

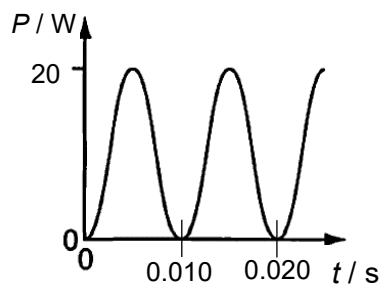
- 27 A sinusoidal alternating current  $I / \text{A}$  varies with time  $t / \text{s}$  according to the equation

$$I = 2.0 \sin (100\pi t)$$

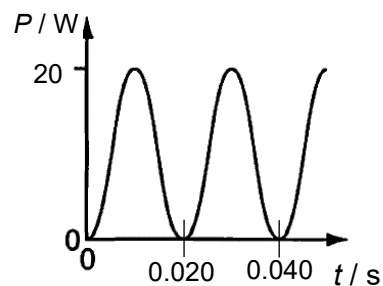
This current is allowed to pass through a resistor of resistance  $5.0 \, \Omega$ .

Which of the following shows how the power  $P / \text{W}$  dissipated in the resistor varies with  $t / \text{s}$ ?

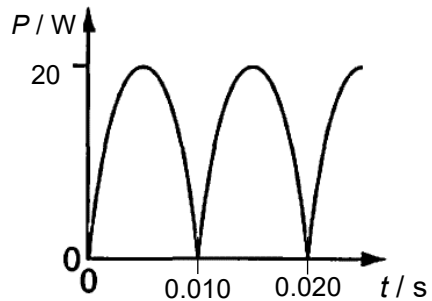
**A**



**B**



**C**



**D**

