

11. Змінний струм використовується як джерело електричної енергії як в промисловості, так і побуті.

Exercise 10. Put special questions to the following sentences.
1. Current carries electrical energy from a power supply to the components of the circuit.
2. A conductor can be heated by electric current.
3. Alternating current has several useful characteristics.
4. Electricity is conducted through some things better than others do.

5. The electrons are passed from atom to atom, creating an electric current.

Exercise 11. Answer the following questions.

1. What is an electric current?
2. What is the flow of charges through a circuit caused by?
3. How is resistance measured?
4. How do we call an atom that has the same number of electrons and protons?
5. What are insulators?
6. How do electrons behave in conductors?
7. Why are rubber, plastic, cloth and glass good insulators?
8. What is AC?
9. What is DC?
10. Why is AC widely used as a source of electric power in industry?

Exercise 12. Read the following text and answer the question:

'Electrons', 'electricity', 'electronic' and other words that begin with 'electr...' all originate from the Greek word 'electron', meaning 'beaming sun'. In Greek, 'electron' is the word for amber. Amber is a very pretty goldish brown 'stone' that sparkles gold and yellow in sunlight. Amber is actually fossilized tree sap! Millions of years ago insects got stuck in the tree sap. Small insects which had bit dinosaurs, had blood with DNA from the dinosaurs in the bodies, which were now fossilized in the amber. Ancient Greeks discovered that amber

2. When electrons move ... the atoms of matter, a current of electricity is created.

3. The electrons are passed ... atom ... atom ... atom, creating an electric current.
4. Electricity is conducted ... some things better than ... others.
5. Each branch ... parallel circuits can be switched ... or ... independently.
6. Electrons spin around the center, or nucleus, ... the same way the moon spins around the Earth.

Exercise 8. Use the proper form of the verb in brackets.

1. An electric current (be) the flow of charges.
2. Current (carry) electrical energy from a power supply.
3. The current (vary) to almost any desirable value by a transformer.
4. The way the electric current flows through (call) a circuit.
5. Rubber (not / allow) electricity to flow freely.
6. Substances through which electricity easily (transmit) (call) conductors.

7. Copper (carry) the current more freely than iron.

Exercise 9. Translate the following sentences into English.

1. Електричний струм – це потік зарядів.
2. Електричний струм протікає, якщо є різниця потенціалів.
3. В металевих провідниках зарядами є електрони.
4. В рідинах та газах заряди – іони.
5. Електрон – це негативно заряджена елементарна частка, протон – є позитивно зарядженою часткою.
6. Кожний атом має певну кількість електронів, протонів і нейтронів.
7. Вчені та інженери винайшли технології створення великої кількості позитивно заряджених атомів і вільних електронів.
8. Електричний струм вільно проходить через провідники.
9. гума, пластмаса, скло, тканина мають високий електричний опір.
10. Струм, який протікає безперервно в одному напрямку, називається постійним струмом.