

- ii) Inaccurate measurement of time  $t$ . This was manifested in getting too short times ( $t$ ) eg. 5 seconds or too long times eg. 20 seconds. Many also measured time ( $t$ ) for half oscillation instead of complete oscillations.

In part (h) a graph, candidates' had difficulties in:

- i) Labeling the axes  
ii) Exchanging y axis and x axis despite having been guided in the question.  
iii) Using scales that were difficult to read. This led to inaccurate plotting of points.  
iv) Inverting the values of the slope eg.  $\frac{\Delta x}{\Delta y}$  instead of  $\frac{\Delta y}{\Delta x}$   
v) Incorrect evaluation of the slopes  
vi) Incorrect substitution in the expression  $k = \frac{T^2}{4\pi^2 s}$ . Many candidates substituted the values of  $t$  in place of  $T$ . Others used  $\pi$  instead of  $\pi^2$

## Question 2

*This question consists of two parts A and B. Answer both parts.*

### PART A

You are provided with the following:

- a dry cell and a cell holder
- a resistor **P**
- a set of mounted resistors **Q**
- a milliammeter
- connecting wires
- a switch

Proceed as follows:

- i) Set up the apparatus as shown in the circuit diagram in figure 2.

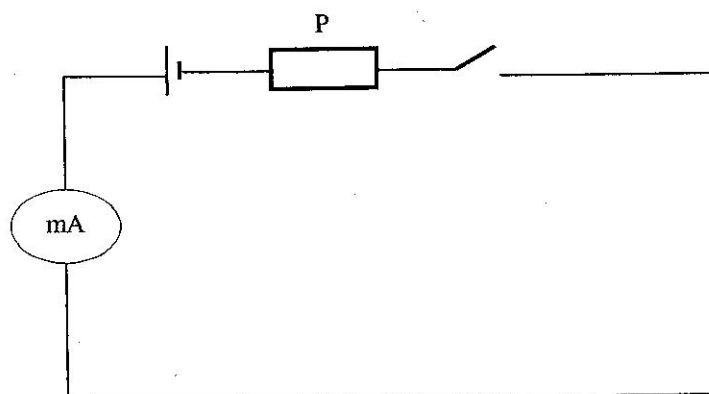


Figure 2