



**SHEET NO (1)**

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**Q1- What does the term Acoustics refer to? State its different application.**

**Q2- What is sound? State its most common sources.**

**Q3- Define the terms, Sound Amplitude, Power, Intensity.**

**Q4- What are the difference between light wave and sound wave?**

**Q5- Why can a tremor of the ground from a distant explosion be felt before the sound of the explosion can be heard?**

**Q6- What is the frequency range of the following terms**

**a) Sound we hear.**

**b) Sound we can't hear: Ultrasound and Infrasound.**

**c) Sound of human voice: Speech and Singing.**

**Q7- The noise level measured at a particular location in a factory with a noisy machine operating nearby is 92 dB (A). When the machine is turned off, the noise level measured at the same location is 88 dB (A). What is the level due to the machine alone?**

**Q8- The sound power level of a certain jet plane flying at a height of 1km is 160 dB (re10-12W). Find the maximum sound pressure level on the ground directly below the flight path assuming that the aircraft radiates sound equally in all directions.**

**Q9- A car horn outdoors produces a sound intensity level of 90 dB at 10 m away. At this distance, what is the sound power in watt?**

**Q10- Choose the correct answer**

1-As a wave passes across a boundary into a new medium, which characteristic of the wave would change?

- a. The speed                      b. The frequency                      c. The wavelength

2- Many wave properties are dependent upon other wave properties. Yet, one wave property is independent of all other wave properties. Which one of the following properties of a wave is independent of all the others?

- a. wavelength                      b. frequency                      c. period                      d. velocity

3- If the distance between the listener and the source of the sound is doubled, the intensity is reduced to

- a.  $\frac{1}{2}$                       b.  $\frac{1}{3}$                       c.  $\frac{2}{3}$                       d.  $\frac{1}{4}$

4- What is the audio frequency range?

- a. 0 Hz to 4kHz      b. 0 Hz to 20 kHz      c. 300 Hz to 400 Hz      d. 1kHz to 20 kHz

5-The high loud voice takes more time from source to destination than the low loud voice

- a- True                      b. false

6- A sound intensity that could cause painful sensation in a human ear

- a. Threshold of sense      b. Threshold of pain      c. Hearing threshold      d. Sensation intensity

7- If the distance between the listener and the source of the sound is decreased to  $\frac{1}{2}$  original amount, the intensity of the sound would be

- a. 2 times as great      b. 3 times as great      c. 4 times as great      d. 5 times as great

9- What is the speech frequency range?

- a. 0 Hz to 4kHz      b. 0 Hz to 20 kHz      c. 300 Hz to 400 Hz      d. 1kHz to 20 kHz