

XYZ International School of Physics  
2547 Broadway Street, North Charleston, South Carolina 29420

**PHY0101 - ELECTRICITY**  
**Test Paper**

1.5 hours

30 marks

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**INSTRUCTIONS**

- *Don't Copy*
  - *You can use calculators*
  - *Check the time in between*
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**SECTION - A**

Answer any three of the following multiple choice questions.

- *Each right answer will secure you 1.5 marks.*
- *There is no negative marking.*

**Question 1:** What is the resistance of the given carbon resistor?

*(1.5 marks)*

*Hint: Use the colour code for carbon resistors.*



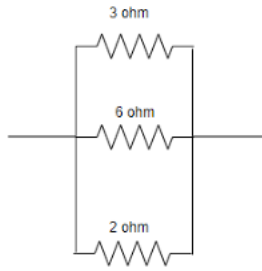
Figure 1

- (a) 10 k $\Omega$   
(c) 100  $\Omega$

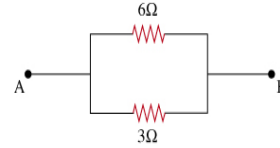
- (b) 1 k $\Omega$   
(d) 100 k $\Omega$

**Question 2:** Find the equivalent resistance in both cases?

(1.5 marks)



(a)



(b)

- (a) 1 Ω, 2 Ω
- (b) 2 Ω, 1 Ω
- (c) 0.33 Ω, 0.5 Ω
- (d) 0.5 Ω, 0.33 Ω

**Question 3:** The Ohm's law is given by the following equation. What can you say about the quantity R?

(1.5 marks)

$$V = IR$$

- (a) Always Constant
- (b) Constant at times; changes with physical conditions
- (c) Variable
- (d) Infinite

**Question 4:** In parallel combination of n cells, we obtain

(1.5 marks)

- (a) more voltage
- (b) more current
- (c) less voltage
- (d) less current

## **SECTION - B**

**Write answers to the following questions in 1 or 2 sentences.**

- Answer all questions.
- Marks will be deducted for exceeding the prescribed word limit.

**Question 1:** State Ohm's Law.

(1 mark)

**Question 2:** What is an electric fuse?

(1 mark)