37 The diagram shows a potentiometer circuit.
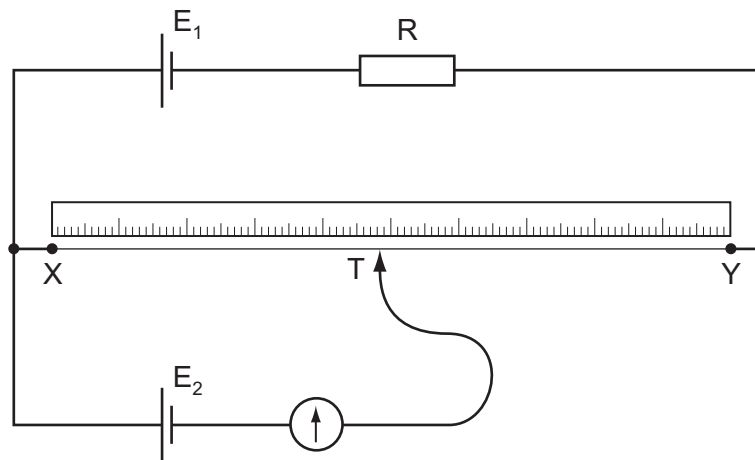

The contact T is placed on the wire and moved along the wire until the galvanometer reading is zero. The length XT is then noted.

In order to calculate the potential difference per unit length on the wire XY, which value must also be known?

A   the e.m.f. of the cell E_1

B   the e.m.f. of the cell E_2

C   the resistance of resistor R

D   the resistance of the wire XY