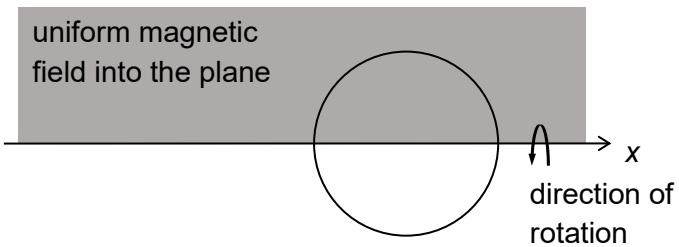


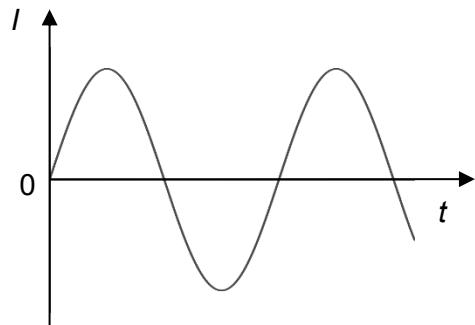
- 25** A coil of one turn is positioned in the plane of the paper such that the upper half of the coil is within a uniform magnetic field acting into the plane of the paper, as shown. The  $x$ -axis is along the edge of the magnetic field and passes through the centre of the coil.



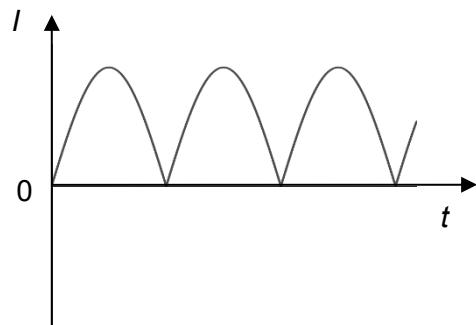
At time  $t = 0$ , the coil starts to rotate about the  $x$ -axis from the position shown.

Which of the following graphs correctly describes the variation of the induced current  $I$  in the coil with time  $t$ ?

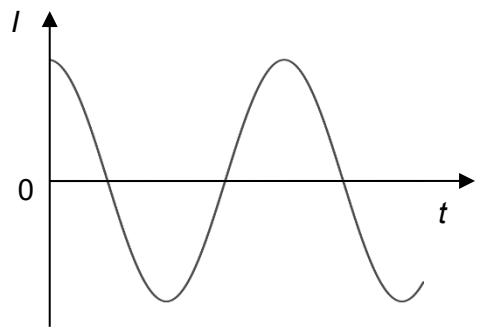
**A**



**B**



**C**



**D**

