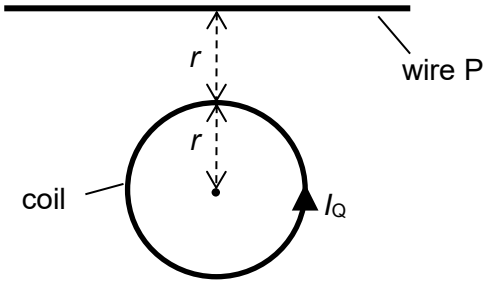
20 A coil Q of a single turn and radius *r*, carries an anti-clockwise current I_Q and lies flat on the table. A long straight wire P carrying current I_P is placed on the same table such that its perpendicular distance from the centre of coil Q is 2*r*.



Which of the following will cause the resultant magnetic field at the centre of coil Q to be zero?

A I_P to the right, $I_P = 2\pi I_Q$

B I_P to the left, $I_P = 2\pi I_Q$

C I_P to the right, $I_Q = 2\pi I_P$

D I_P to the left, $I_Q = 2\pi I_P$