PHYS1303 READING QUIZ 15

8.1.1. Which one of the following choices is not a kind of potential energy?
   a) elastic
   b) gravitational
   c) kinetic
   d) all of these are potential energies

8.2.1. What is the relationship between the gravitational potential energy of an object and the work done on the object by the gravitational force?
   a) The work is equal to the gravitational potential energy.
   b) The negative of the work is equal to the change in the gravitational potential energy.
   c) The negative of the work is equal to the square of the gravitational potential energy.
   d) The work is equal to the square of the gravitational potential energy.
   e) The work is equal to one-half of the gravitational potential energy.

8.2.2. Complete the following statement: A force that acts on an object moving between two points is said to be conservative if
   a) the work it does on the object is equal to the increase in the object's kinetic energy
   b) the work it does on the object is independent of the path between the points.
   c) it always acts in the direction of motion of the object.
   d) it results in a change in the object's kinetic energy.
   e) it obeys Newton's laws of motion.

8.3.2. A ball is constrained to follow a circular path by a conservative force. Which one of the following statements concerning the net work done during one complete revolution is true?
   a) The net work depends only on the time period.
   b) The net work depends only on the velocity of the ball.
   c) The net work depends only on the radius of the circle.
   d) The net work is equal to zero joules.
   e) The net work is greater than zero joules.

8.4.1. In which one of the following situations is there a decrease in gravitational potential energy?
   a) A large boulder rests at the bottom of a steep hill.
   b) A helicopter takes off from the roof of a hospital and flies due west.
   c) A child accidentally releases a helium-filled balloon and it flies upward into the clouds.
   d) A girl jumps down from a bed and lands on her feet.
   e) A truck drives at an average velocity of 25 m/s, due north along a level, country road.