UNITED NATIONS SCHOOL IED
PREPARATION WORKSHOP
3rd TERM
PHYSICS
GRADE 9

NOTE: The questions and answers must be copied and solved in the physics notebook as a requirement to take the competency-based test.

DUE DATE: November 6, 2024

Problems:

1. A circuit has a resistance of 7.5 Ω and a current of 1.8 A. What is the voltage in the circuit?

2. If the voltage in a circuit is 23.7 V and the resistance is 6.4 Ω, how much current flows through the circuit?

3. In a circuit with a voltage of 48.5 V, the current flowing is 3.6 A. What is the resistance of the circuit?

4. A lamp has a resistance of 52.3 Ω and is connected to a 119.5 V source. What current flows through the lamp?

5. What resistance must a device have if it is connected to a 218.8 V source and the current flowing is 4.7 A?

6. If a wire has a resistance of 12.8 Ω and the current through it is 0.75 A, what voltage is needed for it to work?

7. A battery of 8.5 V supplies current to a circuit with a resistance of 2.7 Ω. What current flows through the circuit?

8. If you have a resistance of 95.5 Ω and the current is 0.95 A, what voltage do you need to apply?

Part 2: Uniform Rectilinear Motion (URM)
Problems:

9. A car travels at a constant speed of 18.6 m/s for 12.3 s. What distance does it cover?

10. A train travels a distance of 548.5 m in 21.6 s. What is its speed?

11. If a cyclist covers 312.5 m in 28.9 s, what is their speed?

12. A pedestrian walks at a constant speed of 1.75 m/s for 45.6 s. How far do they travel?

13. A car takes 13.2 s to cover 482.6 m. What is the car's speed?

14. A motorcycle travels at 57.8 km/h. How long does it take to cover 125.5 m? (Note: convert the speed units to m/s).

15. An airplane travels at a constant speed of 268.5 m/s and covers a distance of 945.3 km. How long does it take to reach its destination?