

PHYSICS

ASSIGNMENT

THEORY

QUESTIONS

(1a) Explain how sound is produced and transmitted.

(1b) State three characteristics of sound.

(2a) Distinguish between **pitch**, **loudness**, and **quality** of sound.

(2b) Explain how each characteristic relates to the waveform.

(3a) Describe an experiment to show that **sound cannot travel in a vacuum**.

(b) What conclusion

can be drawn from the experiment?

(4a) Define **ultrasonic waves** and **infrasonic waves**.

(b) State two uses of ultrasonic waves in medicine.

(4).A sound wave travels through air at 340 m/s.

(a) If its frequency is

170 Hz, find its wavelength.

(b) If the wavelength is doubled, what happens to the frequency?

(5a) What is echo sounding?

(b) Describe how it is used to measure the depth of the sea.

(6a) Explain what is meant by **resonance**.

(b) Give two examples of resonance in everyday life.

(7a) Describe how the human ear detects sound.

(b) List three ways of protecting the ear from noise pollution.

