*I. Перепишите предложения. Переведите на русский язык, обращая*

*внимание на перевод герундия. Подчеркните герундий в предложениях.*

1. Studying natural phenomenon without making observations is useless.
2. Russian scientists played an important part in solving this problem.
3. The lightning conductor, familiar to everybody at present, is a metal device protecting buildings from strokes of lightning by conducting the electrical charges to the earth.
4. We all know of their designing a new type of semiconductor radio set.

*II. Перепишите предложения, подчеркните причастия. Переведите*

*предложения на русский язык. Укажите № предложения, в котором*

*употреблен независимый причастный оборот.*

1. Having experimented with electricity and magnetism, Gilbert wrote a book on magnetism.
2. Many hydroelectric stations were built in our country, the one on the Angara being one of the largest.
3. This e-mail transmitted by using the Internet is very important for our professor.
4. Solar batteries converting the energy of the sun directly into electric current are sources of electric energy for radio and television equipment on spaceships and man-made satellites.
5. While using the Web you can start your program anywhere you want.
6. We saw the experiment worker operating a new very complex machine with great skill.

*III. Перепишите предложения и переведите их на русский язык, обращая*

*внимание на глаголы в сослагательном наклонении.*

1. It is highly desirable that more radio-electronic devices should be applied for astronomical observations and measurements.
2. If you watched a laser operate, you might be surprised at the simplicity of a device capable of such power.
3. It is necessary that highly sensitive reception devices be made for the radio telescope to achieve better results in observation.
4. If friction could be entirely eliminated, a body set in motion on a level surface would continue to move indefinitely.

*IV. Перепишите предложения. Переведите на русский язык, обращая*

*внимание на условные придаточные предложения.*

1. Provided electronic and radio navigation equipment had not been improved so radically in recent years, aircraft flying would not have become so reliable and efficient.
2. If some current flows through a thin wire and then the same amount of current is sent through a thicker one, a different amount of heat will be developed in both these wires.
3. If we solved the problem of controlled thermonuclear reactions, we could use oceans of fuels.

*V. Прочитайте текст, перепишите его и письменно переведите на*

*русский язык.*

**Thermal Power-station**

A modern thermal power-station is known to consist of four principal components, namely, coal handling and storage, boiler house, turbine house, switchgear.

If you have not seen a power-station boiler it will be difficult for you to imagine its enormous size.

Besides the principal components mentioned above there are many additional parts of the plant. The most important of them is the turbogenerator in which the current is actually generated.

A steam turbine requires boilers to provide steam. Boilers need a coal-handling plant on the one hand and an ash-disposal plant on the other. Large fans are quite necessary to provide air for the furnaces. Water for the boilers requires feed pumps. Steam must be condensed after it has passed through the turbines, and this requires large quantities of cooling water. The flue gases carry dust which must be removed by cleaning the gases before they go into the open air.

A modern thermal power-station is equipped with one or more turbine generator units which convert heat energy into electric energy. The steam to drive the turbine which, in its turn, turns the rotor or revolving part of the generator is generated in boilers heated by furnaces in which one of three fuels may be used-coal, oil and natural gas. Coal continues to be the most important and the most economical of these fuels.

At present great attention is being paid to combined generation of heat and electricity at heat-and-power plants and to centralized heat supply. One of the world’s largest heat-and-power installations is operating at the Moskowskaya thermal power-station-25.

Thermal power-stations are considered to be the basis of our country’s power industry. More than 80% of the country’s total power output comes from the above stations. It is necessary to say that separate power-stations in our country are integrated into power systems. Integration of power systems is a higher stage in the scientific and technical development of power engineering.

*VI. Письменно ответьте на вопросы по содержанию текста:*

1. What does a modern thermal power-station consist of?
2. What is the efficiency of such power-stations?