

From d)  $v = \frac{d}{t} = \frac{1/16}{10} = \frac{1}{160}$  for lavender

From e  $v = \frac{1}{80}$  for mauve

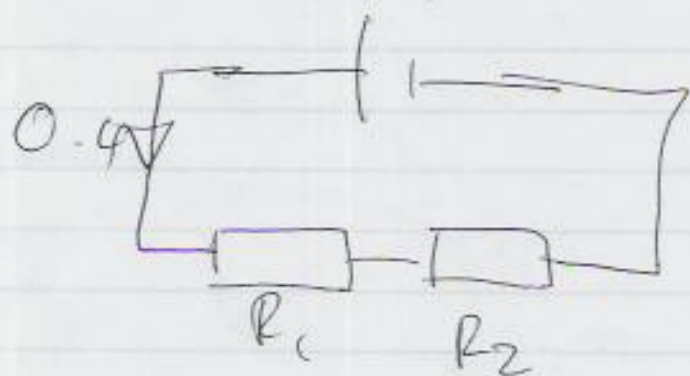
$$\therefore t = \frac{d}{\text{Speed}} = \frac{2\pi r}{1/80}$$

$$= \frac{2 \times 3.14 \times 1180000}{1/80}$$

$$= 592832000 \text{ seconds}$$

13)

a v



$$0.4 = 0.05V^3$$

$$\therefore V = \sqrt[3]{\frac{0.4}{0.05}} = 2 \text{ V}$$

Voltage across fixed resistor = 7V

$$\therefore V = IR$$

$$7 = 0.4 \times R \Rightarrow R = \frac{7}{0.4} = 17.5 \Omega$$