

Chapter 14 – Sources of Energy (30 Important Q&A)

Basics

Q1. What is a good source of energy?

Ans: One which is cheap, easily available, does not cause pollution, produces large energy per unit mass, and is easy to store/transport.

Q2. Name the types of sources of energy.

Ans: Renewable and non-renewable.

Q3. Define renewable sources.

Ans: Sources that can be replenished naturally, e.g., solar, wind, water, biomass.

Q4. Define non-renewable sources.

Ans: Sources that are exhaustible and cannot be replenished quickly, e.g., coal, petroleum.

Q5. Example of non-renewable source:

Ans: Coal, petroleum, natural gas.

Conventional Sources

Q6. What is fossil fuel?

Ans: Fuel formed from decomposition of dead plants/animals over millions of years, e.g., coal, petroleum.

Q7. Why is burning fossil fuels harmful?

Ans: Causes air pollution, greenhouse effect, acid rain.

Q8. What is thermal power plant?

Ans: Plant that produces electricity by burning coal or oil to generate steam.

Q9. Disadvantage of thermal power plant:

Ans: Air pollution, deforestation, greenhouse gas emission.

Q10. What is hydro power plant?

Ans: Plant that uses water stored at height to produce electricity.

Improved Sources

Q11. Advantages of hydropower:

Ans: Renewable, pollution-free, low running cost.

Q12. Disadvantages of hydropower:

Ans: Flooding, displacement of people, loss of biodiversity.

Q13. What is biomass?

Ans: Plant and animal waste material used as fuel.

Q14. Example of biomass fuel:

Ans: Cow dung cake, wood, biogas.

Q15. What is biogas?

Ans: Mixture of methane, CO₂, hydrogen, produced by anaerobic decomposition of biomass.

Alternative Sources

Q16. What is wind energy?

Ans: Energy obtained from kinetic energy of wind using wind turbines.

Q17. Main problem of wind energy:

Ans: Needs steady wind speed, large area, high cost.

Q18. What is solar energy?

Ans: Energy from the Sun, harnessed using solar cells, solar heaters, solar cookers.

Q19. Advantage of solar energy:

Ans: Renewable, pollution-free, available everywhere.

Q20. Disadvantage of solar energy:

Ans: Expensive setup, works only in daytime, depends on weather.

Advanced Sources

Q21. What is tidal energy?

Ans: Energy from rise and fall of sea water levels due to tides.

Q22. Geothermal energy is obtained from:

Ans: Heat stored inside Earth.

Q23. Advantage of geothermal energy:

Ans: Renewable, pollution-free.

Q24. Nuclear energy comes from:

Ans: Fission of uranium or plutonium atoms.

Q25. Advantage of nuclear energy:

Ans: High energy per unit mass, no greenhouse gas emission.

Disadvantages & Comparison

Q26. Disadvantage of nuclear energy:

Ans: Radioactive waste, risk of accidents, high setup cost.

Q27. Renewable vs non-renewable sources:

Ans: Renewable are inexhaustible (solar, wind, water); non-renewable are limited (coal, oil).

Q28. Example of eco-friendly energy sources:

Ans: Solar, wind, hydropower, biogas.

Q29. Why is energy conservation important?

Ans: To reduce pollution, save resources, ensure sustainability.

Q30. Which is the ultimate source of energy on Earth?

Ans: The Sun.
