Non-Negotiables: Physics Paper 1

1. What is energy?
Answer:
The ability to do work or cause change.

2. Give one example of a renewable energy resource.
Answer:
Solar energy (also: wind, hydroelectric, tidal).

3. What is wasted energy usually transferred to?
Answer:
The surroundings as heat.

4. What is the equation for kinetic energy?
Answer:
Kinetic energy = ½ × mass × velocity^2

5. What does insulation do in a house?
Answer:
Reduces heat transfer to keep the house warm.

6. What is electric current?
Answer:
The flow of electric charge.

7. What is the unit of current?
Answer:
Amps (A).

8. State the equation linking voltage, current and resistance.
Answer:
Voltage = current × resistance (V = I × R)

9. What happens to current in a series circuit?
Answer:
The current is the same throughout the circuit.

10. What device is used to measure potential difference?
Answer:
A voltmeter.

11. What happens to particles when a substance is heated?
Answer:
They gain energy and move faster.

12. What is the state of matter in which particles are closest together?
Answer:
Solid.

13. What is density?
Answer:
Mass per unit volume.

14. What is an atom?
Answer:
The smallest part of an element that can exist.

15. What is radioactive decay?
Answer:
The process by which an unstable nucleus loses energy by emitting radiation.