S6 **PHYSICS EXERCISES 1**

1. **Multiple choice questions. Write the letter corresponding to the right answer.**
2. 1.The correct statement about sound waves is that they
3. A. are transverse waves
4. B. can be polarized
5. C. do not require medium

2. Sound travels in

1. Air.
2. Iron.
3. Water.
4. All of these.

3. Two man talk on moon

1. They hear each other with lower frequency
2. They hear each other with higher
3. They can hear each other as such frequency
4. They cannot hear each other at all

4. Do you expect an echo to return to you more quickly on a hot day or a cold day?

1. Hot day.
2. Cold day.
3. Same on both days.

5. A sound wave is different than a light wave in that a sound wave is:

1. produced by an oscillating object and a light wave is not.
2. not capable of traveling through a vacuum.
3. not capable of diffracting and a light wave is.
4. capable of existing with a variety of frequencies and a light wave has a single frequency.

1. **Structured questions**
2. Sound waves can propagate in air. The speed of the sound depends on temperature of the air; at 20 0*C* it is 340 *m* / *s* . What is the wavelength of a sound wave in air if the frequency is 262 Hz (the approximate frequency of middle C on a piano)?
3. Find the speed of sound in water, which has a bulk modulus of*B*=2.1×109*N*/*m*2at a temperature of 00C and density of *ρ* =1.00×103 *kg* / *m*3.
4. Find the speed of propagation of sound in steel. The Young’s modulus of steel is  and its density is .