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Задание: Самостоятельную работу выполняем на листах А4, готовимся защищать работу. В тетрадях доделываем все долги по теме Coal and its Classification.

**Self Work.
Coal and Its Classification.
Variant 1.**

1. Translate word combinations.

- | | |
|--------------------------------------|---|
| a) to smelt iron ore | g) spontaneous combustion |
| b) to blend with other coals | h) different bands <i>or benches</i> of various thickness |
| c) the most abundant variety of coal | i) thin layers of clay and shale |
| d) amount of carbon | j) brilliant lustre |
| e) high-rank coal | |
| f) to weather rapidly | |

2. Match type of coal with its description.

- anthracite
- lignite
- bituminous coal
- peat

1. A low-rank brown-to-black coal containing 30 to 40 per cent of moisture. It is liable to spontaneous combustion.
2. A soft brown deposit in which plant structures can easily be seen. It has the least amount of carbon.
3. The main feature of this grade of coals is its low percentage of volatile matter and high carbon content.
4. This coal has more than 14 per cent of volatile content. There are non-coking and coking varieties, the latter being used for coke manufacture.

3. Translate the text

For along time coal has been the principal fuel, the main source of thermal and electric energy. Now it continues to play an important part in the economy. Coal is the product of vegetable matter that has been formed from the remains of plants and animals accumulated in swamp areas millions of years ago. Although some coals were deposited

4,000,000,000 years ago during the Silurian period, most coals were formed during the Upper and Lower Carboniferous geological epochs about 250,000,000 years ago.

4. Write sentences, translate them, and find Participle I. What function does it perform?

- Coal is, used intensively in blast furnaces for smelting iron ore.
- Anthracites are soft coals being used mainly for metallurgical purposes.
- New cleaner methods of using coal to heat houses have been developed.

5. Choose the right variant

1. There are ... types of coal formation.
a) 4 b) 2 c) 3
2. The first stage of coal formation was ...
a) Anthracite b) peat c) lignite
3. Peat was transformed into ...
a) Bituminous b) Anthracite c) Lignite
4. ... has the biggest carbon content and the best burning properties
a) Anthracite b) peat c) lignite
5. ... has the less carbon content.
a) Anthracite b) peat c) lignite
6. The softest coal is ... or brown coal.
a) Lignite b) anthracite c) bituminous
7. ... coals are also divided into coking and non-coking ones.
a) dry b) hard c) soft

**Self Work.
Coal and Its Classification.
Variant 2.**

1. Translate word combinations.

- | | |
|------------------------------------|--|
| a) benches of varying thickness | g) Coal beds |
| b) regular deposits | h) moisture content |
| c) parallel planes | i) liability to spontaneous combustion |
| d) to produce a mixture | j) coal ranks |
| e) lustrous metal | |
| f) coking and non-coking qualities | |

2. Match type of coal with its description.

- anthracite
- lignite
- bituminous coal
- peat

1. A low-rank brown-to-black coal containing 30 to 40 per cent of moisture. It is liable to spontaneous combustion.
2. A soft brown deposit in which plant structures can easily be seen. It has the least amount of carbon.
3. The main feature of this grade of coals is its low percentage of volatile matter and high carbon content.
4. This coal has more than 14 per cent of volatile content. There are non-coking and coking varieties, the latter being used for coke manufacture.

3. Translate the text

The physical characteristics of coal concern the structural aspects of the coal bed and texture. Structurally coal beds are characterized by the same irregularities in thickness, uniformity and continuity as other strata of sedimentary origin. Thickness varies greatly. Coal beds may consist of essentially uniform continuous strata or like other sedimentary deposits may be made up of bands or benches of varying thickness. The benches may be separated by thin layers of clay, shale, pyrite or other mineral matter, commonly called partings. Like other sedimentary rocks coal beds may be structurally disturbed by folding and faulting.

4. Write sentences, translate them, and find Participle I. What function does it perform?

- Price and ease of use have been the major factors affecting the changing energy demand in the UK in the last forty years.
- We are getting some electricity from nuclear power already.
- Instead of burning fossil fuels we should be concentrating on more economic uses of electricity.

5. Choose the right variant

1. There are ... types of coal formation.
a) 2 b) 4 c) 3
2. The first stage of coal formation was ...
a) peat b) anthracite c) lignite
3. Peat was transformed into ...
a) Lignite b) Anthracite c) Bituminous
4. ... has the biggest carbon content and the best burning properties
a) anthracite b) peat c) lignite

5. ... has the less carbon content.
- a) anthracite b) peat c) lignite
6. The softest coal is ... or brown coal .
- a) lignite b) anthracite c) bituminous
7. coals are also divided into coking and non-coking ones.
- a) dry b) soft c) hard

Self Work.
Coal and Its Classification.
Variant 3.

1. Translate word combinations.

- | | |
|---|--|
| a) thickness of iron ore deposits | f) to store in open piles |
| b) new technologies to utilize coal | g) smelting iron ore |
| c) to estimate value of a coal deposit | h) difference between lignite and brown coal |
| d) geological strata | i) sedimentary strata coal beds |
| e) thickness, uniformity and continuity | j) a smoky flame |

2. Match type of coal with its description.

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- lignite
- bituminous coal
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2. A soft brown deposit in which plant structures can easily be seen. It has the least amount of carbon.
3. The main feature of this grade of coals is its low percentage of volatile matter and high carbon content.
4. This coal has more than 14 per cent of volatile content. There are non-coking and coking varieties, the latter being used for coke manufacture.

3. Translate the text

There exist four main types of coal: anthracite, bituminous, subbituminous, lignite and brown coal. When speaking about the classification of coal based on its nature as rock mineral, scientists distinguish (различать) the following rock varieties or lithotypes such as vitrain, clarain, durain and fusain. These are the four constituents (составная часть) of coal. Price and ease of use have been the major factors affecting the changing energy demand in the UK in the last forty years. We are getting some electricity from nuclear power already. Instead of burning fossil fuels we should be concentrating on more economic uses of electricity.

4. Write sentences, translate them, and find Participle I. What function does it perform?

- Sedimentary deposits may be made up of different bands or benches of varying thickness.

- The benches may be separated by thin layers of clay, shale pyrite or other mineral matter, commonly called partings.
- Brown coal is harder than lignite, containing from 60 to 65 per cent of carbon.

5. Choose the right variant

1. There are ... types of coal formation.
a) 2 b) 4 c) 3
2. The first stage of coal formation was ...
a) peat b) anthracite c) lignite
3. Peat was transformed into ...
a) Lignite b) Anthracite c) Bituminous
4. ... has the biggest carbon content and the best burning properties
a) anthracite b) peat c) lignite
5. ... has the less carbon content.
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a) dry b) soft c) hard