RATU NAVULA COLLEGE

Y12 PHYSICS WORKSHEET 6 QP

2020 SAMPLE

1.

Millikan's oil-drop experiment was based on the principle that

A. $mg = Eq$

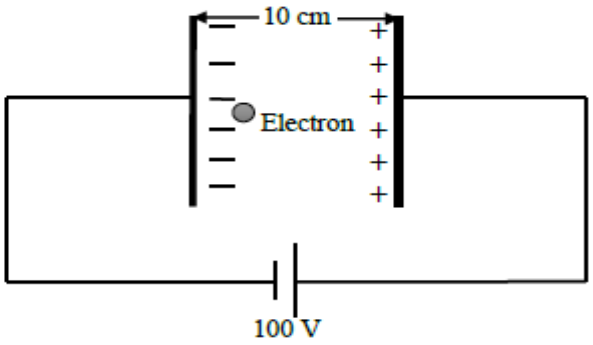
B. $mg = BIL$

C. $mg = Bvq$

D. $mg = \frac{mv^2}{r}$

2.

The terminals of a 100 V battery are connected between two parallel metal plates, 10 cm apart as shown below.



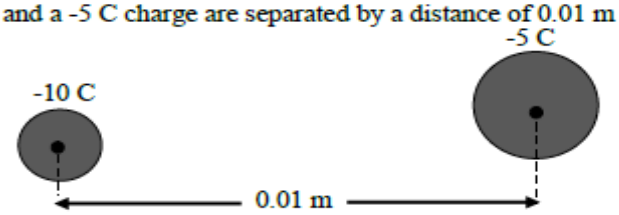
(i) Calculate the electric field strength between the two charged plates. **(1 mark)**

(ii) Calculate the electric force experienced by the electron. **(1 mark)**

(iii) Determine with what velocity the electron will arrive at the positive plate. **(2 marks)**

3.

A -10 C charge and a -5 C charge are separated by a distance of 0.01 m as shown below.



(i) State whether the force that exists between the two charges will be attractive or repulsive. **(1 mark)**

(ii) Calculate the force between the two charges. **(2 marks)**

2020

4. The formula $F = kq_1q1_2/ r^2$ best describes _____ Law.

5. In which experiment was the electronic charge , 1.6×10^{-19}C discovered?

The End