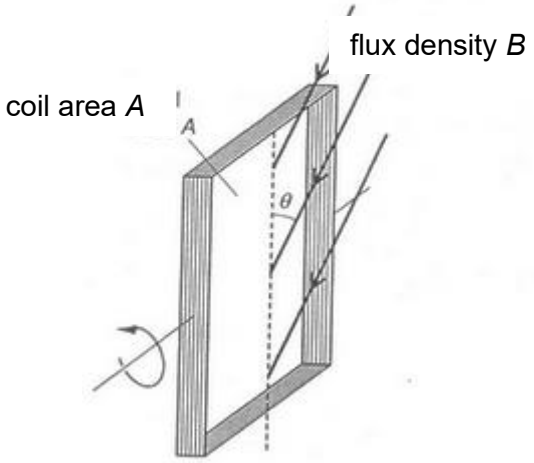
22 A coil has area *A* and *N* turns.

A uniform magnetic field of flux density *B* acts at an angle θ to the plane of the coil, as shown in the figure below.



What is the change in magnetic flux linkage when the coil rotates to a horizontal position?

A $BAN\cos\theta$

B $2BAN\cos\theta$

C $BAN(\cos\theta - \sin\theta)$

D $2BAN\sin\theta$