Eng- | Russian

Measuring devices

Any instrument which measures electrical values is called a meter.

An ammeter measures the current in amperes. The unit is named after Andre Marie Ampere, a French scientist, who discovered a great number of facts about electricity over a hundred years ago. When the ammeter is used the circuit should be opened at one point and the terminals of the meter should be connected to it. The ammeter is connected in series, the positive terminal of the ammeter is connected to the positive terminal of the source, and the negative terminal of the ammeter is connected to the negative terminal of the source. Scales of the ammeter can be graduated or calibrated in amperes, milliamperes or microamperes. In order to receive the correct readings on the ammeter scale the ammeter must have a low resistance coil.

A voltmeter measures the voltage and the potential difference between two points in a circuit. The calibration of voltmeter is usually in volts, millivolts or microvolts. The voltmeter must be connected in parallel to a circuit which voltage is measured. The resistance of the operating coil of the voltmeter must be as high as possible to get the correct readings on a scale.

An ohmmeter is used to measure the value of resistance. It consists of a milliammeter calibrated to read in ohms, a battery and resistors. The ohmmeter is connected in parallel and the circuit is not opened when its resistance is measured.

The measurement of the power in a DC circuit can be achieved by means of an ammeter and voltmeter, because the power in watts is the product of current and the voltage.

To measure AC power correctly the special meter, which is called a wattmeter, is used. The wattmeter combines in itself the ammeter, the voltmeter and the instrument measuring the phase difference. The wattmeter gives a reading of power in watts.

1) a scale	шкала
2) a reading	показание
3) an operating coil	рабочая рамка
4) a product	произведение
5) a power	мощность
6) AC power	мощность переменного тока
7) DC power	мощность постоянного тока

Задание 2: Перепишите вопросы и ответьте на них.

1) How must the ammeter be connected to the circuit?
2) What does an ohmmeter measure?
3) What is the power in a DC circuit?
4) Whom is the volt named after?

Задание 3: *Перепишите предложения. Повторите настоящее неопределённое время (Present Indefinite). К каждому предложению задайте вопрос, начиная со слова, данного в скобках:*

1) Any instrument measuring electrical values is called a meter. (What)
2) A voltmeter measures the voltage and the potential difference between two points in a circuit. (How)
3) The voltmeter is connected in parallel to a circuit which voltage is measured (How)
4) An ohmmeter consists of milliammeter, a battery and resistors. (What... of)
5) The ohmmeters are connected in parallel. (How)
6) The wattmeter gives a reading of power in watts. (What... in)

I. **Give Russian equivalents**

1. electric charge.
2. electrical wire.
3. a property of some subatomic particles
4. electromagnetic fields
5. the capacity of an electric field
6. the motion of an electric charge
7. a quantity of electrical potential energy
8. a working connection
9. electric power
10. to measure in amperes

II. Say True or False

1. Electrically charged matter is influenced by, and produces, electromagnetic fields.
2. A movement or flow of electrically charged particles is measured in farads.
3. The capacity of an electric field to do work on an electric charge, measured in amperes.
4. A connection gives the user of "electricity" access to the electric field present in elecurical wiring.

III. Translate into Russian part of the text "Electric power"

IV. Write the numerals

1.14	6. 4/7
2. 971	7. 7 905 4444 33 2
3. 506	8. 9, 004
4. 86, 309	9. 47. 0007
5. 2004	10. 6 1/3