



## Unit 8 - Week 7

### Course outline

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- Quiz : Week 7 Assignment
- Lecture 37: Considerations while selecting instruments for noise measurements
- Lecture 38: Measuring impedance through two microphone method
- Lecture 39: Designing an impedance measurement tube
- Lecture 40: Octave band analysis
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- Lecture 42: Weighting
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### Week 7 Assignment

The due date for submitting this assignment has passed. **Due on 2017-03-14, 23:59 IST**  
 As per our records you have not submitted this assignment.

1) Range of frequencies or wavelengths that can pass through a filter is called \_\_\_\_\_. **1 point**

- Passband
- Cut off frequency
- Stopband
- Baseband

**No, the answer is incorrect.**

**Score: 0**

**Accepted Answers:**

*Passband*

2) Which electrical cable is suitable to prevent data corruption caused due to electromagnetic induction? **1 point**

- Metallic wires.
- Insulated wires.
- Teflon wires.
- Shielded wires.

**No, the answer is incorrect.**

**Score: 0**

**Accepted Answers:**

*Shielded wires.*

3) In an impedance tube, the 'Two Microphone Method' may be used to measure: **1 point**

- Input signal to the loudspeaker.
- Sound pressure of incident sound wave.
- Reflection coefficient and impedance of material.
- Sound pressure of reflected sound wave.

**No, the answer is incorrect.**

**Score: 0**

**Accepted Answers:**

*Reflection coefficient and impedance of material.*

4) What is the correct relation between absorption coefficient ( $\alpha$ ) and reflection coefficient ( $R$ )? **1 point**

- $\alpha=1-|R|$
- $\alpha=1-|R|^2$
- $\alpha=1-|R|^3$
- $\alpha=1-|R|^{(1/2)}$

**No, the answer is incorrect.****Score: 0****Accepted Answers:**

$$\alpha = 1 - |R|^2$$

5) Sound energy is proportional to \_\_\_\_\_.

**1 point**

- sound pressure
- (sound pressure)<sup>2</sup>
- (sound pressure)<sup>3</sup>
- (sound pressure)<sup>1/2</sup>

**No, the answer is incorrect.****Score: 0****Accepted Answers:**

$$(\text{sound pressure})^2$$

6) The relation between Center frequency ( $f_c$ ), Upper frequency ( $f_u$ ) and lower frequency ( $f_L$ ) of an octave band is: **1 point**

- 
- $f_c = \frac{f_L + f_u}{2}$
- 
- $f_c = \frac{f_L f_u}{2}$
- 
- $f_c = \sqrt{f_L + f_u}$
- 
- $f_c = \sqrt{f_L f_u}$

**No, the answer is incorrect.****Score: 0****Accepted Answers:**

$$f_c = \sqrt{f_L f_u}$$

7) While reporting results for octave bands, the sound pressure in dB is reported for:

**1 point**

- The starting frequency of each octave band.
- The ending frequency of each octave band.
- The center frequency of each octave band.
- All frequencies present in the octave band.

**No, the answer is incorrect.****Score: 0****Accepted Answers:***All frequencies present in the octave band.*

8) Which one of the following band gives finer information about frequency components?

**1 point**

- Octave band.
- 1/3 Octave band.
- 1/10 Octave band.
- Decade band.

**No, the answer is incorrect.****Score: 0****Accepted Answers:***Decade band.*

9) Choose a statement which helps define the requirement for A- Weighting Schemes in the measurement of loudness?

1 point

- Human ears hear same sound level at different frequency with different loudness level.
- Human ears hear same sound level at different frequency with same loudness level.
- Human ears hear different sound level at same frequency with different loudness level.
- None of the options are correct.

**No, the answer is incorrect.**

**Score: 0**

**Accepted Answers:**

*Human ears hear same sound level at different frequency with different loudness level.*

10) What is meant by dB(A) ?

1 point

- Over all weighted sound pressure level.
- A-weighted sound pressure level.
- B-weighted sound pressure level.
- D-weighted sound pressure level.

**No, the answer is incorrect.**

**Score: 0**

**Accepted Answers:**

*A-weighted sound pressure level.*



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