

Law of Conservation of Energy Quiz PDF

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In a closed system, the total energy is:

- Constant
- Increasing
- Decreasing
- Unpredictable

The energy stored in the bonds of molecules is known as:

- Kinetic Energy
- Thermal Energy
- Chemical Energy
- Electrical Energy

What happens to energy when it is "lost" in a system?

- It disappears completely.
- It is transformed into another form, often heat.
- It becomes potential energy.
- It is converted into mass.

In which scenarios is energy conserved? (Select all that apply)

- A pendulum swinging in a vacuum
- A car braking to a stop
- A closed circuit with a resistor
- A perpetual motion machine

What factors can affect the efficiency of energy conversion? (Select all that apply)

- Friction
- Air resistance

- Temperature
- Mass of the system

Which of the following systems can be considered closed systems? (Select all that apply)

- A sealed thermos bottle
- An open pot of boiling water
- A battery-operated flashlight
- A solar panel exposed to sunlight

How does the concept of energy efficiency relate to the Law of Conservation of Energy?

Describe a real-world example where energy is transformed from chemical energy to mechanical energy.

Why are perpetual motion machines considered impossible according to the Law of Conservation of Energy?

Discuss the implications of the Law of Conservation of Energy for renewable energy technologies.

Explain how the Law of Conservation of Energy applies to a roller coaster ride.

Which of the following is NOT a form of energy?

- Mechanical
- Thermal
- Gravitational
- Mass

The First Law of Thermodynamics is another name for:

- The Law of Conservation of Mass
- The Law of Conservation of Energy
- The Law of Inertia
- The Law of Gravity

Which type of energy is associated with motion?

- Chemical Energy
- Thermal Energy
- Kinetic Energy
- Potential Energy

What does the Law of Conservation of Energy state?

- Energy can be created and destroyed.
- Energy can only be transformed from one form to another.
- Energy is always increasing in a system.
- Energy is always decreasing in a system.

Which of the following statements about energy are true? (Select all that apply)

- Energy can be transformed into mass.
- Energy transformations are always 100% efficient.
- Energy can be stored and transferred.
- Energy can exist in different forms.

Provide an example of a closed system and explain how energy is conserved within it.**Which of the following is an example of potential energy?**

- A moving car
- A stretched rubber band
- Flowin water
- A spinning top

Which of the following are examples of energy transformation? (Select all that apply)

- A battery powering a flashlight
- A book sitting on a shelf
- A wind turbine generating electricity
- A car engine running

Which types of energy are involved when a ball is thrown upwards? (Select all that apply)

- Kinetic Energy
- Potential Energy
- Thermal Energy
- Chemical Energy