



B. Sc. (Physics) SEMESTER-III

Paper-I (Sound waves, Applied acoustic, Ultrasonic and Power supply)

Unit- I

Waves in media- Speed of transverse wave on a string, Group velocity and phase velocity

<https://www.youtube.com/watch?v=xN9XSUXe7Ws>

Harmonics, Quality of sound, Human ear and its response (Diagrammatic introduction only)

<https://youtu.be/4q1TyyWo4nI?si=GWFC8CmA9qys9igS>

Intensity and loudness loudness

https://www.youtube.com/watch?si=evGNZKwDsU_tLb6_&v=6kt0dYtdT9I&feature=youtu.be

Musical scale, Temperaments and musical instruments

http://youtu.be/qVcVyj3qz_k?si=G37kkLbFjvvFrIsq

Unit- II

Applied acoustic- Transducers and their characteristics (Crystal microphone)

<http://youtu.be/94NzKCse4N0?si=wpeKPN2luecwkkBB>

Recording and reproduction of sound (Magnetic tape, Cine film,)

<http://youtu.be/k-fbsqQquNA?si=0WKV5sZIK82QsSqG>

Requirements for good acoustics

https://youtu.be/kzQAcEYAI9Y?si=NpQoJI_JgYu-heMR

Factors affecting the acoustics of building

<http://youtu.be/davIeuH6yps?si=nDJDH9IIMMwbTWqK>

Unit- III

Ultrasonic- Introduction, Properties and production of ultrasonic waves

https://www.youtube.com/watch?v=gLyBqMDSD_c&list=PLQqqNcLnVUubTTxybh9Ve3zxoKDgDKuOMf&index=4

piezoelectric effect, piezoelectric generator

http://youtu.be/qM6mUdOtBsM?si=VhyntMNc_DXu3iHU

Frequency of ultrasonic waves

<https://youtu.be/aSk5lINlhjk?si=TWcqTaRiVUR-NkdW>

Application of ultrasonic waves (measurement of depth of sea, SONAR system and Medical science)

<https://www.youtube.com/watch?v=4SqioPyM44s>



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Unit- IV

Power supply-Introduction

<http://youtu.be/CktuRczI6xA?si=P9wJLbmmUGfMP0Cw>

rectification using half wave and full wave rectifiers (Find Id.c., Vd.c. Irms, η and ripple factor)

<https://youtu.be/yaUMBKjkOjg?si=1vHSbyE3zQ3YXmh->

Working of Full wave bridge rectifier,

<http://youtu.be/JG3asbRqHDs?si=4Rg14BKgxV8GbOfj>

Zener diode as voltage regulator

http://youtu.be/6dmfI_H5k7U?si=hORU2pauil_tYQHg