

Figure 1 shows a conducting rod PQ being pulled to the right through a magnetic field. The strength of the magnetic field is 0.2 T , the length of PQ is 0.1 m and the speed at which the rod moves to the right is 5.0 m s^{-1} .

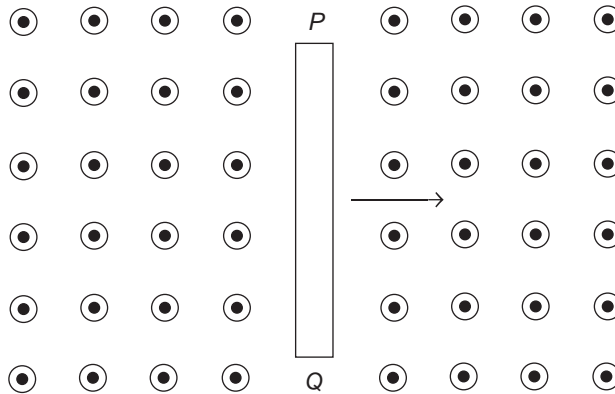


Figure 1

Question 2

Is the P end of the conducting rod positive, neutral or negative? Explain how you determined your answer.

3 marks

Question 3

Calculate the value of the induced potential difference.

2 marks

The ends of the rod PQ are connected via wires to an external resistive load and again the rod is pulled to the right through the magnetic field.

Question 4

On Figure 1, draw the direction of the induced magnetic force.

2 marks
