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vulms.vu.edu.pk/Quiz/QuizQuestion.aspx?ver=4733b959-ae56-44eb-9119-cc50f64889b3

MTH622 - Vectors and Classical Mechanics (Quiz No.3) **Quiz Start Time: 02:59 PM, 07 September 2022**

Question # 1 of 5 (Start time: 02:59:21 PM, 07 September 2022) **Total Marks:** 1

Three particles of masses m, $2m$ and $3m$ are held in a rigid light framework at points $(0, 1, 1)$, $(1, 0, 1)$ and $(1, 1, 0)$, respectively. Find I_{xx}

Select the correct option

Reload Math Equations

- 8m
- 7m

Click to Save Answer & Move to Next Question

WORK.100%

2:59 PM
9/7/2022

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vulms.vu.edu.pk/Quiz/QuizQuestion.aspx?ver=7869381d-0b23-4e9e-965b-24dea7d7a469

Question # 2 of 5 (Start time: 02:59:53 PM, 07 September 2022) **Total Marks:**

The moment of inertia of a rigid body about a given axis is equal to the same about a parallel axis through the centroid plus the moment of inertia due to the total mass placed at the centroid.

Select the correct option

- ○ false
- ◉ true

Click to Save Answer & Move to Next Question

3:01 PM
9/7/2022

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MTH622 - Vectors and Classical Mechanics (Quiz No.3) **Quiz Start Time: 02:59 PM, 07 September 2022**

Question # 5 of 5 (Start time: 03:02:56 PM, 07 September 2022) **Total Marks:** 1

The M.I. of a uniform elliptical lamina with semi major axes and semi minor axes respectively about respective axes (x, y, z-axis) using _____ axis theorem.

Select the correct option

Reload Math Equations

- parallel
- perpendicular

WORK.100%

Click to Save Answer & Move to Next Question

3:03 PM
9/7/2022

Question # 1 of 10 (Start time: 02:48:12 PM, 24 July 2023) **Total Marks: 1**

If the moment of inertia of the centroid

I_0

is 3 and moment of inertia of the system with respect to a parallel axis

I'

is 5 the the total moment of inertia will be _____.

Select the correct option

Reload Math Equations

○	8
○	2
○	15
○	3/2

Click to Save Answer & Move to Next Question

Question # 2 of 10 (Start time: 02:49:35 PM, 24 July 2023) **Total Marks:**

Moment of inertia of a hemisphere is _____ the moment of inertia of a full sphere.

Select the correct option

Reload Math Equations

- ○ double
- ◉ half

Question # 3 of 10 (Start time: 02:50:48 PM, 24 July 2023) Total Marks:

Let 5kg be the mass and 0.1m be the radius of a solid sphere. Its moment of inertia about the diameter will be ____kgm^2.

Select the correct option

Reload Math Equations

- 0.10
- 0.01
- 0.02
- 0.05

Click to Save Answer & Move to Next Question

Question # 4 of 10 (Start time: 02:51:12 PM, 24 July 2023) Total Marks:

The moment of inertia matrix for a solid_____ of mass M and side a , rotating about a corner.

Select the correct option

Reload Math Equations

- sphere
- cone
- cylinder
- cube

Click to Save Answer & Move to Next Question

Question # 5 of 10 (Start time: 02:52:05 PM, 24 July 2023) Total Marks

Three particles of masses m, $2m$ and $3m$ are held in a rigid light framework at points $(0, 1, 1)$, $(1, 0, 1)$ and $(1, 1, 0)$, respectively. Find I_{zz}

Find Izz.

Select the correct option

Reload Math Equations

- 9m
- 8m

Click to Save Answer & Move to Next Question

If the total moment of inertia

I

is 10 and moment of inertia of the system with respect to a parallel axis I'

is 5 then the moment of inertia of centroid I_0

will be _____.

Select the correct option

Reload Math Equations

- 50
- 5
- 2
- 15

Question # 8 of 10 (Start time: 02:52:53 PM, 24 July 2023) Total Marks:

The mass of the circular disc of density ρ and radius r is

Select the correct option

Reload Math Equations

- $2\pi\rho r$
- $\pi\rho r^2$

Click to Save Answer & Move to Next Question

Question # 7 of 10 (Start time: 02:52:43 PM, 24 July 2023) Total Marks:

Three particles of masses m, $2m$ and $3m$ are held in a rigid light framework at points $(0, 1, 1)$, $(1, 0, 1)$ and $(1, 1, 0)$, respectively. Find I_{yy}

Find I_{yy}

Select the correct option

Reload Math Equations

- 8m
- 7m

Click to Save Answer & Move to Next Question

Question # 9 of 10 (Start time: 02:54:10 PM, 24 July 2023) Total Marks:

The mass of a cylindrical shell of density ρ, height h thickness dr and radius r is

Select the correct option

Reload Math Equations

- $2\pi\rho dr h$
- $\pi r^2 \rho dr h$

Click to Save Answer & Move to Next Question

Question # 10 of 10 (Start time: 02:54:41 PM, 24 July 2023) Total Marks:

The moment of inertia of a rigid body about a given axis is equal to the same about a parallel axis through the centroid plus the moment of inertia due to the total mass placed at the centroid.

Select the correct option

○	false
◉	true

Question # 5 of 10 (Start time: 10:12:12 AM, 24 July 2023) Total Marks: 1

For uniform solid sphere

Select the correct option

Reload Math Equations

- $I_{xx} + I_{yy} + I_{zz} = 0$
- $I_{xx} = I_{yy} = I_{zz}$

Question # 7 of 10 (Start time: 10:12:24 AM, 24 July 2023) **Total Marks:** 1

The moment of inertia of a ring of mass 1kg and radius 0.9m about an axis passing through its center will be _____kgm^2.

Select the correct option

Reload Math Equations

- (●) 0.18
- ( ) 1.8
- ( ) 0.81
- 0.45

Question # 5 of 10 (Start time: 03:30:44 AM, 25 January 2023) Total M

In general when a body rotates about fixed point, the angular velocity and the angular momentum vector abou fixed point are in the same direction.

Select the correct option

Reload Math Equa

- False
- True

Sa

Question # 3 of 5 (Start time: 11:08:22 AM, 03 March 2022)

The Moment of inertia of a hollow sphere having mass M and radius a is given by

Select the correct option

- $I = \frac{1}{2}Ma^2$
- $I = Ma^2$
- $I = \frac{2}{5}Ma^2$
- $I = \frac{2}{3}Ma^2$ ✓

Question # 5 of 10 (Start time: 03:02:20 PM, 23 February 2021)

The Moment of inertia of a solid sphere having mass M and radius a is given by

Select the correct option

O	$I = Ma^2$
O	$I = \frac{1}{2}Ma^2$
O	$I = \frac{2}{5}Ma^2$

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Question # 1 of 10 (Start time: 02:57:34 PM, 23 February 2021)

The Moment of inertia of a hollow cylindrical shell having mass M and radius a is given by

Select the correct option

- $I = Ma^2$
- $I = \frac{1}{2}Ma^2$
- $I = \frac{2}{5}Ma^2$
- $I = \frac{2}{3}Ma^2$