

Quiz 2
PSC1341

Match the letter with the correct definition with the terms below:

- 1) Friction _____
- 2) Acceleration due to gravity (on Earth) _____
- 3) Centripetal force _____
- 4) Work _____
- 5) Energy _____
- 6) Kinetic energy _____
- 7) Potential energy _____

- a) 9.8 m/sec^2
- b) Force times Distance
- c) the ability to do work
- d) the inward pull exerted on an object that is moving in a circular path.
- e) the force that resists relative motion between two bodies in contact.
- f) the energy of motion
- g) stored energy

8) A stone is dropped from the top of a building and strikes the ground 5.47 seconds later. How high is the building in meters? (Show your work.)

9) A man throws a baseball straight up in the air at 19.6 m/s. How many seconds does it take to reach the top? (Show your work.)

10) The SI unit of work is the

- a) joule
- b) watt
- c) calorie
- d) Newton

11) Which of the following pair of physical quantities have the same units?

- a) work and force
- b) momentum and force
- c) work and energy
- d) force and impulse

12) Steve weighs 80.7 kg. How much kinetic energy does Steve have running at 4.00 m/s?

13) An Electronic lift can raise a 424 kg mass a distance of 10.0 m in 6.00 seconds. What was the work done by the lift?
(Show all work. Use the factor label method. Write your answer with the correct significant figures and with the correct units.)

14) Based on the previous question, what was the power of the lift?
(Show all work. Use the factor label method. Write your answer with the correct significant figures and with the correct units.)