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SUBJECT:- PHYSICS CLASS:- IXTH DATE:09/09/XX

SUBJECT TEACHER:- MR. NEEL NIRANJAN

CHAPTER 4. (WORK, ENERGY & POWER)(BASED ON NCERT PATTERN)

Question 1: What are the quantities on which the amount of work done depends? How are they related to work?

ANSWER: *The work done by a force on a body depends on two factors:*
(i) Magnitude of force applied
(ii) Displacement in the direction of force applied
The relation between work (W), force (F) and displacement (S) is given by following equation:
$W = F.S. \cos \theta$
Where,
(W) - Work done
(F) - Force
(S) - Displacement
(θ) - Angle between the force applied and displacement of the body.

Question 2: *How much work is done when a body of mass m is raised to a height h above the ground?*

ANSWER: *We can calculate the work done against gravity in moving a body of mass (m) by a height (h) as, Work done in lifting a body = (Weight of body) (Vertical distance)*
So, W = (m) (g) (h)

Question 3: *State the SI unit of work.*

ANSWER: *Joule is the SI unit of work. It is denoted by 'J.*

Question 4: *Define 1 joule of work.*

ANSWER: *Joule is the SI unit of work. Work done is said to be of 1 Joule when a force of 1 Newton moves a body by 1 m along the direction of the force applied.*

Question 4: Is *work a scalar or a vector quantity?*

ANSWER: *Work is a scalar quantity as it has only magnitude.*