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NPTEL

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Courses » Fundamentals of Acoustics

Announcements **Course** Forum Progress Mentor

# Unit 13 - Week 12: Miscellaneous topics and closure ✎

## Course outline

How to access the portal?

Week 01: Introduction and Terminology

Week 02: Concept Review

Week 03: Wave equation

Week 04: Transmission line equations

Week 05: 1-D Waves

Week 06: Power and spherical waves

Week 07: Spherical waves and interference

## Week 12 Assignment ✎

The due date for submitting this assignment has passed.

**Due on 2017-04-18, 23:59 IST.**

### Submitted assignment

- 1) From the following options choose a statement which outlines the requirement for weighting schemes in the measurements 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.
- 2) Integer rating used to define the quality of a building partition in attenuating airborne sounds is called \_\_\_\_\_. **1 point**
- NRC (Noise reduction coefficient).
  - STC (Sound Transmission Class).
  - SAA (Sound Absorption Average).
  - None of the above.
- 3) Which one of the octave band gives more finer information about frequency components? **1 point**
- Octave band.
  - 1/3 Octave band.
  - 1/10 Octave band.
  - 1/15 Octave band.
- 4) Reverberation Time ( $T_{rev}$ ) is the time required for a steady state sound signal to decay by \_\_\_\_\_ dB. **1 point**

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**Week 08:  
Directivity  
and mufflers**


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**Week 09:  
Sound in  
rooms**


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**Week 10:  
Reverb time  
and FFT**


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**Week 11:  
Weighting  
and loudness**


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**Week 12:  
Miscellaneous  
topics and  
closure**

- Lesson 1:  
Octave Band  
Analysis -  
Part I
- Lesson 2:  
Octave Band  
Analysis –  
Part II
- Lesson 3:  
Octave Band  
Analysis –  
Part III
- Lesson 4:  
Reverberation  
Time
- Lesson 5:  
Calculation  
of  
Reverberation  
Time and  
Sound  
Transmission  
Class (STC)
- Lesson 6:  
Noise  
Reduction  
Coefficient  
(NRC)
- Quiz : Week  
12  
Assignment
- Week 12

- 30
- 50
- 60
- 100

5) Dimension of an Anechoic Chamber/Room depends on:

**1 point**

- Frequency range of signals to be used.
- Size of the objects to be tested.
- Type of absorptive element used in Anechoic chamber/Room.
- All of the above.

6) Attenuation of sound waves due to thick walls made of high density material is called \_\_\_\_\_.

**1 point**

- volume attenuation.
- mass attenuation
- sound attenuation.
- wall attenuation.

7) Scalar representation of the amount of sound energy absorbed upon striking a particular surface is called \_\_\_\_\_.

**1 point**

- NRC (Noise reduction coefficient).
- STC (Sound Transmission Class).
- SAA (Sound Absorption Average).
- None of the above.

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



**1 point**

- sound pressure
- (sound pressure)<sup>2</sup>
- (sound pressure)<sup>3</sup>
- (sound pressure)<sup>4</sup>

Previous Page

End

assignment  
solution

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