**Energy Review Problems**

1. A 6.0 kg shell is shot from a cannon to a height of 45 m and at an initial speed of 20 m/s. What is its speed when it is at a height of 15 m?

1. What is the mass of an object that creates 33,750 joules of energy by traveling at 30m/sec?
2. Missy, the former platform diver for the Ringling Brother's Circus, had a kinetic energy of 12000 J just prior to hitting the bucket of water. If Missy's mass is 40 kg, then what is her speed?
3. An object has a kinetic energy of 25 J and a mass of 34 kg , how fast is the object moving?
4. A baseball starts from rest and is dropped from the top of the stadium and hits the ground moving with a speed of 35 m/s and what was the height of the building.
5. An owl has a mass of 4.00 kg. It dives to catch a mouse, losing 800 J of its PE. What was the starting height of the owl, in meters?

Answer: 1)24.4 m/s 2)75 kg 3)24.5 m/s 4)1.2 m/s 5)62.5m 6) 20.4m