Circular Motion

Spoken Tutorial Project
https://spoken-tutorial.org
National Mission on Education through ICT
http://sakshat.ac.in

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10 October 2019

Learning Objectives

- **Change the position, velocity, acceleration and force with time**

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System Requirements

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- **Ubuntu Linux OS v 16.04**

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- **Firefox Web Browser v 62.0.3**

- **Learner should be familiar with Apps on Physics**

Pre-requisites

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- **For the pre-requisite tutorials please visit this site https://spoken-tutorial.org**

Uniform Circular Motion

- It is a motion of an object on a circular path with a constant speed

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- Ex: Moon, revolves around the earth in uniform circular motion

https://www.walter-fendt.de/html5/phen/

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Apps on Physics

- **Uniform Circular Motion**

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- **Model of a Carousel**

- Consider the white point as a toy car of mass 1 kg that moves on a circular track of radius 8.00 m in 10.0 seconds
- Calculate the centripetal acceleration of the car

Assignment

- **A particle of mass 0.2 kg moves on a circle of radius 2 m in a time period of 10 s**
- **Find the angular velocity**

- **A toy car of mass 2 kg moves on a circle of radius 10 m**
- **In a time period of 10 s**
- **Find the values of angular velocity and centripetal force**

Numerical

- The toy horse suspended to a carousel has a mass of 1.5 kg
- It moves on a circular base with a period of 4 s
- If its distance between the suspension and axis of rotation is 1 m
- Calculate centripetal force

Assignment

Assignment

- **The toy horse suspended to a carousel has a mass of 5 kg, it moves on a circular base with a period of 3 s**

- **If its distance between the suspension and axis of rotation is 0.5 m**

- **Calculate angular velocity, angular acceleration & centripetal force**

Summary

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- **Changed the position, velocity, acceleration and force with time**
- **Calculated angular velocity and angular acceleration**
- **Calculated centripetal force**

Acknowledgement

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- **These Apps were created by Walter-fendt and his team**

About the Spoken Tutorial Project

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Spoken Tutorial Workshops

Spoken Tutorial Workshops

The Spoken Tutorial Project Team

- **Conducts workshops using spoken tutorials**
- **Gives certificates to those who pass an online test**
- **For more details, please write to contact@spoken-tutorial.org**

Forum for specific questions

- **Questions in THIS Spoken Tutorial?**
- **Visit https://forums.spoken-tutorial.org**
- **Choose the minute and second where you have the question**
- **Explain your question briefly**
- **The Spoken Tutorial project will ensure an answer**

You will have to register to ask questions

Acknowledgement

Spoken Tutorial project is supported by

- **National Mission on Education through ICT (NMEICT)**
- **Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMTT)**

MHRD, Government of India