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**SUBJECT:- PHYSICS**

**CLASS:- XTH**

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**SUBJECT TEACHER:- MR. NEEL NIRANJAN**

**CHAPTER 3. SOURCES OF ENERGY(SOME EXTRA QUESTIONS AND ANSWERS)**

1. (a) What is geothermal energy?  
(b) What is the source of heat contained in geothermal energy?  
(c) Explain how, geothermal energy is used to generate electricity.  
(d) State two advantages of geothermal energy.  
(e) State two disadvantages of geothermal energy.

**Ans.** (a) Geothermal energy is the heat energy from hot rocks present inside the earth.  
(b) Hot rocks present inside the earth are the source of heat contained in geothermal energy.

(c) Extremely hot rocks present below the surface of earth heat the underground water and turn it into steam. As more and more steam is formed between the rocks, it gets compressed to high pressures. This high pressure steam is brought up through pipes and is used to run the turbine of a generator to produce electricity.

(d) Advantages of geothermal energy:

- (i) It is very economical to use.
- (ii) It does not cause any pollution.

(e) Disadvantages of geothermal energy:-

- (i) It is not available everywhere.
- (ii) Deep drilling in the earth is required, which is technically very difficult and expensive

2. Name the type of nuclear reaction which is involved in the working of:

- (a) a hydrogen bomb.
- (b) an atom bomb.

**Ans.** (a) Nuclear fusion  
(b) Nuclear fission

3. What do you think is the purpose of the thick, concrete chamber surrounding the reactor of a nuclear power plant?

**Ans.** Thick concrete chamber is required to prevent the radioactive rays to travel outside.