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SUBJECT:- PHYSICS **CLASS:- XTH** **DATE:20/05/XX**

SUBJECT TEACHER:- MR. NEEL NIRANJAN

CHAPTER 3. SOURCES OF ENERGY

1. **Wave Energy:**

Waves are created due to movement of wind on ocean surface. A variety of technologies have been proposed to capture the energy from waves. They can be used in several ways to rotate rotor of dynamo to generate electricity.

2. **Ocean - Thermal Energy:**

Ocean thermal energy is a renewable energy technology that harnesses the solar energy absorbed by the oceans to generate electric power. The Sun's heat warms the surface water a lot more than the deep ocean water, which creates the ocean's naturally available temperature gradient, or thermal energy.

Working:

For ocean thermal plant, temperature difference between hot and cold layer should be at least 20°C to vaporize a working fluid, which has a low boiling point, such as ammonia. The vapor expands and spins a turbine coupled to a generator to produce electricity.

The vapor is then cooled by seawater that has been pumped from deeper ocean layer. That condenses the working fluid back into a liquid, so it can be reused. This is a continuous electricity generating cycle.