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Unit 2 - Week 1

Week 1 Assignment

The due date for submitting this assignment has passed. Due on 2017-02-07, 23:59 IST.
As per our records you have not submitted this assignment.

1) Sound propagation from one point to other point is governed by _____? *1 point*

- Sabine's formula.
- Bernoulli's Equation.
- Pascal's Law.
- Wave equation.

No, the answer is incorrect.
Score: 0

Accepted Answers:
Wave equation.

2) Sound Pressure Level (SPL) is measured using which of the following instrument? *1 point*

- Loud speaker.
- Microphone.
- Pitot Tube.
- Accelerometer.

No, the answer is incorrect.
Score: 0

Accepted Answers:
Microphone.

3) Which of the following options characterizes a transverse wave? *1 point*

- Particle displacement is perpendicular to the direction of wave propagation.
- Particle displacement is parallel to the direction of wave propagation.
- Particle displacement is randomly oriented with respect to the direction of wave propagation.
- None of the options are correct.

No, the answer is incorrect.
Score: 0

Accepted Answers:
Particle displacement is perpendicular to the direction of wave propagation.

4) In air, sound propagates as _____. *1 point*

- Longitudinal wave.
- Transverse wave.
- Rayleigh wave.
- Electro magnetic wave.

No, the answer is incorrect.
Score: 0

Accepted Answers:
Longitudinal wave.

5) In acoustics, beats phenomena occurs when two sound waves of similar frequencies _____. ***1 point***

- Diffract.
- Refract.
- Interfere.
- Reflect.

No, the answer is incorrect.
Score: 0

Accepted Answers:
Interfere.

6) What is the value of auditory threshold pressure at 1 KHz? ***1 po***

- 200 mPa
- 20 MPa
- 20 Pa
- 20 μPa

No, the answer is incorrect.
Score: 0

Accepted Answers:
20 μPa

7) Which of the following is used to calculate sound pressure level in dB? ***1 point***

- Amplitude of pressure fluctuations produced due to pressure wave.
- Amplitude of total pressure produced due to pressure wave.
- RMS value of pressure fluctuations produced due to pressure wave.
- Peak value of pressure fluctuations produced due to pressure wave.

No, the answer is incorrect.
Score: 0

Accepted Answers:
RMS value of pressure fluctuations produced due to pressure wave.

8) Sound intensity may be defined as: ***1 point***

- Sound energy per unit area.
- Sound power per unit area.
- Sound energy flowing through a unit area that is perpendicular to the direction in which sound waves are travelling.
- Sound energy flowing per unit time through a unit area that is perpendicular to the direction in which sound waves are travelling.

No, the answer is incorrect.
Score: 0

Accepted Answers:
Sound energy flowing per unit time through a unit area that is perpendicular to the direction in which sound waves are travelling.

9) What is the value of reference pressure used in calculation of sound pressure level (Lp) in air? ***1 point***

- 2×10^{-5} Pa
- 2×10^{-6} Pa
- 2×10^{5} Pa
- 2×10^{6} Pa

No, the answer is incorrect.
Score: 0

Accepted Answers:

2 X 10 $^{-5}$ Pa

10) A pure tone contains how many frequency components? ***1 point***

- 1
- 2
- 3
- 4

No, the answer is incorrect.
Score: 0

Accepted Answers:
1

11) Which of the following frequency bands represents an octave? ***1 point***

- 50 to 100 Hz
- 50 to 500 Hz
- 50 to 400 Hz
- 50 to 58 Hz

No, the answer is incorrect.
Score: 0

Accepted Answers:
50 to 100 Hz

12) Which of the following options characterizes pink noise? ***1 point***

- Equal power with in a fixed bandwidth for any center frequency.
- Constant power spectral density.
- Power spectral density is inversely proportional to frequency.
- None of the options are correct.

No, the answer is incorrect.
Score: 0

Accepted Answers:
Power spectral density is inversely proportional to frequency.

13) Consider two uncorrelated sound sources present in a room. Which of the following options represents the right way to calculate the overall dB level inside the room? ***1 point***

- Directly add up individual sound pressure level in dB.
- Add up sound power produced by each source and then find the dB value corresponding to total power.
- Add up sound pressure produced by each source and then find the dB value corresponding to total pressure.
- None of the options are correct.

No, the answer is incorrect.
Score: 0

Accepted Answers:
Add up sound power produced by each source and then find the dB value corresponding to total power.

14) An increase in 20 dB of sound pressure level (Lp) corresponds to _____ increase in sound power. ***1 point***

- 100 times
- 20 times
- 40 times
- 200 *times*

No, the answer is incorrect.
Score: 0

Accepted Answers:
100 times

15) Sound pressure level heard by a listener when there is a wall between a source and the listener is 76 dB. If the wall attenuates sound by 10 dB, what is the actual sound level produced by the source? ***1 point***

- 43 dB
- 66 dB
- 86 dB
- 76 dB

No, the answer is incorrect.
Score: 0

Accepted Answers:
86 dB

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