

**1. What is meant by efficient use of energy?**

**Solution:**

It means to reduce the cost and amount of energy used to provide us the various products and services.

**2. State two ways to save the energy.**

**Solution:**

The two ways to save energy are as follows:

- It is possible to maintain a comfortable temperature inside by properly insulating a home, which reduces the cost of heating devices in winter and cooling devices in summer
- Replacing traditional incandescent bulbs with fluorescent and LED lights or natural skylight can reduce the amount of energy required to attain the same level of illumination.

**3. How does proper insulation of home save energy?**

**Solution:**

It is possible to maintain a comfortable temperature inside by properly insulating a home. It will reduce the cost of heating devices in winter and cooling devices in summer.

**4. Which of the following device is most efficient for lighting purpose:  
LED, CFL, Fluorescent tube light, Electric bulb.**

**Solution:**

For lighting purpose, LED or light emitting diode is the most efficient.

**5. Give an example to explain that the use of modern eco-friendly technologies is more efficient and less polluting.**

**Solution:**

Modern eco-friendly technologies are most efficient and less polluting. Modern energy efficient appliances such as refrigerators, ovens, freezers, dishwashers etc. make use of significantly less energy than the older appliances. They are star rated in accordance to their efficient use of electricity. The more the star rating, higher is the efficiency.

**6. Describe three ways for the efficient use of energy.**

**Solution:**

Listed below are three ways for the efficient use of energy:

- Use of LED lights or fluorescent lights or natural skylight instead of traditional incandescent light bulbs will reduce the amount of energy required to attain the same level of illumination
- Usage of compact fluorescent lights (CFL) saves 67% energy which may last 6-10 times longer than the incandescent lights
- By reducing the weight of vehicles, fuel efficiency in vehicles can be increased with the use of advanced tyres and computer controlled engines.

**Selina Solutions For Class 9 Physics**  
**Chapter 9 – Current Electricity**

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**7. What social initiatives must be taken for the sensitive use of energy?**

**Solution:**

Listed below are the social initiatives that must be taken:

- Community involvement will be effective in reducing the misuse of electricity
- Non-government organizations (NGO's) can be used to create social awareness of the sensitive use of resources.
- Public awareness can be improved through mass-media and children's participation in campaigns and eco-club activities.

**Multiple choice type:**

**1. The most non-polluting and efficient lighting device is:**

- (a) CFL
- (b) LED
- (c) Fluorescent light
- (d) Electric bulb

**Solution:**

- (a) LED

Light emitting diode or LED bulbs drastically reduces the consumption of energy.

**2. IEA is the short form of:**

- (a) Indian Energy Association
- (b) Indian Eco Academy
- (c) International Energy Agency
- (d) International Eco Academy

**Solution:**

- (c) International Energy Agency

As per the agency, the improved energy efficiency in buildings, industries and transportation could reduce the world's energy need in 2050 by one-third and thus it can help to control global emission of greenhouse gases.