WORKSHEET 2

CHAPTER 3 – SOURCES OF ENERGY

A. Tick (✓) the correct option.

1. Which mirror is used in a solar cooker?
   a. Concave b. Convex c. Plane d. None of these
2. Solar water heater can be used to get hot water on
   a. sunny day. b. cloudy day. c. hot day. d. windy day.
3. Which of these is not an example of a biomass energy source?
   a. Wood b. Nuclear energy c. Gobar gas d. Coal
4. Molten rocks are called
   a. magma. b. hot spots. c. geysers. d. none of these.
5. A solar cell converts solar energy into
   a. mechanical energy. b. electrical energy. c. chemical energy. d. nuclear energy.

B. Fill in the blanks.

1. The sources of energy which cannot be renewed or replaced in short intervals of time are called _____
2. Combustion of fossil fuels produces _____ when supply of oxygen is insufficient.
3. Cow dung contains important nutrients like _____ and _____
4. _____ is prepared by strong heating of wood in a limited supply of air.
5. Biogas is a mixture of _____, _____, _____ and traces of _____

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

1. Solar cookers cannot be used for making chappatis.
2. The tides are caused due to gravitational pull of moon.
3. The cost of installation of nuclear power plant is low.
4. Biomass is defined as the total mass of all living organisms in an ecosystem.
5. The approximate value of solar constant is 1.4 kJ per second per square metre.

D. Match the following.

1. Charcoal	wave energy
2. Hydrogen power plant	solar energy into electrical
3. Solar photovoltaic cell	destructive distillation of wood
4. Energy associated with sea waves	1.602×10^{-19} J
5. 1 electron volt	flowing water

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

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

E. Answer the following questions.

Very Short Answer Questions

1. What is the value of one electron volt in joules?
2. What are the types of chain reactions?

Short Answer Questions

1. Define nuclear fusion.
2. What is ocean thermal energy?

Long Answer Questions

1. What are the limitations of geothermal energy?
2. What are the characteristics of an ideal fuel?

ANSWERS

WORKSHEET 2

A. Tick (✓) the correct option.

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

B. Fill in the blanks.

1. non-renewable
2. carbon monoxide
3. nitrogen and phosphorus
4. charcoal
5. methane, carbon dioxide, hydrogen, hydrogen sulphide

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

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

D. Match the following.

1.	Charcoal	destructive distillation of wood
2.	Hydrogen power plant	flowing water
3.	Solar photovoltaic cell	solar energy into electrical
4.	Energy associated with sea waves	wave energy
5.	1 electron volt	1.602×10^{-19} J

E. Answer the following questions.

Very Short Answer Questions

1. 1.602×10^{-19} J
2. Controlled and uncontrolled.

Short Answer Questions

1. The process in which two lighter nuclei fuse to form a stable heavier nucleus with the liberation of enormous amount of energy is called nuclear fusion.
2. The energy available due to the difference in temperature between water at the surface and water at depths is called ocean thermal energy.

Long Answer Questions

1. Limitations of geothermal energy are:
   - Geothermal hot spots are scattered and not found everywhere. There are very few commercially viable sites where such energy can be harnessed.
   - Deep drilling in the earth to take out steam from hot spots is very expensive.
2. The characteristics of an ideal fuel are:
   - It should be economical and easily available.
   - It should burn at moderate and steady rate.
   - It should not produce any poisonous and irritating fumes or smoke during burning.
   - It should not leave much ash after burning.
   - It should produce large amount of heat per unit mass.
   - It should have proper ignition temperature so that it can be burnt easily.