In-class Quizzes Class 23

Correction to Quiz from last day:

Quiz from last class (botched explanation):

The nucleus with the most tightly bound nucleons is

A. Hydrogen
B. Iron
C. Lead
D. Uranium
E. Plutonium

Definition: A nucleon is either a proton or a neutron. Highest binding energy corresponds to most stable nucleus...
Quiz 1 was a race of two soup cans rolling down an incline. Which can will reach the bottom first?
A. Cream of mushroom soup.
B. Beef Broth.
C. They will both reach the end at the same time.

Correct answer: B. As explained in notes, beef broth does not need to use energy to rotate along with can, so more energy is available for linear speed.
What is the weight of a 3 kg rock?

A. 3 kg
B. 3 N
C. 3 pounds
D. 30 N
E. 30 pounds
The weight of an object

A. has the same magnitude as its mass.
B. is the force of gravity on the object.
C. has the same magnitude as its inertia.
D. has the same magnitude as the normal force supporting the object.
E. is the number of particles in the object

Class Vote:
The apparent weight of an object

A. has the same magnitude as its mass.
B. is the force of gravity on the object.
C. has the same magnitude as its inertia.
D. has the same magnitude as the normal force supporting the object.
E. is the number of particles in the object.

Class Vote:
A metal fan with horizontal blades turns when it is held above a burning candle. The fan won’t work when you remove the candle and put it inside a hot, dark oven at the same temperature as the air above the candle. Its inability to use the oven’s heat to turn is explained by the fact that

A. the candles produced burned gases while the oven contains only hot air.
B. the candle’s heat is ordered, while the heat in the oven is completely disordered.
C. the candle flames emit light, while the oven is dark.
D. both a hot region and a cold region are needed in order to convert heat into work.

Class vote:
After running a plastic comb through your hair several times, you hold it near a metal can, which is lying on its side on a table. The can rolls toward the comb because the can becomes:

A. magnetic.
B. electrically charged.
C. conducting.
D. electrically polarized.

Class vote: