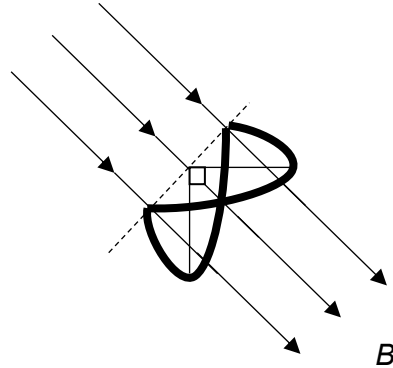


24 A closed circular loop of wire has a radius of 3.7 cm. It is bent along a diameter such that the two halves are perpendicular to each other. A uniform magnetic flux density of $B = 76 \text{ mT}$ is directed perpendicular to the fold diameter and makes equal angles (45°) with the planes of the semicircle.



If the magnetic flux density B is reduced to zero at a uniform rate during a time interval of 4.5 ms, what is the magnitude of the induced e.m.f in the loop?

A 0.026 V

B 0.051 V

C 0.073 V

D 0.098 V