

Study Guide (Midterm III)

1 Potential energy and energy conservation.

Potential energies (gravitational potential energy, potential energy of springs and Hook's law)

Conservative and non-conservative forces

Conservation of mechanical energy

2. Collisions: Elastic and inelastic collision.

Application and extremes in solving for elastic collision and complete inelastic collision.

3. Rotational motion :

a. What is the difference of translation and rotation?

b. Physical quantities in rotation: angular quantities, torques, rotational Energy, angular momentum and their conservation.

c. Vector algebra (cross product)