**Assignement-3**

1. If the intensity of a sound in air at 1 kHz is 10-10W/m2. Find out the value of root mean square pressure? Where density of air is ρ0 =1.21 kg/m3 and sound velocity is c=350 m/s
2. In an outdoor acoustic the ambient noise level is 70dB and a sound system generate SPL of 110dB at 4ft. How far the sound will travel before it submerged with noise.
3. If the input voltage of a loud speaker is raised by 30% how many dB will be increase the acoustic pressure. Let initial sound pressure level of the loud speaker is 6dB (Pref = 20μPa). If a person hard the sound 10 m apart from the loud speaker what will be the intensity of the sound. Where the specific acoustic impedance of the medium z = 400 RAYL.
4. Given a small source of spherical wave in air at a radial distance of 10 cm, compute the absolute magnitude of the specific acoustic impedance for 500Hz frequency at this location. Then density of air ρ0=1.21 kg/m3 and velocity of sound in air c = 340m/s.
5. An earth quake wave was traveling through the earth and the intensity detected 200 km from source was 8.0x 106 W/m2. What is the intensity [in dB] of the earth quake wave at a distance 600 km from the source?