**Text 1.1 Minerals**

**Ex. 1. Study the vocabulary.**

Acid - кислота, кислотный

Brittle - ломкий, хрупкий

Common - обычный, обыкновенный, типичный, распространенный compound соединение, сложный

Condition - условие, положение, состояние, обстоятельства

constituent компонент, элемент, составляющая, составляющий, составной

crust - кора, корка

feldspar - полевой шпат

gneiss - гнейс, мигматит (полосчатая порода из полевого шпата и сланца) greasy масляный

homogeneous - однородный

igneous rock - вулканическая порода

occurrence - встречаемость, распространенность, наличие

to occur - встречаться, происходить, иметь место

to possess - иметь, обладать

property - свойство

quartz - кварц

sandstone песчаник

sedimentary - песчаный

silicon - кремний

variety - разнообразие

to vary - варьироваться

**Ex. 2. Read and translate the text.**

Minerals are the basic naturally occurring inorganic homogeneous units having definite physical and chemical properties which are combined in various ways and under different conditions to form rocks. Most minerals consist of elements combined as chemical compounds although a few may occur as native elements, for example gold, silver, copper, and carbon (diamond and graphite). Eight elements make up about 98% of the earth’s crust. Oxygen is the most abundant and seven other elements unite with oxygen to make up many of the common minerals. The most fundamental 6 combination of these elements is their union with oxygen to form oxides. When silicon unites with oxygen, silicon dioxide is formed, which unites with water and forms acids. The six other elements unite with oxygen and water to form bases. The acids and bases combine to form silicates, which are the most abundant compounds in the earth’s crust. Feldspars Feldspars are probably more widely-distributed than any other group of rock forming minerals. They occur in most of the igneous rocks, such as granites and lavas; in certain sandstones and conglomerates among sedimentary ones; and in gneisses of the metamorphic rocks. Feldspar is a family name, and not that of a single mineral. It constitutes one of the most, if not the most, important group of rock-forming minerals; nearly 45% of the earth’s crust is composed of feldspar. Quartz Quartz is one of the commonest minerals which is present in many rocks and solids in a wide variety of forms. It consists of silicon and oxygen. It forms the major proportion of most sands. Quartz is crystalline, it possesses no cleavage, its colour varies widely from colourless or white through grey and brown to black, sometimes yellow, red, pink, green and blue. It is luster vitreous, sometimes greasy. It is brittle. Quartz has widespread occurrence in igneous, sedimentary and metamorphic rocks. It is an important constituent of the acid igneous rocks, such as granites, and may occur in gneisses, and is the predominant constituent in quatzites. It is common in sedimentary rocks, forming the principle mineral in sandstones. It is associated in rocks chiefly with feldspar.

**Ex. 3. Answer the following questions on the text**.

1. What is the composition of minerals?

2. How do oxides form?

3. What way do silicates form?

4. Where do feldspars occur?

5. What does quartz consist of?

6. What are the physical characteristics of quartz?