**ГБОУ СПО МО «Электростальский колледж»**

**УТВЕРЖДАЮ**

**Зам.директора по УМР**

**\_\_\_\_\_\_\_\_\_\_\_\_Л.Г.Жепан**

**«\_\_\_\_\_\_»\_\_\_\_\_\_\_\_\_\_\_2015**

**Контрольная работа по изучению дисциплины**

**«Английский язык»**

**для студентов заочного отделения**

**по специальности**

**08.02.01 Строительство и эксплуатация зданий и сооружений (базовая подготовка)**

**3 КУРС**

### Рассмотрены и одобрены на заседании предметно -цикловой комиссии ООГЭС

Протокол №\_\_\_\_\_\_\_\_от \_\_\_\_\_\_\_\_\_\_\_\_ 2015г.

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**Электросталь**

**2015**

**ВАРИАНТ 1**

**1. Прочитайте и переведите текст:**

**The Properties of Concrete**

Concrete must be hard, strong, durable, dense, non-porous, fire-resisting and economical.

Concrete has proved to be durable when made of good materials, well mixed, and properly cured. Failures can be found in concrete work, but the trouble is usually caused by poor material, faulty foundations, lack of knowledge of the properties of concrete or poor workmanship. For example, some cements will give better results in sea water than others. This fact had to be established by experience and experiments.

It is more difficult to secure durable reinforced concrete than mass concrete. This is due to the reinforcing steel and the additional water required to make the concrete flow around the steel bars. When moisture reaches the steel, it will rust and the expansion caused by the rust will crack the concrete, resulting in an unsightly structure and necessary repairs. In all structures exposed to the weather the reinforcing steel must be carefully placed and well secured so that it cannot be displaced while concreting. No metal should project to the surfaces. Small wires will soon cause rust spots on the surface of the concrete if they are exposed.

Concrete, to be durable, must be made of good materials, uniform in quality, mixed with a minimum amount of water, and properly placed and protected while curing. Concrete exposed to sea water and the rise and fall of water levels, especially in cold climates where ice forms on the structures, requires specials attention in the selection of the cement, aggregates, mixing, placing and curing.

With the use of dense aggregates the proportions which will produce the densest products are generally those which contain the maximum amount of coarse aggregate and still contain enough fine aggregate to produce a smooth surface. With porous aggregates used in the production of light weight units, the amount of material in the mix passing a 50-mesh sieve is generally limited and in addition more of the coarse aggregate is used to produce a unit of less density and lower weight. This is generally desirable for light weight units except where fire resistance or watertightness are important.

The strength of plain concrete depends upon the quality of the cement, the strength and character of the aggregate, the quantity of cement in a unit of volume, and the density of the concrete. Other things being equal the strongest concrete is that containing the largest amount of cement in a given volume of concrete, the strength of the concrete varying directly as the amount of cement. With a given quantity of cement in a unit of volume, the strongest concrete is that in which the aggregates are proportioned so as to give a concrete of the greatest density that is of the greatest weight per unit of volume. The strength of concrete also depends upon the methods used in mixing, upon the care taken in measuring the ingredients, and in mixing and placing the concrete. Concrete exposed to the air hardens more rapidly than protected concrete. The setting of cement is a chemical change brought about by the addition of water to the cement, the strength increasing very rapidly the first few days, after which the mixture slowly hardens and increases in strength.

Concrete has poor elastic and tensional properties, but it is strong in compression. Its tensile strength is only one-tenth of its compressive strength. The compressive strength of plain concrete varies between wide limits, depending upon the cement, the proportions of cement and aggregates, and the methods of mixing, and depositing, and the age.

**2. Переведите на русский язык следующие английские словосочетания:**

1) reinforced concrete; 6) fire resistance;

2) unsightly structure; 7) density of the concrete;

3) a minimum amount of water; 8) the strength of concrete;

4) a smooth surface; 9) addition of water;

5) light weight units; 10) tensional properties.

**3. Найдите в тексте английские эквиваленты следующих словосочетаний:**

1) недостаток знаний; 6) особое внимание;

2) свойства бетона; 7) качество цемента;

3) морская вода; 8) количество цемента;

4) уровень воды; 9) химическое изменение;

5) холодный климат; 10) методы смешивания.

**4. Найдите в тексте слова, имеющие общий корень с данными словами. Определите, к какой части речи они относятся, и переведите их на русский язык.**

1) economics; 6) desire;

2) add; 7) resist;

3) care; 8) hard;

4) select; 9) rapid;

5) produce; 10) mix.

**5. Ответьте на вопросы по тексту:**

1.​ What kind of concrete must it be?

2.​ When has concrete proved to be durable?

3.​ What is the trouble of concrete work caused by?

4.​ What concrete requires special attention in the selection of the cement, aggregates, mixing, placing and curing?

5.​ What does the strength of plain concrete depend upon?

6.​ What is the strongest concrete?

7.​ What concrete hardens more rapidly?

**6. Составьте аннотацию к тексту (2-3 предложения).**

**ВАРИАНТ 2**

**1. Прочитайте и переведите текст:**

**Construction Works**

The first houses were built for the purpose of protecting their owners from the weather and, therefore, were very simple – a roof to keep off the rain or snow, and walls to keep out the wind.

The building erected now can be divided into two broad classifications: they are either for housing or for industrial purpose.

As far as the material is concerned, the building can be divided into stone (or brick), wood and concrete types. The brick is an artificial material made of clay then burnt to harden it. The natural stone (rubble masonry) is used for footing and foundations for external walls carrying the load. The buildings made of stone or brick are durable, fire-proof and have poor heat conductivity.

The tiers or levels which divide a building into stages or stories are called floors. These may be of timber but in stone buildings they are made of ferro-concrete details in great or small sizes.

The coverings or upper parts of buildings constructed over to keep out rain and wind and to preserve the interior from exposure to the weather, are called roofs. There should tie the walls and give strength and firmness to the construction.

Every building must be beautiful in appearance and proportional in various parts. The interior should be planned to suit the requirements of the occupants while the exterior must be simple without any excesses.

Any building should be provided with water, electricity, ventilation and heating system.

Getting water into the house is called plumbing. The plumbers have also to get the water out after it has been used. The first part of this problem is called water supply and the second one is called drainage or sewerage.

Almost everybody saw the construction of a building and followed its progress with interest. First the excavation is dug for the basement, then the foundation walls below ground level are constructed; after this the framework is erected and clothed with various finishing materials and protected by several coats of paint.

The part upon which the stability of the structure depends is the framework. It is intended for safety carrying the loads imposed. The floors, walls, roofs and other parts of the building must be carefully designed and proportioned.

The architect or designer must decide, what the size of the walls, the floors, the beams, the girders and the parts, which make up the framework, will be and how they will be placed and arranged.

Here are the main parts of a building and their functions.

**Foundations** serve to keep the walls and floors from contact with the soil, to guard them against the action of frost, to prevent them from sinking and settling which cause cracks in walls and uneven floors.

**Floors** divide the building into stories. They may be either of timber or may be constructed of a fire-resisting material. Walls are built to enclose areas and carry the weight of floors and roofs. The walls may be solid or hollow. The materials used for the walls construction can be brick, stone, concrete and other natural or artificial materials.

**Roofs** cover the building and protect it from exposure to the weather. They tie the walls and give strength and firmness to the structure.

**Turnkey construction** is the type of assistance in building different facilities. In this case the employer engages the contractor to design, manufacture, test, deliver, install, complete and commission a certain project and the contractor undertakes full responsibility for the project construction and commissioning.

The contractor then undertakes endeavors to conduct a survey and design work, as well as to work out basic and detailed engineering and supply equipment. As a rule, the contractor’s highly qualified specialists are made responsible for doing part or full construction works, carrying out installation, start-up and adjustment operations.

After the construction is completed the precommissioning starts, that is testing, checking and meeting other requirements, which are specified in the technical handbooks.

As soon as all works in respect of the precommissioning are completed and the project is ready for the commissioning, the contractor notifies the engineer (Project manager) with the message. The contractor begins the commissioning immediately after the engineer does the issue of the Completion Certificate.

The contractor carries out the guarantee test during the commissioning to make sure that the project will reach the designed performance.

Operational acceptance of the project takes place when the guarantee test has been successfully completed and the guarantees met. As a rule the contractor supplies spare parts so that the project could normally operate during the maintenance guarantee period.

Turnkey contracts are always long-term undertaking involving several parties, among them foreign and local subcontractors. They are usually won as a result of tenders where the bidders compete for the contract on the terms most favourable for the customer.

**2. Переведите на русский язык следующие английские словосочетания:**

1) artificial material; 6) stability of the structure;

2) external walls; 7) fire-resisting material;

3) poor heat conductivity; 8) technical handbooks;

4) ferro-concrete details; 9) guarantee test;

5) water supply; 10) designed performance.

**3. Найдите в тексте английские эквиваленты следующих словосочетаний:**

1) промышленные цели; 6) размер стен;

2) система отопления; 7) слои краски;

3) строительство здания; 8) запасные части;

4) ниже уровня земли; 9) период гарантии;

5) строительство «под ключ»; 10) предпусковые работы.

**4. Найдите в тексте слова, имеющие общий корень с данными словами. Определите, к какой части речи они относятся, и переведите их на русский язык.**

1) found; 6) appear;

2) firm; 7) require;

3) construct; 8) care;

4) build; 9) design;

5) beauty; 10) natural.

**5. Ответьте на вопросы по тексту:**

1.​ What were the first houses built for?

2.​ What is brick?

3.​ What are called floors?

4.​ What should any building be provided with?

5.​ What is framework?

6.​ What are roofs?

**6. Составьте аннотацию к тексту (2-3 предложения).**

**ВАРИАНТ 3**

**1. Прочитайте и переведите текст:**

**Modern Building Materials**

Some of the most important building material are: timber, brick, stone, concrete, metal, plastics and glass.

**Timber** is provided by different kinds of trees. Timbers used for building purpose are divided into two groups called softwoods and hardwoods. Timber is at present not so much used in building construction, as in railway engineering, in mining and in the chemical industry where it provides a number of valuable materials.

However, timber is still employed as a building material in the form of boards. For the interior of buildings plywood and veneer serve a number of purposes.

**A brick** is best described as a “building unit”. It may be made of clay by moulding and baking in kilns, of concrete, of mortar or of a composition of sawdust and other materials. In shape it is a rectangular solid and its weight is from 6 ½ to 9 Ib.

There exists variety of bricks for different purposes: ordinary, hollow or porous, lightweight, multicolor bricks for decorative purposes, etc. Bricks are usually laid in place with the help of mortar.

The shape and convenient size of brick enable a man to grip it with an easy confidence and, because of this, brick building has been popular for many hundreds of years. The hand of the average man is large enough to take a brick and he is able to handle more than 500 bricks in an eight-hour working day.

It is necessary, therefore, for the “would be” bricklayer to practice handling a brick until he can control it with complete mastery and until he is able to place it into any desired position.

The brick may be securely handled by placing the hand over the surface of the upper part of a brick and by placing the thumb centrally down the face of the brick with the first joints of the fingers on the opposite face. It is better to protect the thumb and the fingers with leather pads, which also prevent the skin from rough bricks.

Sometimes natural stones such as marble, granite, basalt, limestone and sandstone are used for the construction of dams and foundations. Marble, granite and sandstone are widely used for decorative purposes as well, especially with the public buildings.

**Natural stone** is used for foundations and for the construction of dams. The main varieties of building stone are basalt, granite, marble, sandstone and limestone.

**Metals:** *Aluminium*, principally in the form of various alloys, is highly valued for its durability and especially for its light weight, while *brass* is frequently used for decorative purposes in facing.

*Steel* finds its use in corrugated sheets for roofing, for girders, frames, etc. Various shapes are employed in construction.

**Plastics** are artificial materials used in construction work for a vast number of purposes. Nowadays plastics, which are artificial materials, can be applied to almost every branch of building, from the laying of foundation to the final coat of paint. Synthetic resins are the main raw material for plastics. Plastics have some good advantages as they are lighter than metals, not subject to corrosion, and they can be easier machined. Besides, they are inflammable, they can take any color and pattern, and they are good electrical insulators. More over, they possess a high resistance to chemical action.

A lot of decorative plastics, now available, have brought about a revolution in interior and exterior design. But plastics are used now not only for decoration. These materials are sufficiently rigid to stand on their own without any support. They can be worked with ordinary builders’ tools.

**Laminate** is a strong material manufactured from many layers of paper or textile impregnated with thermosetting resins. This sandwich is then pressed and subjected to heat. Laminate has been developed for both inside and outside use. It resists severe weather conditions for more than ten years without serious deformation. As a structural material it is recommended for exterior work. Being used for surfacing, laminate gives the tough surface.

**Foamed** glass is a high-porosity heat insulating material, available in block made of fine-ground glass and a frothing agent.

Foamed glass is widely used in prefabricated house building, to ensure heat insulation of exterior wall panels, and in industrial construction.

Foamed glass has a high mechanical strength, is distinguished by moisture, vapour and gas impermeability. It is non-inflammable, offers resistance to frost, possesses a high sound adsorption, and it is easily sewn and nailed.

Structural foamed glass blocks designed to fill ceilings, and for making interior partitions in buildings and rooms, to ensure heat and sound insulation.

For insulation mineral wool or cinder wool is often resorted to.

**2. Переведите на русский язык следующие английские словосочетания:**

1) building purposes; 6) foamed glass;

2) building construction; 7) heat insulating material;

3) railway engineering; 8) wall panels;

4) eight-hour working day; 9) resistance to frost;

5) raw material; 10) high sound adsorption.

**3. Найдите в тексте английские эквиваленты следующих словосочетаний:**

1) строительные материалы; 6) для многих целей;

2) химическая промышленность; 7) слой краски;

3) природные камни; 8) погодные условия;

4) декоративные цели; 9) серьезная деформация;

5) легкий вес; 10) наружная работа.

**4. Найдите в тексте слова, имеющие общий корень с данными словами. Определите, к какой части речи они относятся, и переведите их на русский язык.**

1) differ; 6) decorate;

2) construct; 7) insulate;

3) found; 8) deform;

4) wide; 9) industry;

5) resist; 10) structure.

**5. Ответьте на вопросы по тексту:**

1.​ What are the most important building materials?

2.​ What groups are timbers divided into?

3.​ What is brick made of?

4.​ What are marble, granite and sandstone used for?

5.​ What is natural stone used for?

6.​ What is the main raw material for plastics?

7.​ What is foamed glass?

**6. Составьте аннотацию к тексту (2-3 предложения).**

**2**. **Инструкция по выполнению домашней контрольной работы.**

Контрольная работа включает в себя грамматические задания, и задания на перевод, которые охватывают курс дисциплины «Иностранный язык».

Контрольная работа состоит из текста и заданий к нему. Задания включают письменный перевод текста, ответы на вопросы по тексту, а также поиск эквивалентов, выбор 1 ответа из предложенных. Контрольная работа включает в себя 3 варианта. В каждом варианте предложены задания идентичные по сложности. Поэтому студент может выбрать любой понравившийся вариант. Все задания необходимо выполнить в письменном виде.

При выполнении заданий необходимо грамматически верно расписывать полностью выстроенное предложение (без сокращений и упущений слов или фраз).

Контрольная работа должна быть выполнена в отдельной тетради или в напечатанном виде (формат А4). На обложке тетради или титульном листе следует указать специальность, курс, номер группы, фамилию, имя, отчество, дату и номер варианта.

Контрольные задания следует выполнять четким почерком или в напечатанном виде с соблюдением полей, оставленных для замечаний, комментария и методических указаний преподавателя.

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