant energy transmitted as longitudinal pressure waves through the air or other medium.

3. **Sound wave**

   A longitudinal pressure wave in air or an elastic medium, especially one producing an audible sensation.

4. **Frequency**

   The number of cycles per unit time of a wave or oscillation.

5. **Hertz (Hz)**

   The unit of frequency equal to one cycle per second.

6. **Decibel (dB)**

   A unit for expressing the relative pressure or intensity of sounds on a uniform scale from 0 for the least perceptible sound to about 130 for the average threshold of pain.

7. **Audio frequency**

   A range of frequencies from 15Hz to 20,000Hz audible to the normal human ear.

8. **Sound level meter**

   An electrical instrument for measuring sound pressure levels. To compensate for the way, we perceive the relative loudness of the different frequencies of sound, there are three networks – A, B and C. These networks weight the recordings for different frequencies and combine the results in a single reading. The A-network scale, in dBA units, is most commonly used since it discriminates against the lower frequencies, as does the human ear at moderate sound levels.

9. **Hearing**

   The sense by which sound is perceived, involving the entire mechanism of the internal, middle, and external ear and including the nervous and cerebral operations that translate the physical operations into meaningful signals.

10. Hearing loss

An increase in the threshold of audibility, at specific frequencies, caused by normal aging, disease or injury to the hearing organs.

11. Threshold of pain

The level of sound intensity high enough to produce the sensation of pain in the human ear, usually around 130dB.

12. Auditory fatigue

Physical or mental weariness caused by prolonged exposure to loud noise.

13. Acoustic

The branch of physics that deals with the production, control, transmission, reception, and effects of sound.

14. Room Acoustic

The qualities or characteristics of a room, auditorium, or concept hall that determine the audibility of speech or fidelity of musical sounds in it.

15. Acoustical treatment

The application of absorbent or reflecting materials to the walls, celling, and floor of an enclosed space to alter or improve its acoustic properties.

16. Attenuation

A decrease in energy or pressure per unit area of a sound wave, occurring as the distance from the source increases as a result of absorption, scattering or spreading in three dimensions.

17. Absorption

The interception and conversion of sound energy into heat or other form of energy by the structure of a material.

18. Absorption coefficient

A measure of the efficiency of a material in absorbing sound at a specified frequency, equal to the fractional part of the incident sound energy at the frequency absorbed by the material.

19. Noise reduction

The perceived difference in sound pressure levels between two enclosed spaces, due to the sound-isolating qualities of the separating barrier as well as the absorption present in the receiving room, it is expressed in decibels.

20. Noise reduction coefficient

A measure of the sound-absorbing efficiency of a material, equal to the average of the absorption coefficients of the material computed to the nearest 0.05 at four frequencies – 250, 500, 1000 and 2000Hz.

21. Sound absorption

It refers to the process by which a material, structure or object receives sound energy when sound waves are encountered, as opposed to reflecting the energy. Part of the absorbed sound energy is transformed into heat – it is said to have been lost and part is transmitted through the absorbing body.

22. Soundproofing

It is the means of reducing the sound pressure to a specified sound source and receiver. It can suppress unwanted indirect waves such as reflections that cause echoes and resonances that cause reverberation. Soundproofing reduce the transmission of unwanted direct sound waves from the source to an involuntary listener through the use of distance and intervening objects in the sound path.

23. Sound Insulation

The capacity of a structure to prevent sound from reaching a receiving location. Sound insulation measures the ability of building elements or structures to reduce sound transmission. Sound energy is not necessarily absorbed; impedance mismatch or reflection back toward the source is often the principle mechanism.