

Answer on Question #47911, Physics, Mechanics | Kinematics | Dynamics

an electric bulb of 60 W is used for 6 hour per day. calculate the units of energy consumed in one day by the bulb.

Solution:

$$t = 6 \text{ hour} = 6 \cdot 3600 \text{ s} = \text{time};$$

$$P = 60 \text{ W} = \text{power};$$

The formula for the power:

$$\text{Power} = \frac{\text{Energy}}{\text{time}}$$

$$\text{Energy} = \text{time} \cdot \text{Power} = 6 \cdot 3600 \text{ s} \cdot 60 \text{ W} = 1.296 \cdot 10^6 \text{ J}$$

Answer: energy consumed in one day: $1.296 \cdot 10^6 \text{ J}$