



Grand Quiz Spring 2021

Subject Code PHY 101 lecture 1 to 22

Solved By Riz Mughal



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<https://www.facebook.com/groups/923887914750307>



<https://www.youtube.com/channel/UCINsFwDiB62SValCcPDZbRQ/playlists>

Dear Viewers:

I'm providing 100% correct quiz solution. You can visit my YouTube channel and get more information about all other subjects' quizzes and final year project (CS619).

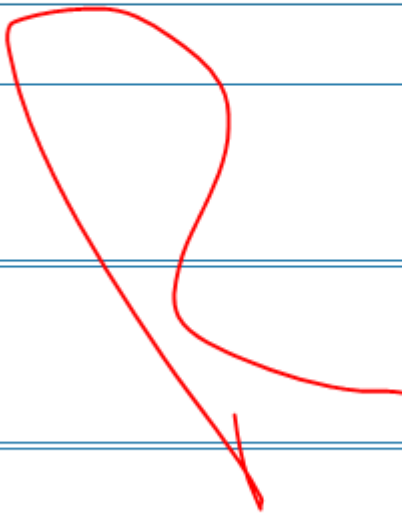
RIZ MUGHAL (SQA ENGINEER)

Question # 1 of 30 (Start time: 09:40:17 AM, 30 June 2021)

A fire whistle emits a tone of 170 Hz. Take the speed of sound in air to be 340m/s. The wavelength of this sound is about:

Select the correct option

<input checked="" type="radio"/>	2.0m
<input type="radio"/>	3.0m
<input type="radio"/>	0.5m
<input type="radio"/>	1.0m

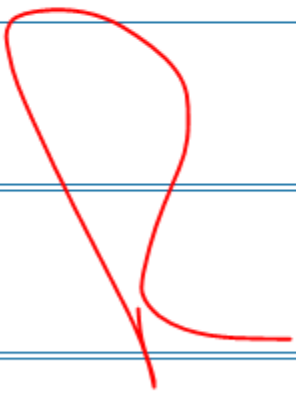


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Question # 2 of 30 (Start time: 09:40:36 AM, 30 June 2021)

The angular momentum L of a rigid body is given by:

Select the correct option

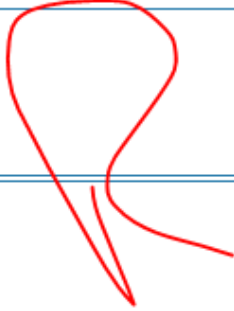
- | | |
|----------------------------------|-----------|
| <input checked="" type="radio"/> | $I\omega$ |
| <input type="radio"/> | $r\omega$ |
| <input type="radio"/> | mrl |
| <input type="radio"/> | mrw |
- 

Question # 3 of 30 (Start time: 09:40:53 AM, 30 June 2021)

Total Marks

A water bed that is 1.5 m wide and 2.5 m long weighs 1055 N. Assuming the entire lower surface of the bed is in contact with the floor, what is the pressure the bed exerts on the floor?

Select the correct option

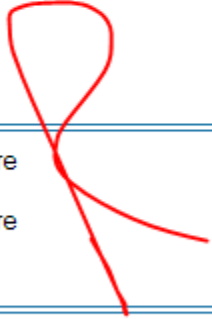
- | | |
|----------------------------------|--------|
| <input type="radio"/> | 270 Pa |
| <input type="radio"/> | 250 Pa |
| <input checked="" type="radio"/> | 280 Pa |
| <input type="radio"/> | 260 Pa |
- 

PHY101:Grand Quiz

Question # 4 of 30 (Start time: 09:41:08 AM, 30 June 2021)

A particle oscillating in simple harmonic motion is:

Select the correct option


- | | |
|----------------------------------|--|
| <input type="radio"/> | never in equilibrium because it is in motion |
| <input type="radio"/> | in equilibrium at the ends of its path because its velocity is zero there
in equilibrium at the ends of its path because its velocity is zero there |
| <input type="radio"/> | never in equilibrium because there is always a force |
| <input checked="" type="radio"/> | in equilibrium at the center of its path because the acceleration is zero there |
- 

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Question # 5 of 30 (Start time: 09:41:35 AM, 30 June 2021)

Young's modulus can be used to calculate the strain for a stress that is:

Select the correct option


- | | |
|----------------------------------|----------------------------------|
| <input checked="" type="radio"/> | well below the yield strength |
| <input type="radio"/> | well above the yield strength |
| <input type="radio"/> | just below the ultimate strength |
| <input type="radio"/> | just above the ultimate strength |
- 

Question # 6 of 30 (Start time: 09:41:49 AM, 30 June 2021)

Total Marks

A mosquito's buzz is often rated with a decibel rating of 40 dB. Normal conversation is often rated at 60 dB. How many times more intense is normal conversation compared to a mosquito's buzz?

Select the correct option

- | | |
|----------------------------------|-----|
| <input checked="" type="radio"/> | 100 |
| <input type="radio"/> | 20 |
| <input type="radio"/> | 400 |
| <input type="radio"/> | 2 |
- 

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Question # 7 of 30 (Start time: 09:42:03 AM, 30 June 2021)

Which of the following statement/s is / are true?

- i. The weight of a man on the Moon is smaller than that on the Earth.
- ii. The mass of a man is the same on both the Moon and the Earth.
- iii. We cannot determine our own mass in the outer space because there is no gravity.

Select the correct option

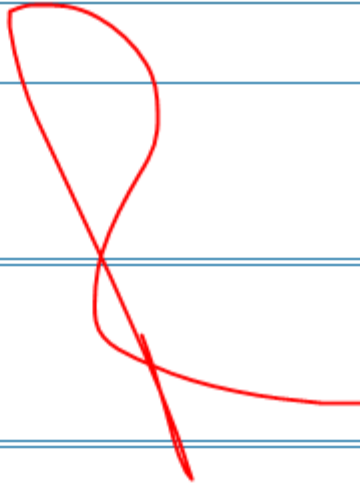
<input type="radio"/>	(i) only
<input checked="" type="radio"/>	(i) and (ii) only
<input type="radio"/>	(iii) only
<input type="radio"/>	(ii) and (iii) only



Question # 8 of 30 (Start time: 09:42:20 AM, 30 June 2021)

The angular momentum vector of Earth about its rotation axis, due to its daily rotation, is directed:

Select the correct option

- | | |
|----------------------------------|--|
| <input type="radio"/> | tangent to the equator toward the east |
| <input type="radio"/> | tangent to the equator toward the west |
| <input checked="" type="radio"/> | north |
| <input type="radio"/> | south |
- 


PHY101:Grand Quiz

Question # 9 of 30 (Start time: 09:42:36 AM, 30 June 2021)

When body moves with constant acceleration the velocity time graph is:

Select the correct option

<input type="radio"/>	Hyperbola
<input checked="" type="radio"/>	Straight line
<input type="radio"/>	Curve
<input type="radio"/>	Parabola



Question # 10 of 30 (Start time: 09:42:51 AM, 30 June 2021)

Total M

The persistence of audible sound due to the successive reflections from the surrounding objects even after the source has stopped to produce that sound is called

Select the correct option


- | | |
|----------------------------------|---------------|
| <input checked="" type="radio"/> | Reverberation |
| <input type="radio"/> | rarefaction |
| <input type="radio"/> | Reflection |
| <input type="radio"/> | Echo |

R

Question # 11 of 30 (Start time: 09:43:09 AM, 30 June 2021)

A vector A is added to a vector B. The resultant vector $A + B$ have greatest magnitude when:

Select the correct option

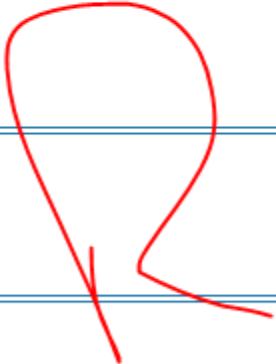
- | | |
|----------------------------------|--|
| <input type="radio"/> | The magnitude of vector $A + B$ does not depend on the directions of A and B |
| <input type="radio"/> | When vectors A and B are perpendicular |
| <input checked="" type="radio"/> | When vectors A and B are parallel and in the same direction |
| <input type="radio"/> | When vectors A and B are parallel and in the opposite direction |
- 

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Question # 12 of 30 (Start time: 09:43:24 AM, 30 June 2021)

The unit of intensity of sound is:

Select the correct option

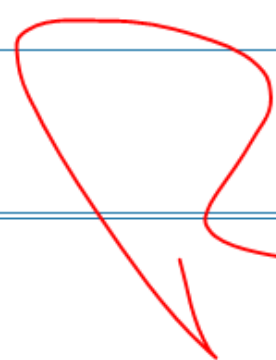
- | | |
|----------------------------------|---------|
| <input type="radio"/> | Candela |
| <input type="radio"/> | Decibel |
| <input checked="" type="radio"/> | Kelvin |
| <input type="radio"/> | Meter |
- 

Question # 13 of 30 (Start time: 09:43:38 AM, 30 June 2021)

Total Marks: 1

When number of bodies are such that they can exert force upon one another and no external agency exerts a force on them, they are said to form:

Select the correct option

- | | |
|----------------------------------|---------------------------------|
| <input type="radio"/> | Non-inertial frame of reference |
| <input type="radio"/> | Non isolated system |
| <input checked="" type="radio"/> | An isolated system |
| <input type="radio"/> | An inertial frame of reference |
- 

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Question # 14 of 30 (Start time: 09:43:54 AM, 30 June 2021)

Because a buoyant force acts in the opposite direction of gravity,

Select the correct option


- | | |
|----------------------------------|--|
| <input type="radio"/> | objects submerged in water have a net force larger than their weight. |
| <input checked="" type="radio"/> | objects submerged in water have a net force smaller than their weight. |
| <input type="radio"/> | objects submerged in water appear to weigh more than they do in air. |
| <input type="radio"/> | objects submerged in water have a net force equal to their weight. |

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Question # 15 of 30 (Start time: 09:44:08 AM, 30 June 2021)

If the mass of moving objects is doubled then its K.E becomes:

Select the correct option

- | | |
|----------------------------------|----------|
| <input type="radio"/> | 4 times |
| <input type="radio"/> | 5 times |
| <input type="radio"/> | 16 times |
| <input checked="" type="radio"/> | 2 times |
- 

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Question # 16 of 30 (Start time: 09:44:24 AM, 30 June 2021)

acceleration of an object must be zero at a point where:

Select the correct option

- | | |
|----------------------------------|---|
| <input type="radio"/> | the average velocity is zero |
| <input checked="" type="radio"/> | the instantaneous velocity is constant |
| <input type="radio"/> | the instantaneous velocity is not zero but changing |
| <input type="radio"/> | the instantaneous velocity is zero but changing |

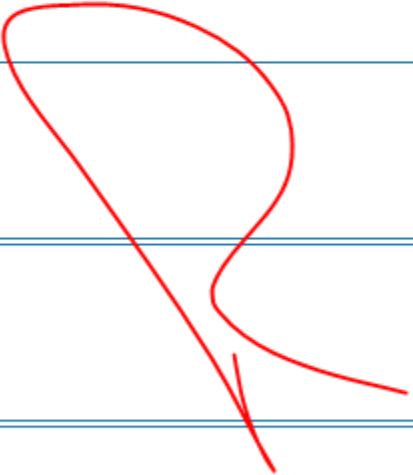
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Question # 17 of 30 (Start time: 09:44:41 AM, 30 June 2021)

back and forth in a leftward and rightward direction. This type of wave is known as a ____.

Select the correct option


<input type="radio"/>	Mechanical
<input checked="" type="radio"/>	Longitudinal
<input type="radio"/>	Transverse
<input type="radio"/>	Electromagnetic



Question # 18 of 30 (Start time: 09:45:10 AM, 30 June 2021)

Final take off velocity of an airplane is 67 m/s. The length of runway is 2 km, the constant acceleration is:

Select the correct option

- | | |
|----------------------------------|-----------------------|
| <input type="radio"/> | 2.24 ms ⁻¹ |
| <input checked="" type="radio"/> | 2.24 ms ⁻² |
| <input type="radio"/> | 3.24 ms ⁻² |
| <input type="radio"/> | 3.24 ms ⁻¹ |
- 

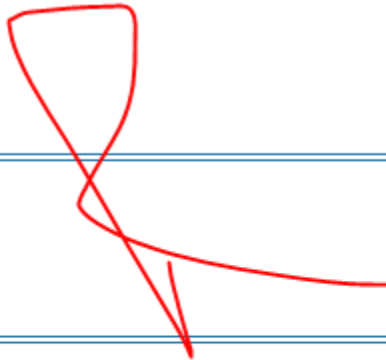
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Question # 19 of 30 (Start time: 09:45:27 AM, 30 June 2021)

The frequency which is not audible to the human ear is

Select the correct option

<input checked="" type="radio"/>	50000 Hz
<input type="radio"/>	500 Hz
<input type="radio"/>	50 Hz
<input type="radio"/>	5000 Hz




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Question # 20 of 30 (Start time: 09:45:47 AM, 30 June 2021)

The speed of sound in medium depends upon

Select the correct option


<input checked="" type="radio"/>	properties of the medium
<input type="radio"/>	amplitude
<input type="radio"/>	frequency
<input type="radio"/>	wavelength



Question # 21 of 30 (Start time: 09:46:02 AM, 30 June 2021)

If a body whose mass is much less than a body at rest collide with it elastically, then it bounces back with:

Select the correct option


- | | |
|----------------------------------|----------------------|
| <input type="radio"/> | Half of the velocity |
| <input type="radio"/> | Double velocity |
| <input type="radio"/> | None of these |
| <input checked="" type="radio"/> | Same velocity |
- 

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Question # 22 of 30 (Start time: 09:46:19 AM, 30 June 2021)

SI Unit of time period is _____.


Select the correct option

- | | |
|----------------------------------|------------|
| <input type="radio"/> | nanosecond |
| <input type="radio"/> | minute |
| <input type="radio"/> | hour |
| <input checked="" type="radio"/> | second |
- 

Question # 23 of 30 (Start time: 09:46:36 AM, 30 June 2021)

Which of the following is not a characteristic of mechanical waves?

Select the correct option

- | | |
|----------------------------------|--|
| <input checked="" type="radio"/> | They travel in a direction which is at right angles to the direction of the particles of the medium. |
| <input type="radio"/> | They transport energy. |
| <input type="radio"/> | They are created by a vibrating source. |
| <input type="radio"/> | They consist of disturbances or oscillations of a medium. |
- 


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Question # 24 of 30 (Start time: 09:46:51 AM, 30 June 2021)

As the wavelength of a wave in a uniform medium increases, its frequency will _____.

Select the correct option

<input type="radio"/>	Remain the same
<input type="radio"/>	None of these
<input type="radio"/>	Increase
<input checked="" type="radio"/>	Decrease



Question # 25 of 30 (Start time: 09:47:06 AM, 30 June 2021)

Which of the following has the smallest moment of inertia about the central axis if all have equal masses and radii?

Select the correct option

<input type="radio"/>	Ring
<input type="radio"/>	Disc
<input checked="" type="radio"/>	Sphere
<input type="radio"/>	Spherical shell

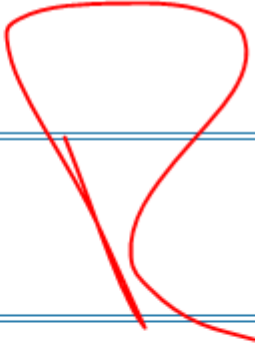
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Question # 26 of 30 (Start time: 09:47:22 AM, 30 June 2021)

Which of the following cases is/are NOT a uniformly accelerated motion?
i.A feather falls from a certain height inside a vacuum tube.
ii.A ball rolls along a frictionless plane at uniform speed.
iii.A coin falls from a certain height in air but air resistance is negligible.

Select the correct option

<input type="radio"/>	(i) and (ii) only
<input checked="" type="radio"/>	(ii) only
<input type="radio"/>	(ii) and (iii) only
<input type="radio"/>	(i) only

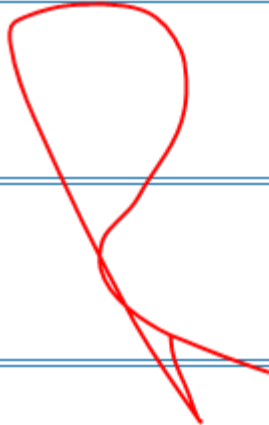


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Question # 27 of 30 (Start time: 09:47:38 AM, 30 June 2021)

Before the density of an object can be found, what two measurements are required?

Select the correct option

- | | |
|----------------------------------|------------------------|
| <input checked="" type="radio"/> | mass and volume |
| <input type="radio"/> | temperature and volume |
| <input type="radio"/> | mass and length |
| <input type="radio"/> | volume and length |
- 

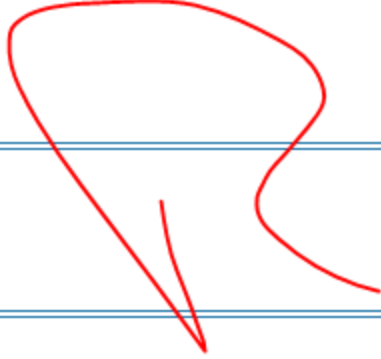
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Question # 28 of 30 (Start time: 09:47:51 AM, 30 June 2021)

Distance covered during one vibration of an oscillating body in terms of amplitude A:

Select the correct option

<input checked="" type="radio"/>	4A
<input type="radio"/>	2A
<input type="radio"/>	A/2
<input type="radio"/>	A



Question # 29 of 30 (Start time: 09:48:06 AM, 30 June 2021)

If the distance between all pairs of particles of the body do not change by applying a force then the body is said to be

Select the correct option

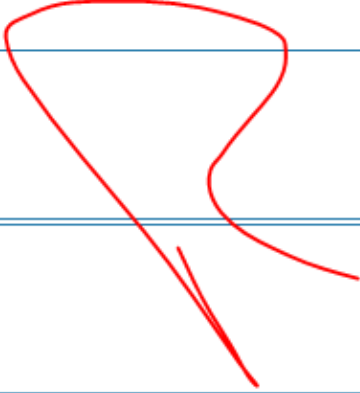
<input type="radio"/>	large
<input type="radio"/>	flexible
<input checked="" type="radio"/>	rigid
<input type="radio"/>	small

Question # 30 of 30 (Start time: 09:48:21 AM, 30 June 2021)

Total

Two sound waves are traveling through a container of unknown gas. Wave A has a wavelength of 1.2 m. Wave B has a wavelength of 3.6 m. The frequency of wave B must be _____ the frequency of wave A.

Select the correct option

- | | |
|----------------------------------|-------------------------|
| <input type="radio"/> | Three times larger than |
| <input type="radio"/> | The same as |
| <input checked="" type="radio"/> | One-third |
| <input type="radio"/> | One-ninth |
- 



Thank you for watching

Please share it with your friends 😊

RIZ MUGHAL (SQA ENGINEER)

