

cfw
17-08-21

HOME ASSIGNMENT ASSIGNMENT (Physics)

1. Define work.

Work done by a force is defined to be the product of component of the force in the direction of the displacement and the magnitude of this displacement.

2. When does a force perform work?

Work is said to be done when the applied force makes the body move (i.e. there is a displacement of the body).

3. State two conditions when no work is done by a force.

(i) If a force applied on a body does not produce displacement ~~in a body~~ in the body, scientifically work is not done.

(ii) If a force applied on a body is zero, scientifically work is not done.

4. In which of the following cases is work being done?

- a) A boy pushing a heavy truck.
- b) A boy climbing up the stairs.
- c) A coolie standing with a box on his head.
- d) A girl moving on the road.

5. A coolie is moving on a road with a large luggage on his head. Does he perform work against the force of gravity? Give + gravity? Give reason to support for your answer.

A coolie carrying a luggage on his head moving on a ground does no work against the force of gravity as displacement is normal (perpendicular) to the direction of force of gravity.

6. The moon is ~~revolve~~ revolving around the earth in a circular path. How much work is done by the moon?

Work done by gravitational force acts perpendicular to the direction of motion of the satellite.

7. Write the expression for work done by a force.

Work done = Force \times displacement, done

8. State the S.I. unit of work and define it.

S.I. unit of work = Nm

Work done when a force of 1 N displaces the body through a distance of 1 m in the direction of force.

9. State two factors on which the work done on a body depends.

The work done on a body depends upon ~~two~~ two factors:

* Magnitude of the force

* The displacement ~~of~~ through which the body moves.

10. Define the term energy.

Energy is defined as a ~~ph~~ physical quantity that is transferred from one object to another to ~~pe~~ perform work or ~~to~~ heat ~~the~~ object.

~~11. State~~ 11. State the S.I. unit of energy.

The S.I. unit ~~of energy~~ energy is ~~Joule (J)~~ Joule (J), and it is a Joule (J).

12. Define 1 joule of energy.

1 joule is the amount of work done when 1 newton ~~of~~ of force acting on a ~~body~~ body displaces ~~it~~ ~~it~~ ~~it~~ it through 1 metre.