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SUBJECT:- PHYSICS

CLASS:- XTH

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CHAPTER 3. SOURCES OF ENERGY(NCERT QUESTIONS & ANSWERS)

4. Compare and contrast fossil fuels and the Sun as direct sources of energy.

Ans.

Sun	Fossil fuels
1. It is renewable source of energy.	It is non-renewable source of energy.
2. It does not cause pollution.	It causes pollution in the environment.
3. It is cheap, easily available for most of the time and at most of the places.	It is expensive, not easily available ai1y time and anywhere.

5. Compare and contrast bio-mass and hydro electricity as sources of energy.

Ans.

Bio-mass as Energy Source	Hydro electricity as Energy Source
1. It causes pollution.	It does not cause pollution.
2. It is cheap and easily available.	It is expensive and not easily available.
3. Initial cost for building the bio-gas plant is very cheap and its maintenance is also cheap.	The initial cost of building the power plant is expensive, its maintenance is also expensive.

6. What are the limitations of extracting energy from:

- (a) the wind? (b) waves? (c) tides?

Ans. (a) The Wind

(i) It can be extracted only at limited sites where the wind blows most of the time in a year.

(ii) The minimum speed of wind should be 15 km/h.

(iii) Large area is required to build the wind farm/wind mills which is expensive affair.

(iv) Efficiency, is low.

(b) Waves

(i) The place and time is limited when the waves are strong.

(ii) Initial setup cost is expensive.

(iii) Efficiency is low.

(c) Tides

(i) The areas where tidal energy can be harnessed is less.

(ii) The efficiency is very low.

(iii) The plants are not cost effective.

7. On what basis would you classify energy sources as

(a) renewable and non-renewable?

(b) exhaustible and inexhaustible?

Ans. Both (a) and (b) options are same:

Renewable/Inexhaustible	Non-renewable/Exhaustible
1. They are also called inexhaustible	They are also called as exhaustible
2. The energy source that will not finish and can be renewed or made again and again is called renewable source of energy e.g., sun, wind, water.	The energy source that will finish and will get exhausted and cannot be made very soon or takes million of years for its formation e.g., fossil fuels-petrol, coal