

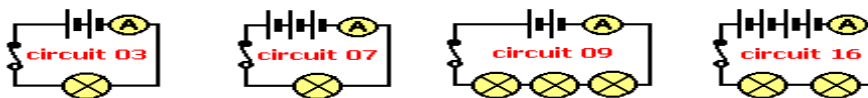


Science
Class 7
Topic: Electrical Circuits
Reinforcement Worksheet

Name: _____ Sec: _____ Date: _____

Q.1 Choose the best answer:

1. Identify the circuit which will have 'the brightest lit lamp or lamps'? Note that the bulbs and batteries are identical.



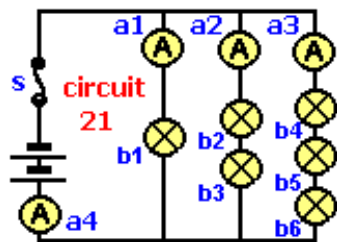
2. The ratings for four typical domestic appliance fuses are 3A, 5A, 8A and 13A. Which **fuse wire will melt** if a **current of 6A** is passed through them?

- a) 3A only
b) 3A, 5A and 8A only
c) 3A and 5A only
d) 3A, 5A, 8A and 13A

3. Which of the circuit symbol means a 'meter for measuring potential difference'?



4. If **bulb b5 'blows'** what happens to the other bulbs?



- a) b1, b2 and b3 stay lit but b4 and b6 also go out
b) b1, b2, b3 and b6 stay lit, but b4 also goes out
c) b1, b2, b3, b4 and b6 also go out
d) b1, b2, b3, b4 and b6 stay lit

5. Which of the following is a **unit of current**?

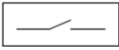


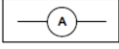
- a) Volts
- c) Joules

- b) Amps
- d) Ohm

Q.2 Fill in the blanks

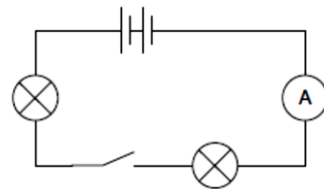
- a. Flow of electrons is known as _____.
- b. The unit for the measurement of current is _____.
- c. A circuit in which there is only one path for the current to flow is called _____.
- d. In a circuit energy is provided by the _____.
- e. The measure of how much an electrical component opposes the flow of current is called _____.
- f. In a parallel circuit, resistance _____ as more resistors are added.

Q.3 (a) Match the column.

Circuit Symbol	Name
	Ammeter
	Switch
	Battery
	Bulb

(b) Fred made **circuit 1** as shown.

circuit 1



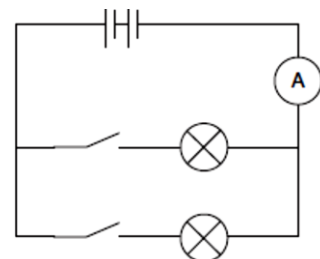
Name the component which is a source of electrical energy in an electric circuit.

(c) Fred then made **circuit 2** as shown:

In the table below, tick a box to show whether **circuit 1** and **circuit 2** are series or parallel circuits.

Tick only **two** boxes.

circuit 2



	series	parallel
circuit 1	<input type="checkbox"/>	<input type="checkbox"/>
circuit 2	<input type="checkbox"/>	<input type="checkbox"/>

Q.4 Match column A with column B & write the answer in column 'C'.

Column A	Column B	Column C
i) Current	a. Volt	
ii) Resistance	b. Ampere	
iii) Power	c. Joules	
iv) Voltage	d. Watts	
v) Energy	e. Ohms	

Q.5 State whether the given statements are true or false. If the statement is wrong, then re-write it to make it correct.

i) A Galvanometer is used to measure voltage. []

ii) Resistance decrease when extra bulbs are added in series circuit. []

iii) All components in an electrical circuit have resistance. []

iv) Another term for resistance is potential difference. []

Q.6a Name the two types of resistors?

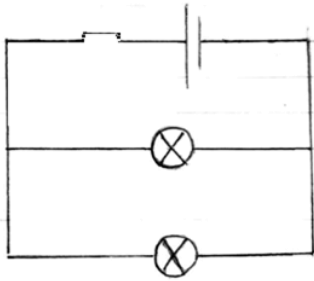
b. Which resistor is used in fans and why?

c. Write down the effect of adding more resistors in:

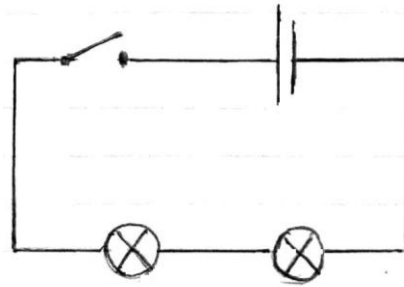
Series circuit:

Parallel circuit:

Q.7 Look at the circuit diagrams below and answer the questions.



Circuit 1



Circuit 2

i) Identify the type of circuit in the circuit diagram given above.

ii) Identify open circuit in the diagram?

iii) In which circuit the bulbs will be brighter when the circuits are closed.

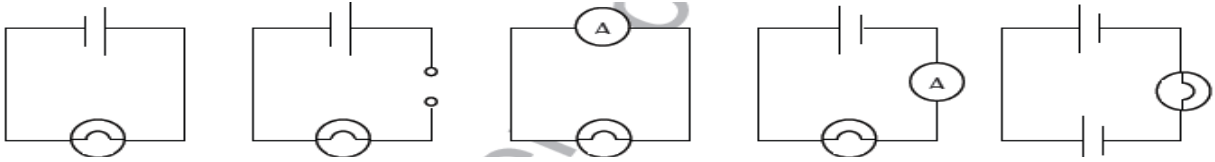
iv) Identify the circuit in which the current is the same throughout.

v) Connect an ammeter to one of the bulbs in series circuit in the diagram.

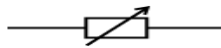
vi) Connect a voltmeter to one of the bulbs in parallel circuit,

vii) What is the advantage of parallel circuit over series circuit?

Q.8a Identify the circuits in which the bulb would be lit. There may be more than one correct answer.



b. What is the name of this component? Can this component be used as a switch? Justify your answer.



Q.9 Give scientific reason.

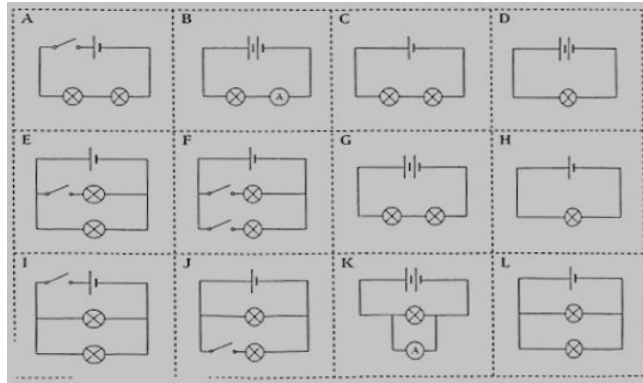
a) Bathrooms are always fitted with pull-cord switches.

b) As more bulbs are added in series, the bulbs get dimmer.

c) In parallel circuit, if one bulb does not light, the others still work.

d) Current is not consumed in the electrical circuits.

Q.10 Look at the circuit diagrams and answer the questions.



1. Choose two circuits that have two bulbs controlled by one switch.

2. How could you increase the brightness of the bulb in circuit H?

3. Choose a circuit with an ammeter in the correct place.

4. Choose two series circuits that have brighter bulbs than circuit C.

5. Choose a circuit which has a dimmer bulb than circuit H.

6. Why doesn't the bulb light in circuit A?

7. Choose a circuit which has a brighter bulb than circuit H.

8. Choose a circuit with two bulbs you can turn on and off independently.

9. Add a voltmeter to circuit D.

10. Which of all these circuits would have the brightest bulbs?
