WORKSHEET 1

CHAPTER 3 – SOURCES OF ENERGY

A. Tick (✓) the correct option.

1. Which is not a characteristic of good source of energy?
   a. Safe and convenient b. Easy to transport c. Economical d. Difficult to store
2. Which of these is the major source of energy in India?
   a. Wind b. Nuclear c. Coal d. Hydrogen
3. Combustion of fossil fuels in insufficient supply of oxygen forms
   a. carbon monoxide. b. hydrogen. c. oxygen. d. nitrogen.
4. Which of these gas is responsible for greenhouse effect?
   a. Oxygen b. Carbon dioxide c. Nitrogen d. Carbon monoxide
5. Minimum wind speed required to run the turbine generator is
   a. 20 km/h. b. 30 km/h. c. 40 km/h. d. 10 km/h.

B. Fill in the blanks.

1. Energy can neither be _____ nor be _____
2. The fossil fuel is a _____ source of energy.
3. The mechanical energy is converted into _____ in the generator.
4. Biogas is obtained by _____ decomposition of cow-dung in the presence of water.
5. A cluster of wind turbine generators installed over a large area is called a _____

C. State whether the given statements are true or false.

1. Wind energy farms incur high cost of maintenance.
2. Hydroelectricity is totally pollution free.
3. LPG is used as a fuel in chullahs.
4. The energy of flowing water is non-renewable source of energy.
5. SPM is short form of suspended particulate matter.

D. Match the following.

1. Fossil fuels	renewable source of energy
2. Tidal energy	generator
3. Harmful gases to harmless gases	non-renewable source of energy
4. Greenhouse effect	catalytic converter
5. Mechanical energy to electrical	carbon dioxide

Name: ..... Teacher's signature: .....

Class: ..... X ..... Date: .....

E. Answer the following questions.

Very Short Answer Questions

1. What does the principle of conservation of energy state?
2. What is the calorific value of wood?

Short Answer Questions

1. How is charcoal prepared?
2. What is the function of control valve in hydroelectric dams?

Long Answer Questions

1. What are the disadvantages of using wood as a fuel?
2. What measures can be adopted to meet increasing energy demands?

ANSWERS

WORKSHEET 1

A. Tick (✓) the correct option.

1. d
2. c
3. a
4. b
5. a

B. Fill in the blanks.

1. created, destroyed
2. non-renewable
3. electrical energy
4. anaerobic
5. wind energy farm

C. State whether the given statements are true or false.

1. T
2. T
3. F
4. F
5. T

D. Match the following.

1. Fossil fuels	non-renewable source of energy
2. Tidal energy	renewable source of energy
3. Harmful gases to harmless gases	catalytic converter
4. Greenhouse effect	carbon dioxide
5. Mechanical energy to electrical	generator

E. Answer the following questions.

Very Short Answer Questions

1. According to the principle of conservation of energy, energy can neither be created nor be destroyed.
2. The calorific value of wood is 17 kJ/g.

Short Answer Questions

1. Charcoal is prepared by the strong heating of wood in closed vessels in a limited supply of air.
2. The control valve in hydroelectric dam controls the movement of sluice gate.

Long Answer Questions

1. The disadvantages of using wood as a fuel are:
   - The calorific value of wood is low. Thus to produce sufficient amount of energy, we need to burn a large quantity of wood.
   - Using wood as fuel leads to deforestation.
   - The burning of wood produce a lot of smoke and harmful gases which causes pollution.
   - Wood does not burn completely, it produces a lot of residue.
2. The following measures can be adopted to meet increasing energy demands:
   - Develop technology to use the conventional sources of energy more efficiently.
   - Shift our preference to renewable sources of energy.
   - Develop technology to use the latest sources of energy which are non-conventional like solar energy, energy from the sea, geothermal energy and nuclear energy.