Kingdom of Saudi Arabia
Ministry of Higher Education
University of Hail
Preparatory Year Deanship
Basic Science Department
Medical Physics

المملكة العربية السعودية
وزارة التعليم العالي
جامعة حائل
عمادة السنة التحضيرية
قسم العلوم الاساسية
الفيزياء الطبية

First semester 2017-2018
PHYS-121
Quiz (3)

Name: Sec:

ID:

1) Because of the Doppler effect sounds coming from a moving source
a) seem louder than if the source were not moving.
b) are of a higher frequency if the source is moving away from the observer.
c) have a lower frequency if the source is moving toward the observer.
d) have a higher frequency if the source is moving toward the observer.

2) The three lowest resonant frequencies of a system are 50 Hz, 150 Hz, and 250 Hz. The system could be
a) a tube of air closed at both ends.
b) a tube of air open at one end.
c) a tube of air open at both ends.
d) a vibrating string with fixed ends.

3) An open-end resonance tube sounds out a fifth harmonic at 1600 Hz. The frequency of the second harmonic is

a) 320 Hz
b) 533 Hz
c) 960 Hz
d) 640 Hz

4) What is the formula for density?
a) Force divided by area
b) Pressure divided by force
c) Mass divided by volume
d) Volume divided by force

5) 1 Pascal is equivalent to:

a) N/m
b) N.m
c) Nm^2
d) N/m^2

Question	1	2	3	4	5
Answer					

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1) The Doppler effect is produced if
   A. the source is in motion.
   B. the detector is in motion.
   C. a and b.
   D. none of the above.

2) In human speech: The vocal cord tension can be varied; hence,
   A. the frequencies of sound produced can be changed
   B. the wavelengths of sound produced can be varied
   C. both of (A) and (B) are true
   D. the intensity of sound produced can be changed

3) The SI unit of pressure is.....
   A. Pascal
   B. N/m
   C. N/m^3
   D. Both (A) and (C) are true

4) Pressure is equal to
   A. force divided by area.
   B. force times area.
   C. force times lever arm length.
   D. force plus area.

5) The three lowest resonant frequencies of a system are 50 Hz, 100 Hz
   A. a tube of air closed at both ends.
   B. a tube of air open at one end.
   C. a tube of air open at both ends.
   D. none of the above.

Question	1	2	3	4
Answer				

Q1) The Doppler effect is the change in observed frequency due to

a) both the motion of the source and the medium.
b) the medium through which the wave travels.
c) the motion of the source.
d) the type of wave

Q2) the intensity of sound wave is directly proportional to:

a) the square of the frequency.
b) the square of the wavelength.
c) the square of the amplitude.
d) the square of the period.

Q3) Normal atmospheric pressure measured at sea level measured in Pascal is

a) 100kPa
b) 1kPa
c) 10^5 N/m
d) a and c

Q4) In human speech: The vocal cord tension can be varied; hence,

a) the frequencies of sound produced can be changed
b) the wavelengths of sound produced can be varied
c) both of (A) and (B) are true
d) the intensity of sound produced can be changed

5) The three lowest resonant frequencies of a system are 50 Hz, 150 Hz, and 250 Hz. The system could be

a) a tube of air closed at both ends.
b) a tube of air open at one end.
c) a tube of air open at both ends.
d) none of the above.

Question	1	2	3	4	5
Answer					