10 Ramped Questions on How a Transformer Works

1. What device is used to change the voltage of an alternating current supply?
2. Name the two coils found inside a transformer.
3. Which coil is connected to the input voltage supply?
4. What type of current is needed for a transformer to work?
5. What happens to the magnetic field around the primary coil when alternating current flows through it?
6. Why is an iron core placed between the primary and secondary coils?
7. Explain how a changing magnetic field in the iron core produces a voltage in the secondary coil.
8. A transformer has 200 turns on the primary coil and 100 turns on the secondary coil. Is it a step-up or step-down transformer? Explain your answer.
9. Explain, in the correct order, how electrical energy in the primary coil is transferred to electrical energy in the secondary coil.
10. A National Grid transformer increases the voltage before electricity is sent through power lines. Explain why increasing the voltage makes the transmission of electricity more efficient.