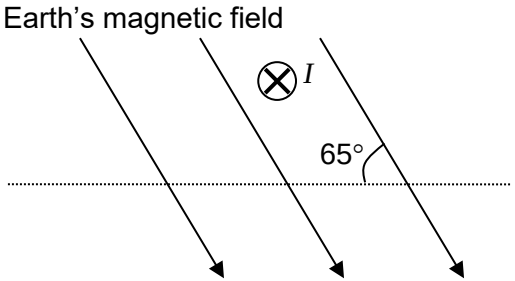
23 The figure shows a horizontal power cable of length 2.0 m carrying a steady current I of 3.0 A into the plane of the paper.



What is the force acting on the cable that is caused by the Earth's magnetic field of flux density 4.0×10^{-5} T, in a region where this field is at 65° to the horizontal?

A 82 μN **B** 220 μN **C** 240 μN **D** 660 μN