1.Переведите термины на русский язык.

- 1. Связывать, скреплять
 - a) to connect b) to form c) to bind
- 2. Черный металл
 - a) non-ferrous metal b) black metal c) ferrous metal
- 3. Облицовывать
 - a) to face b) to decorate c) to cover
- 4.4V Γ VH
 - a) clay b) cast c) lime
- 5. Свойство
 - a) masonry b) property c) porosity

2.Подберите необходимое по смыслу слово.

a) secondary b) timber c) building materials d) lime e) artificial

All 1... are divided into three main groups:

Main building materials such as rocks and 2...stones, 3...and metals; binding materials such as 4..., gypsum and cement; 5... building materials which are used for the interior parts of the buildings.

3. Раскройте скобки.

- 1.Stone (to belong) to one of the oldest building materials used by man?
- 2. The outstanding property of glass (to be) its chemical inertness.
- 3. People (to use) bricks many thousands of years ago.
- 4. The term "plastics" (to cover) a range of synthetic or semi-synthetic organic condensation?
- 5. In the market the term "building products" often (to refer) to ready-made particle or sections.

4.Переведите отрывок из текста на русский язык.

At present, the construction industry is the largest in the Republic of Belarus and holds an important place in the National Economy of the country. It comprises more than 10,000 architectural, city-planning and construction organizations of various forms of ownership. Many highly educated civil engineers, who have been trained at Belarusian universities, skilled and unskilled workers are engaged in construction.

The Belarusian construction industry provides services in industrial and civil construction, construction of healthcare institutions and agricultural organizations, sports facilities, residential districts.

- 1. Which profession of civil engineering is the most prestigious, demanded and well-paid in modern society in your opinion?
- 2. Where can civil engineers work?

1.Переведите термины на русский язык.

- 1.Соединять
- a) to fasten b) to connect c) to press
- 2. Арматура
- a) fortress b) reinforcement c) strength
- 3. Каменная кладка
- a) mortar b) masonry c) mixture
- 4.Придавать форму
- a) to shape b) to compress c) to subject
- 5. Гнить, разрушаться
- a) to collapse b) to dwell c) to decay

2.Подберите необходимое по смыслу слово.

a) artificial b) interior c) building materials d) binding e) secondary

We use main 1... for bearing structures. 2... materials are used for making 3... stones and for binding together masonry units. For 4... finish of the building we use 5... materials.

3. Раскройте скобки.

- 1.Soil (to provide) good thermal mass.
- 2. The heat/coolness (to stay) longer in a wood built house.
- 3. Some of these buildings (to remain) habitable for hundreds of years?
- 4. Sand (to be) also used as a part of the concrete mix.
- 5. You (to find) stone buildings in most major cities?

4.Переведите отрывок из текста на русский язык.

Concrete is a building material made by mixing such natural aggregates as sand, gravel, broken stone, slag, cinder and cement together with sufficient water to produce a mixture of proper consistency. Together, these materials provide a hard, rocklike substance that is durable, fire-resistant, and relatively inexpensive. It has a potential to be both solid and fluid (and so – take any shape). It is a flexible, malleable material, able to undergo high compressive loads. To make it even more resistant, steel reinforced bars can be added to make reinforced concrete. There are two kinds of reinforced concrete: with ordinary reinforcement and with pressed reinforcement.

- 1. Is concrete an example of a natural building material? And why?
- 2. What areas of activity does civil engineering cover?

1.Переведите термины на русский язык.

- 1. Прочный, долговечный
 - a) durable b) entire c) derivative
- 2. Применять
 - a)to refer b) to belong c) to apply
- 3. Каркас
 - a) girder b) framework c) filler
- 4. Древесина
 - a) tender b) timber c) forest
- 5. Железобетон
 - a) dense concrete b) foam concrete c) reinforced concrete

2.Подберите необходимое по смыслу слово.

a) properties b) reinforced c) cement d) concrete e) mould

1... is a mixture of 2..., aggregates and water together. Other admixtures may modify the ultimate physical 3.... Mixed concrete is a plastic material, which takes the shape of the 4.... It may be 5... by the incorporation of steel.

3. Раскройте скобки.

- 1.Steel (**not to be**) the cheapest of the ferrous metals.
- 2. Concrete and cement (to be) natural building materials?
- 3.We (to use) clay, rocks, sand and wood, even twigs and leaves to construct buildings.
- 4.Clay (to hold) heat or cold, releasing it over a period of time like stone.
- 5. You (to use) sand with cement?

4.Переведите отрывок из текста на русский язык.

One type of safety glass is toughened glass, also called tempered glass. As the term suggests, the glass is tempered – it's heated and kept hot for a certain time, to change its structure. Then if tempered glass is broken, it shatters (i.e. breaks into tiny pieces). These are a lot safer than the long, sharp pieces produced when annealed glass breaks. The disadvantage of toughened glass is that it can't withstand impacts from small objects. So in cases where impacts are a problem, another type of safety glass – laminated glass – is generally used. The advantage of having a laminated material is not just that it's very strong. If the glass does break, the broken pieces are held together, and don't fly.

- 1. What are the main groups of metals? What are they used in construction for?
- 2. Is water an enemy of concrete? Why?

1.Переведите термины на русский язык.

- 1. Строительный раствор
 - a) amenity b) mortar c) main
- 2. Плита, блок
 - a) beam b) slab c) slate
- 3. Сплав
 - a) alloy b) allow c) clay
- 4. Балка
 - a) sewage b) beam c) shale
- 5. Пористость
 - a) porosity b) durability c) strength

2.Подберите необходимое по смыслу слово.

a) reinforced concrete b) buildings c) steel d) construction e) glass

Industrial 1 ...comprise another significant type of construction. This type of 2... involves factories, laboratories, mines, exhibition halls, etc. Modern industrial buildings have demonstrated the advantages of 3...arches, metal frames, 4 ...walls and mass produced parts. 5... was gradually substituted for iron and permitted wider rooms and larger windows.

3. Раскройте скобки.

- 1. Building material (to be) any material which is used for construction purposes?
- 2. The amount of each material (to lead) to different styles of buildings?
- 3. The use of air-entraining agents (to reduce) the risk of surface frost damage.
- 4. Larger amounts of clay (to be) usually employed in the cob/adobe style.
- 5. The other main ingredients (to include) more or less sand/gravel.

4.Переведите отрывок из текста на русский язык.

Advances and innovations in materials science and engineering have always played a substantial role in civil engineering, building structural design, and construction. In recent years, extensive effort has been devoted to the applications of stimuli-responsive smart materials in buildings. These smart materials used in the built environment can be defined as those having a unique active property that allows them to respond to changes in their condition or the environment that surrounds them. This means that one of their features may be changed due to such external conditions as alterations in mechanical strain, electric and magnetic fields, temperature, moisture, pH and light.

- 1. What are the common properties of metals?
- 2. Where is steel used in modern construction?