**Government Engineering College, Bhuj**

**Semester-1 [Electrical,Mechanical,Civil]**

**Assignment-1 Engineering Physics**

**Ch-1 Architectural Acoustic**

1. Explain: Reverberation and Reverberation time.
2. Write the difference between Sound Intensity and Loudness.
3. Write short note on Coefficient of Absorption and explain its Unit.
4. Write Sabine’s Formula for reverberation time and explain the terms used in it and what are the limitations of Sabine’s Formula.
5. Explain how the reverberation time of a hall is affected by

(a) Size (b) Nature of its wall (c) Audience

1. List the factors affecting the Reverberation time of auditorium and explain.

**Ch-2 Ultrasonics**

1. Explain Magnetostriction Method for Production of Ultrasonic sound.
2. Explain Piezoelectric Method for Production of Ultrasonic sound.
3. How can be Ultrasonic waves Velocity determined using Acoustic diffraction method? Explain.
4. List the applications of Ultrasonic sound and explain any two.

**Ch-8 Super Conducting Materials**

1. Explain the phenomena of Superconductivity.
2. What is the physical significance of critical temperature, critical magnetic field and critical current density in superconductor?
3. What is relation between critical temperature and critical magnetic field? explain.
4. Explain the properties of superconductivity:

Isotope effect, Entropy, Heat Capacity, Persistent current, Flux Quantization

1. Write a short note:

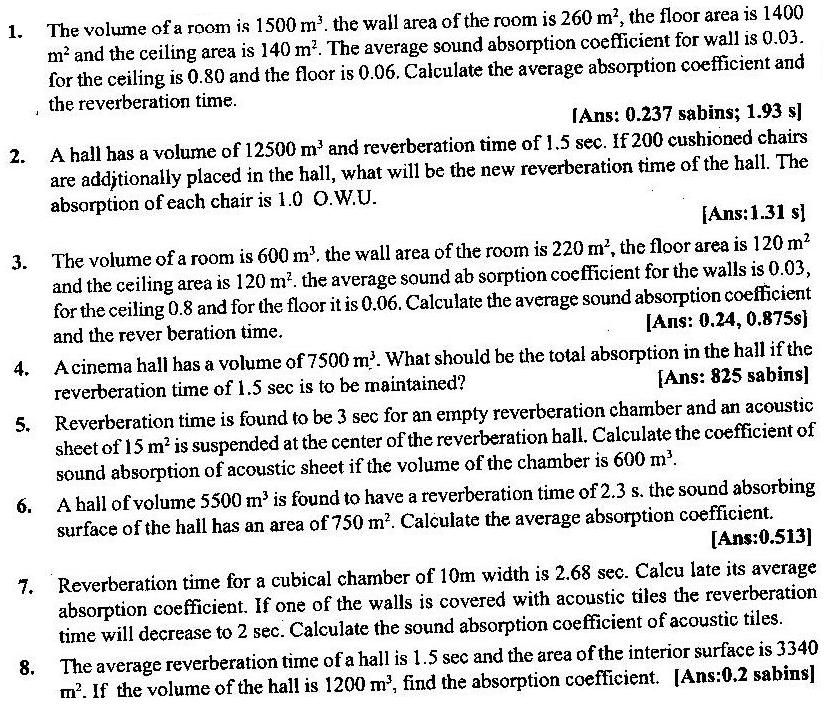
Meissner Effect, London Penetration Depth, Type-1 and Type-II superconductors

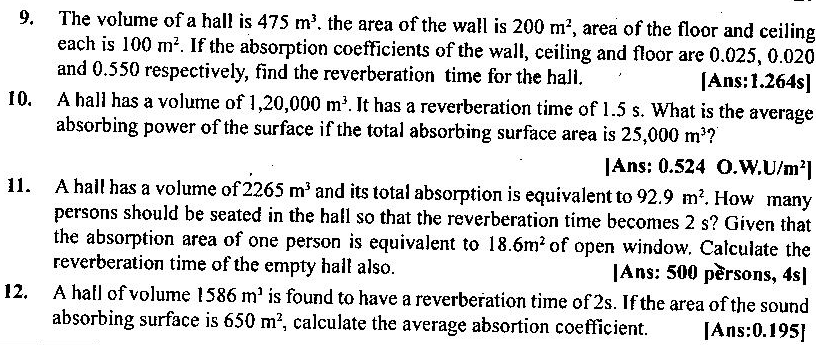
1. Explain BCS theory for superconductivity.
2. Distinguish between Type-1 and Type-II superconductors.
3. Explain ac and dc Josephson Effect.
4. Write a short note on applications of superconductivity:

Magnetic Levitation, SQUID, Properties of High Tc superconductors.

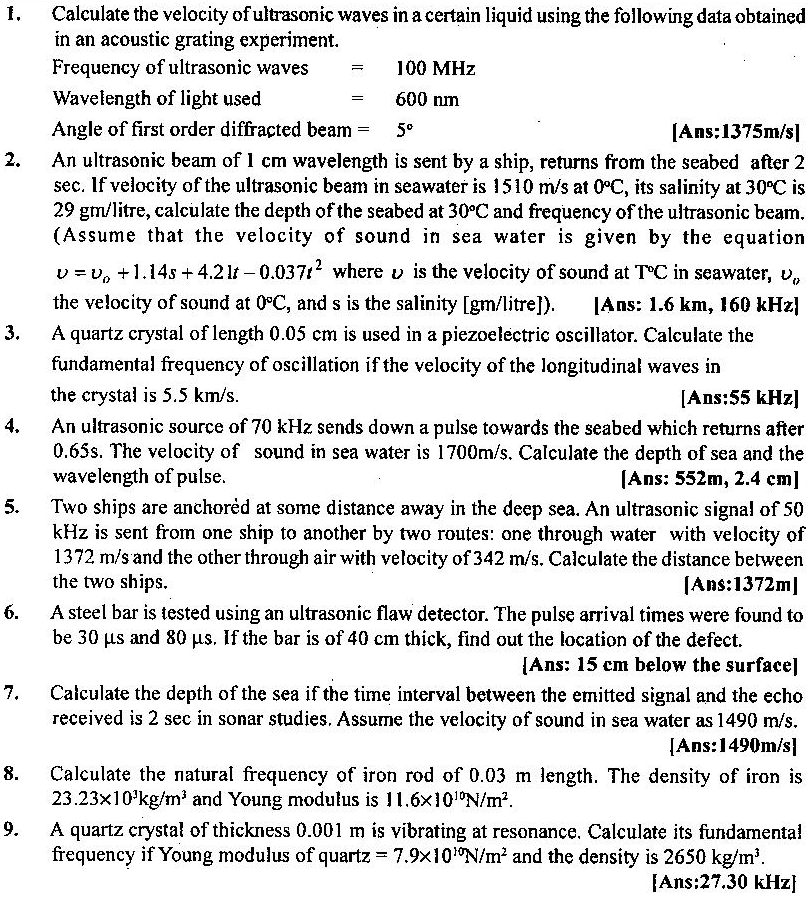
**Numerical**

**Ch-1 Architectural Acoustic**





**Ch-2 Ultrasonics**



**Ch-8 Super Conducting Materials**

