Electroacoustics

Issues for the test No. 1

1. The construction and the functions of outer, middle and inner ear
2. The system of human speech production
3. Free and forced vibrations of the vibrating system of one degree of freedom. Displacement and velocity resonances
4. Vibrations of the system of multi degrees of freedom
5. Waves in a string. Free vibrations of strings
6. Vibrations of circular membranes
7. Acoustic wave: quantities, equation, speed of sound
8. Plane wave. Acoustic characteristic field resistance
9. Sound intensity and SPL
10. Attenuation of acoustic waves
11. Point source and pulsating sphere. Radiation impedance
12. Acoustic dipole and oscillating sphere. Directional characteristics and radiation impedance
13. Flat piston in infinite baffle. Nearfield. Directivity. Radiation impedance
14. Mutual radiation impedance
15. Acoustic field in rooms. Reverberation time
16. Absorbing materials and structures