

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

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

Chapter Title: Potential Energy and Conservation of Energy

Sections: Work Done on a System by an External Force  
Conservation of Energy

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## **Probable Mid-term Questions: Lecture 11**

Distinguish the conservation of energy for an open and isolated system.

### **Class Activity: Math Problem #1**

In a dart gun, a spring with  $k = 400.0 \text{ N/m}$  is compressed  $8.0 \text{ cm}$  when the dart (mass  $m = 20.0 \text{ g}$ ) is loaded. What is the muzzle speed of the dart when the spring is released? (Ignore friction).

## **Mid-term Exam Preparation**

**Syllabus:** L1-L11

Check: 'Probable Mid-term Questions', In-Class Math Exercise, & Practice Problems

### **Diagram:**

If a diagram is required, you must draw one.

### **Mathematical Problem:**

- 1) Unit
- 2) Correct answer
- 3) Multiple mathematical steps missing

### **Others:**

Formula Tips

Calculator/ Pencil/ Pen