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CAMBRIDGE International Education
Cambridge International School

MID TERM TEST I
ACADEMIC YEAR 2024/2025

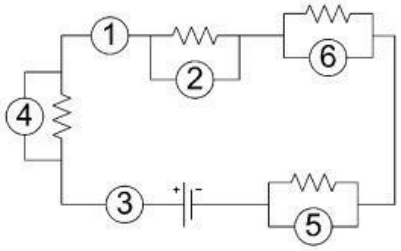
Subject	: Physics	Day/Date	: Monday, 23 September 2024
Grade	: IX B & IX C	Duration	: 90 minutes
		Time	: 07.30 – 09.00

A. **INSTRUCTIONS**: choose the answer that you think is correct (50 points)

1. The amount of electric charge flowing through a conductor per second is called…
   a. Electric energy
   b. Electric power
   c. Electric voltage
   d. Electric Current

2. The direction of electric current is..
   a. In the same direction as the movement of electrons
   b. From low potential to high potential
   c. From high potential to low potential
   d. In the opposite direction of the movement of electric current

Numbers 3 and 4 based on figure 1 below :



3. The number indicating the voltmeter is…
   a. 2, 3, 4
   b. 2, 4, 5, 6
   c. 2, 4, 6
   d. 2, 3, 4, 5

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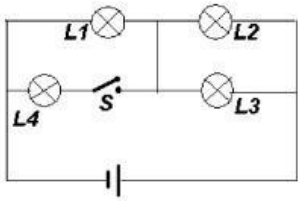
4. The number indicating the ammeter is…
    a. 1 dan 2
    b. 2 dan 3
    c. 1 dan 3
    d. 2 dan 4

5. Please note the following lamp circuit. If the switch is opened in the diagram below, the lamp that goes off is:



    a. L4
    b. L3
    c. L2
    d. L1

6. The voltage indicated by the needle in the following picture is…

    a. 1.5 V
    b. 3 V
    c. 15 V
    d. 30 V

7. The function of a fuse is to...
    a. Allow or interrupt the flow of electric current in an electrical circuit.
    b. Prevent excessive current from flowing in the event of a short circuit.
    c. Move electric charge from low potential to high potential.
    d. Convert electrical energy into heat with a large current.

8. Based on the table above, the relationship between V, I, and R is..

No.	V (volt)	I (ampere)
1.	1.50	0,08
2.	2,80	1,50
3.	3,99	2,10

    a. The greater the V, the greater the I, and R remains constant.
    b. The value of R is directly proportional to V and I.

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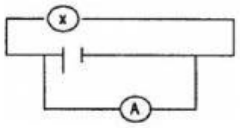
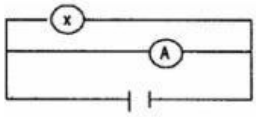
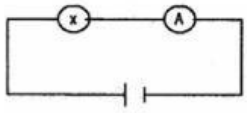
c. The value of R is the result of multiplying V and I.
d. The value of I is directly proportional to R and inversely proportional to V

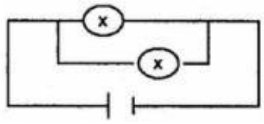
9. The potential difference between the ends of a dry cell when the dry cell is conducting an electric current is called… (the circuit is in Closed condition)
   a. Electromotive force
   b. Potential difference
   c. Internal resistance
   d. Source Energy

10. The correct diagram showing the installation of an Ammeter Ⓐ is shown by the picture.

a. 

b. 

c. 

d. 

11. Look the table below!

Type of wire	Resistivity
Metal A	1.72×10^{-8} Ωm
Metal B	2.82×10^{-8} Ωm
Metal C	9.8×10^{-8} Ωm
Metal D	44×10^{-8} Ωm

The type of wire that is best for conducting electric current is metal…
   a. metal A
   b. metal B
   c. metal C
   d. metal D

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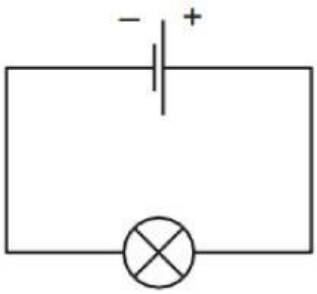
12. A. cell is connected to a lamp, as shown.



A charge of 4.0C flows through the lamp in the 2 seconds. What is the direction of the electron flow in the lamp and what is the current in the lamp?

	the direction of electron flow in lamp	Current(A)
A	from left to right	2
B	from left to right	8
C	from right to left	2
D	from right to left	8

13. Some resistors are made using one type of wire. Two different lengths of wire are available. Each length is available in two different diameters. Which wire has the highest resistance? ($R=\rho \times l/A$)
    a. the wire with the greater length and the larger diameter
    b. the wire with the greater length and the smaller diameter
    c. the wire with the smaller length and the larger diameter
    d. the wire with the smaller length and the smaller diameter

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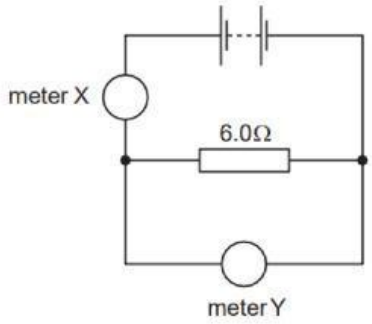
14. Four students are each given an identical resistor and asked to find its resistance. They each measure the potential difference between the resistor and the current in it. One student makes a mistake. Which row shows the results of the student that makes a mistake

	potential difference (V)	Current(A)
A	1.2	0.5
B	2.4	1.1
C	1.5	0.625
D	3.0	1.25

15. The circuit shown contains a battery, a 6.0 Ω resistor, and two meters X and Y.
One meter records current and one meter records potential difference.



Which row shows possible values for the readings on the meters?

	meter X	meter Y
A	2 A	12 V
B	2 V	12 A
C	12 A	2 V
D	12 V	2 A

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