



## Chapter Review

# Work and Energy

## Part A. Vocabulary Review

**Directions:** Match the description in the first column with the term in the second column by writing the correct letter in the space provided.

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| _____ 1. total amount of kinetic and potential energy in a system | <b>a.</b> energy                         |
| _____ 2. the ability to cause change                              | <b>b.</b> work                           |
| _____ 3. stored energy due to position                            | <b>c.</b> kinetic energy                 |
| _____ 4. energy in the form of motion                             | <b>d.</b> law of conservation of energy  |
| _____ 5. Energy cannot be created or destroyed                    | <b>e.</b> gravitational potential energy |
| _____ 6. does work with only one movement of the machine          | <b>f.</b> mechanical energy              |
| _____ 7. energy stored in chemical bonds                          | <b>g.</b> potential energy               |
| _____ 8. ratio of output work to input work                       | <b>h.</b> simple machine                 |
| _____ 9. energy stored by things that are above earth             | <b>i.</b> efficiency                     |
| _____ 10. SI unit of energy                                       | <b>j.</b> chemical potential energy      |
| _____ 11. force applied through a distance                        | <b>k.</b> joule                          |

## Part B. Concept Review

**Directions:** Complete the following sentences using the correct terms.

- \_\_\_\_\_ 1. The amount of kinetic energy a moving object has depends on its mass and its \_\_\_\_\_.
- \_\_\_\_\_ 2. The potential energy of an object depends on its \_\_\_\_\_.
- \_\_\_\_\_ 3. The energy stored in foods and fuels is \_\_\_\_\_ potential energy.
- \_\_\_\_\_ 4. The law of \_\_\_\_\_ states that energy cannot be created or destroyed.
- \_\_\_\_\_ 5. A compound machine is a combination of two or more \_\_\_\_\_.
- \_\_\_\_\_ 6. The number of times a machine multiplies the effort force is the \_\_\_\_\_ of the machine.
- \_\_\_\_\_ 7. You convert kinetic energy into thermal energy when you rub two sticks together because of \_\_\_\_\_.

**Chapter Review (continued)**

- \_\_\_\_\_ 8. The total energy of a system remains \_\_\_\_.
- \_\_\_\_\_ 9. Screws and wedges are modified \_\_\_\_\_.
- \_\_\_\_\_ 10. A car engine changes chemical potential energy into the \_\_\_\_\_ energy of the moving car.
11. Use the equation  $KE = \frac{1}{2} m \times v^2$  to calculate the kinetic energy of a 100 kg cart moving at a speed of 7 m/s?

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12. Use the equation  $GPE = m \times 9.8 \text{ m/s}^2 \times h$  to calculate the gravitational potential of a 10-kg sack of groceries on a shelf 1 m above the floor?

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