1. Differentiate pitch, intensity and loudness.

- Pitch - determined by the frequency of vibration of the sound waves that produce them.
- Intensity - **the power carried by sound waves per unit area in a direction perpendicular to that area**.
- Loudness - This phenomenon of a sound depending on the amplitude of the sound wave. If the amplitude of the sound wave is large, then the sound is said to be loud. It is directly proportional to the square of the amplitude of vibration. If the amplitude of the sound wave becomes double, then the loudness of the sound will be quadrupled.

2. How is pitch and wavelength of soundwave related to each other?

- The higher the frequency and pitch of the sound, the shorter the wavelength. In other words, short waves are louder than long waves. Instead of measuring frequencies, musicians name the most frequently used pitches.

3. How loudness differs with the person?

- It is defined from the receiver's perspective, which means that a person's loudness is the amount of sound that person hears. It is related to the amplitude of the sound wave. The greater the amplitude, the greater the sound energy, and thus the greater the intensity.

4. As an ambulance approaches and passes you, how can you explain the sound it produced?

- When an ambulance goes by while sounding its siren, you can hear the siren's pitch change: while it is moving toward you, the siren sounds higher than when it is moving away from you. The Doppler effect is frequently physically demonstrated by this change.

5. Suggest ways on how to protect human ear from noise pollution

- If you are listening to a music using an earphone or headset keep it at low volume.
- Avoid loud, noisy activities, and places.

- Use hearing protection