

29. Прочитайте следующие сочетания слов. Переведите их:

the contraction and expansion of rocks  
the destructive action of water  
the solvent action of water  
under the influence of heat  
fine-grained sand  
at an equal rate  
external and internal forces  
hard conditions  
the Earth's surface  
mode of occurrence  
the layers of oil

the destruction of rocks  
lateral pressure  
physical and chemical weathering  
the consolidation of sediments  
to be of unequal hardness  
natural waters  
considerable transformations  
hard rocks  
hardly noticeable cracks  
bedded deposits

30. Определите значения выделенных слов по сходству их корней (корнями соответствующих слов в русском языке:

**active processes**; **physical or mechanical weathering**; the change in **temperature**; different **minerals**; varied **forms**; **chemical agents**; **complex changes**; the **disintegration** of rocks; cold **climate**; high mountain **peaks**; living **organisms**; to **accelerate** the destruction of rocks

31. а) По заголовку и выделенным словам определите, о чем говорится в тексте Б.

б) Прочитайте текст Б и скажите, какое действие оказывает вода на горные породы при выветривании. Приведите примеры из текста.

## ТЕКСТ Б

### Weathering of Rocks

All rocks which are exposed on the Earth's surface (high mountain peaks, déserts) are decomposed to a certain degree. The process of rock disintegration by the direct influence of local atmospheric conditions on the Earth's surface is called *weathering*. This phenomenon is often referred to in geology because weathering is an active process. It takes place in the upper layers of the Earth's crust.

The main cause of *physical weathering* is the change in temperature that takes place with the succession of day and night. This phenomenon can best be observed in the deserts and high mountains where the changes in temperature are common.

During the day under the influence of heat, rocks expand whereas at night they begin to contract. As rocks are generally composed of different minerals, their expansion and contraction do not occur uniformly. As a result of this rocks crack. At the beginning

these cracks or fissures are hardly noticeable but gradually they become wider and deeper until the whole surface of rock is finally transformed into gravel, sand or dust.

In the regions of a moderate or cold climate, where the temperature in winter goes down to below 0 (zero), the decomposition of rocks is greatly facilitated by the action of water. When water freezes it increases in volume and develops enormous lateral pressure. Under the action of water, rocks decompose to pieces of varied forms and sizes.

The decomposition of rocks under the direct influence of heat and cold is called *physical weathering*.

Rocks are subjected not only to physical decomposition but also to *chemical weathering*, i.e. to the action of chemical agents, such as water, carbon dioxide and oxygen. In a general way, chemical weathering is an acid attack on the rocks of the Earth's crust, in particular an attack on the most abundant minerals — quartz (sand) and aluminosilicates (clays). Only few minerals and rocks are resistant to the action of natural waters. The solvent action of water is stronger when it contains carbon dioxide. Water causes more complex and varied changes. With the participation of oxygen and carbon dioxide up to 90 per cent of rocks is transformed into soluble minerals, which are carried away by the waters.

Organisms and plants also take part in the disintegration of rocks. Certain marine organisms accelerate the destruction of rocks by making holes in them to live in. The action of plants can often be even more destructive. Their roots penetrate into the fissures of rocks and develop the lateral pressure which fractures and destroys rocks.

32. Укажите, какие предложения соответствуют содержанию текста. Подтвердите свои ответы фактами из текста.

1. The process of sedimentation is called *weathering*.
2. The change in temperature causes physical weathering.
3. As a rule during the night rocks expand.
4. When freezing water decreases in volume and develops enormous lateral pressure.
5. The decomposition of rocks is due to the influence of heat and cold.
6. As a rule water contains dissolved mineral substances.
7. The solvent action of water is stronger when it does not contain carbon dioxide.

8. It should be noticed that the action of organisms and plants is destructive.

9. Certain marine organisms accelerate the destruction of rocks.

33. Ответьте на следующие вопросы:

1. What process is called weathering?
2. What process is called physical weathering?
3. Where can the phenomenon of physical weathering be best observed?
4. What process is called chemical weathering?
5. What substances can act as solvents?
6. Are all minerals and rocks resistant to the action of natural waters or only few minerals and rocks can resist the action of water?
7. How do organisms act on the destruction of rocks?

34. а) Найдите в правой колонке русские эквиваленты следующих слов и сочетаний слов:

- |   |                                    |
|---|------------------------------------|
| 1. the Earth's surface                  | а) под влиянием тепла              |
| 2. to be composed of different minerals | б) разрушительные силы             |
| 3. the expansion of rocks               | в) выветривание                    |
| 4. changes in temperature               | г) большое количество трещин       |
| 5. under the influence of heat          | д) состоять из различных минералов |
| 6. weathering                           | е) расширение пород                |
| 7. destructive forces                   | ж) проникать в трещины             |
| 8. a great number of fractures          | з) изменения температуры           |
| 9. to penetrate into fissures           | и) поверхность земли               |

б) Найдите в правой колонке английские эквиваленты следующих слов и сочетаний слов:

- |                                    |   |
|------------------------------------|---|
| 1. увеличиваться в объеме          | а) to facilitate the decomposition of rocks |
| 2. развивать боковое давление      | б) to increase in volume                    |
| 3. способствовать разрушению пород | в) to resist (smth)                         |
| 4. подвергаться гниению            | г) rock pieces of varied (different) sizes  |
| 5. растворять вещества             | д) to accelerate the process of weathering  |
| 6. сопротивляться (чему-л.)        | е) to be subjected to decay                 |
| 7. некоторые органические вещества | ж) to dissolve substances                   |
| 8. ускорять процесс выветривания   | з) to develop lateral pressure              |
| 9. куски породы различных размеров | и) certain organic substances               |