Выразите основную идею текста и свое отношение к ней на английском языке, а также

- переведите текст

- проанализируйте глаголы-сказуемые в предложениях;

- найдите сложноподчиненные предложения и определите, как они соединены;

- распознайте инфинитивные, герундиальные и причастные обороты в предложениях.

**Geology**

Earth sciences primarily deal with the history, chemical composition, physical characteristics, and dynamic behavior of solid Earth, fluid streams and oceans, and gaseous atmosphere. Because of the three-phase nature of the Earth system, Earth scientists generally have to consider the interaction of all the three phases – solid, liquid and gaseous – in the most problems that they investigate.

The geosciences (geology, geochemistry, and geophysics) are concerned with the solid part of the Earth system. Geology is largely a study of the nature of Earth materials and processes, and how these have interacted through time to leave a record of past events in existing Earthly features and materials. Hence, geologists study minerals, rocks, ore deposits, mineral fuels and fossils, and the long-term (долгосрочный) effects of terrestrial and oceanic waters and of the atmosphere. They also investigate present processes in order to explain past events.

Geophysics deals with the physical characteristics and dynamic behavior of the Earth system and thus with a diversity of natural phenomena. For example, earthquakes, volcanism, and mountain building throw light on structure and constitution of the Earth’s interior. Study of the magnetic field involves considering the Earth as a self-sustaining dynamo.

Man’s entry into the space age calls for a vast increase in knowledge of the environment through which vehicles and living things will go and return. Many aspects of the Earth’s atmosphere are now being studied intensively for the first time. Many important characteristics of the ocean were discovered, and with instruments and facilities developed during World War II, oceanographic research has been going on at a quickened pace.

Questions to be answered in writing:

1. Why is the nature of the Earth system considered as the three-phase one?

2. How can the geologists explain the past events?

1. Which one of the geosciences deals with studying a diversity of natural phenomena?

4. What are the factors accelerating the geo-research?

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**Metallurgy**

Metallurgy is the technology and science of metallic materials. Metallurgy as a branch of engineering is concerned with the production of metals and alloys, and their performance in service. Metallurgy has played an important role in the history of civilization. Metals were first produced more than 6000 years ago. Because only a few metals, principally gold, silver, copper, and meteoric iron, occur in the uncombined state in nature, and then only in small quantities, primitive metallurgists had to discover ways of extracting metals from their ores. Quite large-scale production of some metal was carried out in the Middle Ages in central and Northern Europe. Basic metallurgical skills were also developed in other parts of the world.

The scale of metalworking developed with the growth of industrial organizations. Today’s metallurgical plants supply metals and alloys to the manufacturing and construction industries in many forms, such as beams, plates, sheets, bars, wire, and castings. Rapidly developing technologies such as communications, nuclear power, and space exploration demand new techniques of metal production and processing.

The field of metallurgy may be divided into process metallurgy (production metallurgy, extractive metallurgy) and physical metallurgy. According to another system of classification, metallurgy comprises chemical metallurgy, mechanical metallurgy (metal processing and mechanical behavior in service), and physical metallurgy.

Metallurgy occupies a position of the juncture of physics, chemistry, mechanical and chemical engineering. It also borders electrical, civil, aeronautical, and nuclear engineering.

Questions to be answered in writing:

1. What is *metallurgy*?

2. How did metalworking develop?

3. What are the subdivisions of the metallurgy field?

4. What other fields and subjects does metallurgy border?