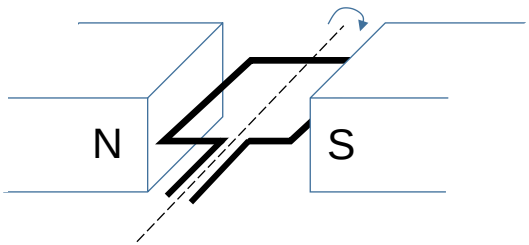
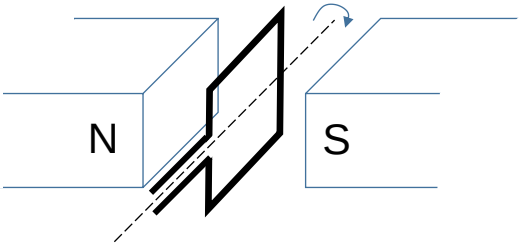
25 A rectangular coil made of 100 turns of wire with cross sectional area 30 cm^2 is placed within a uniform magnetic field of 0.80 T. The coil is rotated with an angular velocity of 100 rad s^{-1}. At different stages of its rotation, the cross sectional area of the coil can be parallel or perpendicular to the magnetic field, as shown.



parallel to magnetic field



perpendicular to magnetic field

What is the maximum e.m.f. induced and the corresponding orientation of the coil?

	maximum e.m.f. / V	orientation of coil
A	0.24	parallel to magnetic field
B	0.24	perpendicular to magnetic field
C	24	parallel to magnetic field
D	24	perpendicular to magnetic field