

Name of the Student: \_\_\_\_\_

Max. Marks : 16 Marks

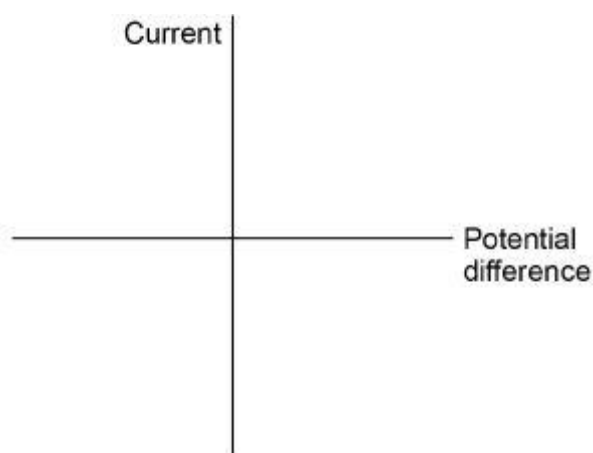
Time : 16 Minutes

**Q1.**

A student built a circuit using filament lamps.

- (a) Sketch a current potential difference graph for a filament lamp on **Figure 1**

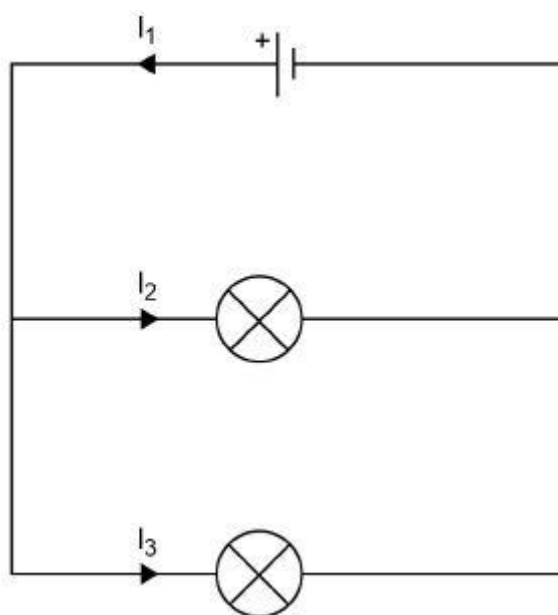
**Figure 1**



(2)

**Figure 2** shows the circuit with two identical filament lamps.

**Figure 2**



- (b) Compare the currents  $I_1$ ,  $I_2$  and  $I_3$

---

---

---

(2)

(c) Calculate the charge that flows through the cell in 1 minute.

Each filament lamp has a power of 3 W and a resistance of  $12 \Omega$

Write any equations that you use.

Give the unit.

---

---

---

---

---

---

---

---

Charge = \_\_\_\_\_

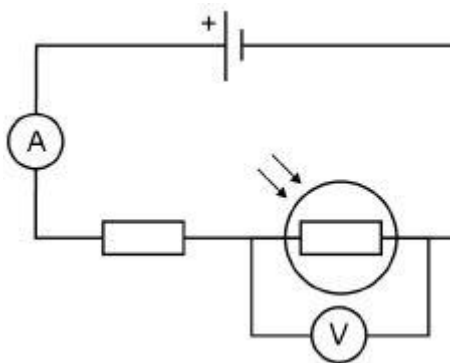
Unit = \_\_\_\_\_

(6)

(d) The student builds a different circuit.

**Figure 3** shows the circuit.

**Figure 3**



Explain how the readings on both meters change when the environmental conditions change.

---

---

---

---

---

---

---

---

---

---

---

---

---

---

(6)  
(Total 16 marks)