

**Class-VII**

**Geography, Chapter:-7**

**Book Work**

**A. Choose the correct answers:-**

1. India is the ..... largest producer of hydroelectric power in the world.  
c. seventh
2. Which of the following is not an example of a biomass energy source?  
c. wind
3. ....was formed from the remains of swamp vegetation.  
b. coal
4. Which of these are non-renewable energy sources?  
a. petroleum
5. Non-renewable energy sources constitute..... per cent of the fuel use.  
b. 80

**B. State whether the following sentences are true or false:-**

1. There is the same amount of energy today as when the world began. **(False)**
2. Bhakra Namgal is the smallest dam in India. **(False)**
3. Bio energy improves quality and water retention capacity of the soil. **(True)**
4. Wind energy is available at all times. **(True)**
5. Tidal energy is an indirect form of solar energy. **(False)**

**C. Fill in the blanks:-**

1. **Non-renewable** sources of energy, which once used up, cannot be replenished for millions of years.
2. Hirakud Dam is built across the **Mahanadi** river.
3. **Solar** energy is obtained from sunlight.
4. Natural Gas is also used as a fuel for **heating, cooking and electricity generation.**

5. Coal, oil and natural gas are the most common sources.

**D. Answer the following in 1-2 sentences:-**

1. Give few examples of primary and secondary energy sources.

Ans.1 Primary energy sources:-Wind, water, wood coal etc.

Secondary energy sources:-Electricity, gas etc.

2. What are non-renewable sources of energy? Give examples.

Ans.2 Non-renewable sources of energy, which once used up, cannot be replenished for millions of years. Example:-Coal and petroleum.

3. Define renewable energy. Give examples.

Ans.3 Energy collected from resources which are naturally replenished such as sunlight, wind, rain and geothermal heat are called renewable energy.

4. Name some of the cleaner and more sustainable methods of electrical power.

Ans.4 Some of the cleaner of the cleaner, more sustainable methods of electrical power are biomass, solar, wind, tidal and hydrothermal power.

5. What do you mean by the term 'conservation'?

Ans.5 Conservation is the process of reducing demand on a limited supply of energy and enabling that supply to begin to rebuild itself.

**E. Answer the following in 3-4 sentences:-**

1. What is the primary objective of energy conservation?

Ans.1 The primary objective of energy conservation is to reduce demand by efficient utilisation of resources, protect and replenish supplies, and use alternative energy sources and to clean up the damage from the prior energy processes.

2. What is the need for exploring alternative sources of energy?

Ans.2 We need to conserve energy and power sources for exploring alternative sources of energy.

3. Which source of energy would you use for heating your food and why?

Ans.3 Natural gas we use for heating our food because by this we have the ability to closely control the temperature of our stovetop with a simple turn of a knob.

4. What is wind power? Mention some of its uses.

Ans.4 Wind power describes the process by which the wind is used to generate mechanical power and transform to electricity. Wind power captures the natural wind in our atmosphere and converts it into energy.

5. Write a short note on tidal power.

Ans.5 Tidal power is considered to be a potential source of renewable energy because tides are steady and predictable. Tidal energy is a form of hydropower that converts the energy of the tides into electricity or other useful forms of power.

**F. Answer the following in 8-10 sentences:-**

1. What are the most commonly used sources of power? Discuss each one of them briefly.

Ans.1 The commonly used sources of power are coal, petroleum and natural gas.

i. Coal:-Coal is the largest source of energy for the generation of electricity worldwide. Coal was formed from the remains of swamp vegetation. The pressure of rocks deposited on top converted it into a solid state. Water and gases were driven out of the vegetation compacted. What remained was mainly carbon.

ii. Petroleum:-Petroleum or crude oil is a non-renewable fuel that is naturally found in liquid form. It is recovered by oil drilling and then processed to make liquid petroleum products like gasoline, diesel fuel and heating oil.

iii. Natural Gas:-Natural gas is a fossil fuel used for heating, cooking and electricity generation. It is also used as fuel for vehicles and as a raw material in the manufacture of plastic and other commercially important organic chemicals.

2. Solar energy has been used by humans for a long time for uses such as heating, cooking food, removing salt from seawater and drying clothes. How has it emerged as an alternative source of energy?

Ans.2 Solar power is one of the most popular and faster-growing sources of alternative energy. Solar energy is a renewable free source of energy that is sustainable and totally inexhaustible, unlike fossil fuels that are finite. It is also a non-polluting source of energy and it does not emit any greenhouse gases when producing electricity. Using solar power means reducing your energy bills and saving money.

3. Make a list of the advantages of renewable sources of energy.

Ans.3 Some benefits of Renewable Energy are:-

i. Environmental and economic benefits of using renewable energy include.

ii. Generating energy that produces no greenhouse gas emissions from fossil fuels and reduces some types of air pollution.

iii. Diversifying energy supply and reducing dependence on imported fuels.

4. How is the increasing demand for energy affecting our environment adversely?

Ans.4 The increase in demand of energy is affecting our environment in many ways. Combustion of fossil fuels is producing acid rain and damaging plants, soil and aquatic life. The construction of hydro power plants is disturbing ecological balance.

5. What is hydroelectricity? How is hydroelectric power produced?

Ans.5 hydrothermal all hydroelectric power refers to the production of electrical power through the use of the gravitational force of falling or flowing water. Electricity generated by hydropower is termed as hydroelectricity. Dams are built on rivers to produce hydroelectric power. Hydroelectric power is produced as water passes through a dam and into a river below. The more water that passes through a dam, the more energy is produced. Electricity is produced by the spinning of a turbine. The falling water spins the turbines located inside dams.

6. What are the advantages and disadvantages of a hydroelectric-power plant?

Ans.6 Advantages of hydroelectric-power plant:-

- i. Hydropower is fueled by water, so it's a clean fuel source, meaning it won't pollute the air like power plants that burn fossil fuels, such as coal or natural gas.
- ii. Hydroelectric power is a domestic source of energy, allowing each state to produce their own energy without being reliant on international fuel sources.

Disadvantages of hydroelectric-power plant:-

- i. Hydropower is non-polluting, but does have environmental impacts.
- ii. Reservoir construction is "drying up" in the U.S. The construction of surface reservoirs has slowed considerably in recent years.
- iii. Hydroelectricity is hydrology dependent.
- iv. In some cases, hydroelectricity can disrupt wildlife habitat.

**H. Picture study:-**

Looked at the pictures and write few lines about these alternative sources of energy shown here.



**Wind Power:-**The term wind energy or wind power describes the process by which the wind is used to generate mechanical power and transform to electricity. Wind power captures the natural wind in our atmosphere and converts it into energy.



**Solar Power:-**Solar power is one of the most popular and fastest-growing sources of alternative energy. Solar-thermal power uses mirrors or lenses to concentrate a large area of Sunlight on to a small area that is called a solar cell. Increase in solar cell efficiency and dropping prices are making solar power competitive with conventional sources of power.