7.2 **Pengaliran Arus Elektrik dalam Litar Bersiri dan Litar Selari**
Flow of Electric Current through a Series Circuit and a Parallel Circuit

Buku Teks: m.s. 152 – 157

1. Nyatakan sama ada pernyataan di bawah **BENAR** atau **PALSU**. TP②
   State whether the statements below are TRUE or FALSE.

   (a) Formula arus bagi litar bersiri ialah $I = I_1 + I_2$.
   The formula for current in a series circuit is $I = I_1 + I_2$.

   (b) Formula rintangan bagi litar bersiri ialah $R = R_1 + R_2 + R_3$.
   The formula for resistance in a series circuit is $R = R_1 + R_2 + R_3$.

   (c) Dalam litar selari, kecerahan mentol tidak akan bertambah walaupun voltan ditambah.
   In a parallel circuit, the brightness of the bulb does not increase even when the voltage is added.

   (d) Dalam litar bersiri, sel kering menjadi lemah dengan cepat jika mentol ditambah.
   In a series circuit, dry cells become weaker faster if bulbs are added.

   (e) Formula voltan dalam litar bersiri ialah $V = V_1 + V_2 + V_3$.
   The formula for voltage in a series circuit is $V = V_1 + V_2 + V_3$.

   (f) Semua mentol menyala dengan kecerahan yang sama dalam litar bersiri.
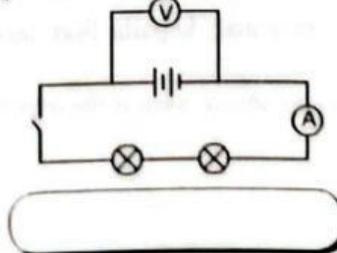   *All bulbs light up with equal brightness in a series circuit.*

2. Nyatakan jenis-jenis litar berikut. TP②
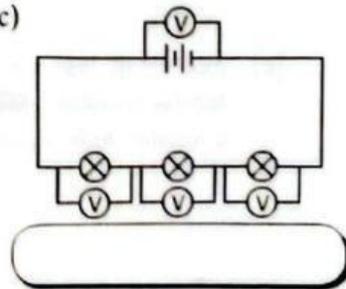   *State the type of the following circuits.*

   (a)

   (b)

   (c)

TP2   Menguasai   Belum menguasai
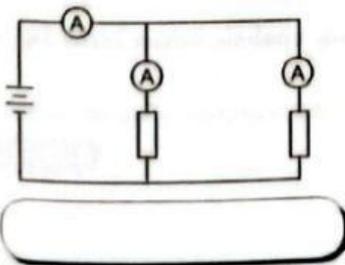
3. Rajah 1 menunjukkan satu litar elektrik.
   Diagram 1 shows an electric circuit.
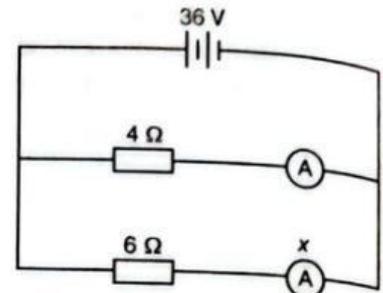
   (a) Nyatakan jenis litar tersebut. **TP②**
       State the type of the circuit.

       _____

   (b) Hitung keseluruhan rintangan dalam litar. **TP③**
       Calculate the total resistance in the circuit.

       R =
       _____

   (c) Apakah bacaan pada ammeter X? **TP③**
       What is the reading on ammeter X?

       _____

   (d) Berikan dua kelebihan litar tersebut. **TP②**
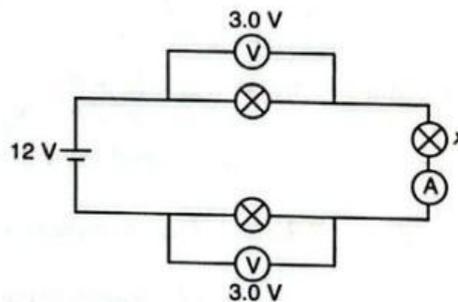   *Give two advantages of this circuit.*

Rajah 1 / *Diagram 1*

36 V

4 Ω (A)

6 Ω x (A)

circuit

separately

affect

Each electrical equipment can be controlled [_____] . Adding more electrical equipment not [_____] the function of other electrical equipment in the [_____] .

4. Rajah 2 menunjukkan satu litar bersiri.
   Diagram 2 shows a series circuit.

3.0 V (V)
⊗
12 V ⊥ ⊗ x (A)
⊗
3.0 V (V)

Rajah 2 / *Diagram 2*

Jika rintangan bagi mentol X ialah 3 Ω, hitung: **TP③**
If the resistance for bulb X is 3 Ω, calculate:

(a) Voltan yang merentasi mentol X.
    The voltage across bulb X.

    V =
    _____

(b) Arus yang melalui mentol X.
    The current that goes through bulb X.

    I =
    _____

(c) Jika sebiji lagi mentol ditambah kepada litar tersebut, apakah kesan terhadap kecerahan semua mentol? **TP④**
    If another bulb is added to the circuit, what is the impact on the brightness of all the bulbs?

    All bulbs will be [_____] bright.

TP2 Menguasai Belum menguasai TP4 Menguasai Belum menguasai TP4 Menguasai Belum menguasai

Bab 7

(d) Berikan dua sebab litar bersiri tidak sesuai digunakan untuk rumah. Berikan contoh bagi setiap sebab. **TP 6**

Give two reasons for a series circuit is not suitable to be used for homes. Give an example for each reason.

KBAT Menganalisis

Waste

cause

same

fails

broken

i) All components are controlled by the _____ switch - _____ of electrical energy because if a person wants to watch a television, he needs to turn on a switch that will _____ other electrical equipment in the house to turn on too.

ii) When an equipment _____, the rest also fail - When one bulb is _____, the others will not be working as well.