

## **Chapters/ Sections will be Covered**

Book: Fundamentals of Physics by David Halliday, Jearl Walker, and Robert Resnick

Chapter Title: Rotation

Sections: Rotational Variables

Rotation with Constant Angular Acceleration

Relating the Linear and Angular Variables

---

## Sample Quiz Question

If there is no angular acceleration, what is linear acceleration?

- a) Maximum
- b) Minimum
- c) Zero
- d) Unit measure

An engineer calculates constant linear speed for a rotational motion. What is the angular speed of that motion?

- a) Minimum
- b) Null
- c) Maximum
- d) Constant

## Sample Quiz Question

What is a characteristic of a rigid body?

- a) Particles inside can move
- b) Particles can move but remain in the body
- c) Particles remain in place and do not move
- d) Particles show rotational motion

If angular velocity increases what happens to linear acceleration?

- a) Increases linearly
- b) Decreases exponentially
- c) Decreases linearly
- d) Increases square-root factor

## Sample Quiz Question

A disc is rotating with a uniform angular acceleration. Which of the following statements is true?

- a) Angular acceleration is zero
- b) Angular displacement is constant
- c) Angular velocity is constant
- d) Angular velocity increases linearly with time

Which of the following conditions must be satisfied for rotational motion?

- a) No linear motion
- b) No angular motion
- c) Linear velocity =  $\omega r$
- d) Centripetal acc.  $a_c = \alpha$

## Sample Quiz Question

Which of the following is a pure number?

- a) Arc length
- b) Radius
- c) Angular position
- d) Angular velocity

In rotational motion, which of the following units is used to measure an angle?

- a) Degree
- b) Radian measure
- c) Radian
- d) Arc length

## Probable Final Questions: Lecture 15

Given arc length  $s$  for a rotating body, show how angular velocity and acceleration depend on the rotation radius  $r$ .