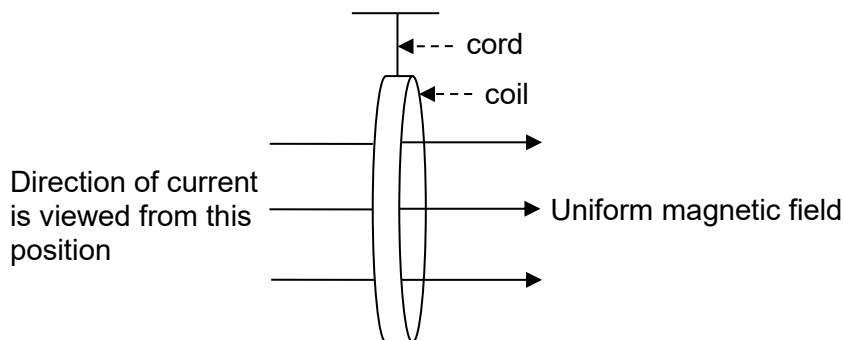# 25

A rigid conducting coil has 100 turns and a cross-sectional area of 8.0×10^{-3} m². It is freely suspended by a non-conducting cord. A uniform magnetic field is directed at right angles to the plane of the loop as shown in the figure.

The magnetic flux density of the uniform magnetic field is changed steadily from 20 mT to 80 mT over a period of 4.0 s.

What is the direction of the induced current as viewed from the position indicated in the figure and the average e.m.f. induced in the coil during this time?

	Direction of induced current	Magnitude of induced e.m.f. / V
A	clockwise	1.6×10^{-2}
B	anti-clockwise	1.6×10^{-2}
C	clockwise	1.2×10^{-2}
D	anti-clockwise	1.2×10^{-2}

26   A generator produces a current of 60 A r.m.s. at a voltage of 120 V r.m.s. The voltage is