ODM EDUCATIONAL GROUP
Changing your Tomorrow

ENERGY

CHAPTER NO.4

SUB: PHYSICS

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LEARNING OUTCOMES

Students will be able to:

- Define kinetic energy.
- Express kinetic energy in proper units.
- Solve simple problems based on kinetic energy.
- Define potential energy.
- Define gravitational potential energy.
- Solve problems based on gravitational potential energy.
- Describe energy transformation in daily life situation .
- Distinguish between energy and power.

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POINTS TO BE COVERED

- Power
- Unit of power
- Factors affecting power of a source.

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INTRODUCTION

Power:

The power of a body is defined as the rate of doing work by the body.

If a body performs a work W in time t , the power spent by the body is :

Power = work done by the body/ Time taken.

P= W/t.

- The symbol of Power is P.
- Energy spent or work done = P x t.
- Unit of Power:

SI unit of work is joule.

SI unit of time is S.

- So SI unit of power is joule/sec.
- The unit joule/second has been named as watt.
- 1 kw = 1000w.
- 1 MW = 1000000W.

FACTORS AFFECTING THE POWER OF A SOURCE

- The power spent by a source depends on two factors:
- The amount of work done by the source.
- The time taken by the source to do the work.

Difference between work and power

Work	Power
1. Work done by a force is equal to the product of force and distance moved in the direction of force.	Power of a source is the rate of doing work by it.
2. Work done does not depend on time.	Power spent depends on the time in which work is done.
3. SI unit of work is joule.	SI unit of power is watt.

DIFFERENCE BETWEEN ENERGY AND POWER

ENERGY	POWER
Energy of a body is its capacity to do work.	Power of a source is the rate at which energy is supplied or work is done by it.
Energy spent does not depend on time.	Power depends on the time in which energy is spent.
SI unit of energy is joule (J)	SI unit of power is watt(W)

HOME ASSIGNMENT

- Exercise: B: 11,12,13,14

THANKING YOU

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