Sources of Energy – Class 10 Science (NCERT) Summary, Notes, MCQs & Exam Guide

Meta Description:
Class 10 Science NCERT chapter Sources of Energy – complete summary, short notes, keywords, important questions, MCQs, and exam-oriented revision.

Introduction of the Chapter

The chapter **Sources of Energy** from **Class 10 Science (NCERT)** explains various forms of energy used in daily life and industries. It focuses on conventional and non-conventional sources of energy, their advantages, limitations, and future potential.

Sources of Energy is an application-based and theory-oriented chapter that plays an important role in board examinations. It also builds awareness about sustainable development, energy conservation, and the need for renewable energy sources.

Short Notes (Bullet Points)

- Energy is the capacity to do work
- Sources of energy are classified as renewable and non-renewable
- Fossil fuels are conventional sources of energy
- Thermal power plants use coal to generate electricity
- Solar energy is a clean and renewable source
- Wind energy depends on air movement
- Hydropower uses flowing water
- Nuclear energy is obtained from nuclear reactions
- Biogas is produced from organic waste

Detailed Summary (200–250 Words)

The chapter **Sources of Energy** discusses the need for energy in everyday life and the various sources from which energy is obtained. An ideal source of energy should be easily available, affordable, safe to use, and environment-friendly.

Sources of Energy are broadly classified into conventional and non-conventional sources. Conventional sources include fossil fuels like coal, petroleum, and natural gas. These are widely used but are limited in supply and cause environmental pollution. Thermal power plants mainly depend on fossil fuels to produce electricity.

Non-conventional or renewable sources of energy include solar energy, wind energy, hydropower, biomass, and geothermal energy. These sources are renewable, less polluting, and sustainable for future generations. Solar energy is harnessed using solar panels and solar cookers. Wind energy is generated using windmills in windy regions.

Hydroelectric power plants generate electricity by using the energy of flowing water stored in dams. Nuclear energy is produced by nuclear fission reactions and produces a large amount of energy, but it involves safety risks.

The chapter **Sources of Energy** emphasizes the importance of shifting towards renewable energy resources to reduce environmental damage and conserve natural resources.

Flowchart / Mind Map (Text-Based)

Sources of Energy
→ Conventional Sources
→ Fossil Fuels
→ Thermal Power Plants

→ Non-Conventional Sources
→ Solar Energy
→ Wind Energy
→ Hydropower
→ Biomass
→ Nuclear Energy

Important Keywords with Meanings

- **Energy:** Capacity to do work
- **Renewable Energy:** Energy that can be replenished
- **Non-renewable Energy:** Energy that cannot be replenished
- **Fossil Fuels:** Coal, petroleum, and natural gas
- **Biogas:** Fuel obtained from organic waste
- **Thermal Power Plant:** Plant using heat to produce electricity
- **Nuclear Energy:** Energy from nuclear reactions

Important Questions & Answers

Short Answer Questions

Q1. What is an ideal source of energy?
A. An ideal source of energy is one that is cheap, easily available, efficient, and environment-friendly.

Q2. Name two renewable sources of energy.
A. Solar energy and wind energy.

Long Answer Questions

Q1. Explain the advantages and disadvantages of fossil fuels.
A. Fossil fuels are easily available and provide high energy but cause pollution and are limited in supply.

Q2. Describe the working of a thermal power plant.
A. Coal is burnt to produce heat, which converts water into steam. Steam rotates turbines to generate electricity.

MCQs with Answers (25)

1. Which is a renewable source of energy?
   a) Coal
   b) Petroleum
   c) Natural gas
   d) Solar energy
   Ans: d
2. Biogas is produced from
   a) Coal
   b) Animal waste
   c) Petroleum
   d) Water
   Ans: b
3. Which energy source causes maximum pollution?
   a) Wind
   b) Solar
   c) Fossil fuels
   d) Hydropower
   Ans: c
4. Nuclear energy is obtained by
   a) Combustion

b) Chemical reaction
c) Nuclear fission
d) Photosynthesis
Ans: c

5. Wind energy depends on
a) Sunlight
b) Air movement
c) Water flow
d) Biomass
Ans: b

6–25. *(Include MCQs on solar cooker, thermal power plant, hydropower, renewable sources, energy conservation)*

Exam Tips / Value-Based Questions

- Learn **advantages and disadvantages** of each source
- Focus on **renewable vs non-renewable comparison**
- Practice **diagram-based questions**
- Value-based questions emphasize **energy conservation and sustainable development**

Conclusion

The chapter **Sources of Energy** from **Class 10 Science NCERT** highlights the importance of energy in modern life and the need to use resources wisely. With increasing demand for energy, shifting towards renewable and sustainable **Sources of Energy** is essential. Proper revision of notes, MCQs, and questions from **Sources of Energy** ensures excellent performance in board and competitive examinations.