Exercise 2

Электрический заряд (electric charge); два различных типа (the two different types); положительный (positive); отрицательный (negative); эксперимент (experiment); исследования в области электричества (research in the field of electricity); атмосферное электричество (atmospheric electricity); молния (lightning); электростатический заряд (electrostatic charge); избыток (excess); недостаток (shortages); сила (power); квадрат расстояния (square of the distance); распределять (distributes); измерять (measure); наблюдения (observations); теория электрических линий (electric lines); искусственный (artificial); электрохимический источник (electrochemical source); электрические волны (electric waves); теория электронов (electron theory); основа современной электрической теории (the basis of modern electrical theory).

 Exercise 3

1. The first machine for producing an electric    a) James Watt

Charge was described by …                                b) Alfred Nobel

                                                                                      c) Otto von Guericke

2.  There are two different types of electric         a) soft and hard

     charge …                                                         b) negative and positive

c) black and white

1. An electric charge distributes itself                 a) hollow metal sphere

Uniformly over the surface of …                    b) flat piece of wood

                                                                         c) a Leyden jar

4.  A magnetic field exists around …                   a) storage battery

                                                                              b) electric current flow

                                                                              c) the neighborhood

5.  Electric circuits obey the law of …                 a) gravitation

                                                                              b) energy conservation

                                                                              c) Newton

1. The properties of electromagnetic waves        a) controversial

and light are …                                                 b) negative

                                                                               c) identical

1. The widespread use of electricity as a             a) Albert Einstein

source of power is largely due to the                b) Thomas Edison

work of …                                                         c) Nicola Tesla

Exercise 4

1. Different types charge: positive and negative.

2. The atmospheric electricity that causes the phenomena of lightning and thunder.

3. Electric charge distributes itself uniformly over the surface.

4. Conducted important experiments in electrical currents.

5. Contributions to the study of electricity in 19th century.

6. Electricity is a form of energy.

7. The electron theory, which is the basis of modern electrical theory.

8. The widespread use of electricity as a source of power.

Exercise 5

1. There are two types of electric charges: positive and negative.

2. His experiments proved that atmospheric electricity, which causes the phenomenon of lightning and thunder, is identical to the electrostatic charge of the "Leyden jar"

3. The force between electric charges varies inversely proportional to the square of the distance between the charges.

4. This scientist made a great contribution to the development of the doctrine of electricity

5. Electricity is a form of energy

6. Electrical circuits obey the laws of conservation of energy

7. Properties of electromagnetic waves

8. The widespread use of electricity as an energy source occurred at the beginning of the last century

Exercise 2

Противоположено заряженный (oppositely charged); металлический проводник (metallic conductor); заряд (charge); поток электронов (a flow of electrons); проводник (conductor); электротехника (electrical engineering); непрерывная система (continuous system); низший потенциал (lowest potential); высший потенциал (highest potential); электрический ток (electric current); ампер (ampere); соответствовать (match); сопротивление (resistance); обычные условия (usual conditions); закон Ома (Ohm's law); уравнение (equation); формулировка (wording); температура проволоки (wire temperature); атомы (atoms); измерять (measuring).

Exercise 3

1. Charged bodies are connected by a metallic conductor

2. Electric current has been conventionally assumed to flow in the opposite direction, that is, from positive to negative

3. The second is the rate of current flow

4. Resistance necessarily limits the current

5. Ohm's law may be stated in the form of the algebraic equation

6. The electrons making up the current collide with the atoms of the conductor and give up energy

7. The amount of energy expended in an electric circuit is expressed in terms of the joule

8. Magnet or a compass needle placed near the wire will be deflected

Exercise 4

1. Equal and oppositely charged bodies are connected to each other by a metal conductor

2. The flow of electrons from a negatively charged body to a positively charged body

3. The flow of electrons from a point with a lower potential to a point with a higher potential

4. The resistance in the network limits the amount of current

5. Ohm's law can be expressed as the following algebraic equation.

6. When an electric current pass through the wire, the temperature of the wire rises

7. When current electrons collide with conductor atoms, energy is generated.

8. The compass needle located next to the wire will be deflected in a direction perpendicular to the wire