



ДОНСКОЙ ГОСУДАРСТВЕННЫЙ ТЕХНИЧЕСКИЙ УНИВЕРСИТЕТ  
УПРАВЛЕНИЕ ДИСТАНЦИОННОГО ОБУЧЕНИЯ И ПОВЫШЕНИЯ  
КВАЛИФИКАЦИИ

Кафедра «Иностранных языков»

**Методические указания**  
по развитию навыков чтения и говорения  
по теме «Моя специальность»  
по дисциплине

**«Английский язык»**  
**(Часть 3)**

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## Аннотация

Методические указания предназначены для студентов 1 и 2 курсов направлений подготовки 08.03.01 «Строительство», 20.03.01 «Техносферная безопасность», 23.03.01 «Технология транспортных процессов», 27.03.01 «Стандартизация и метрология». Цель – развитие навыков чтения и говорения по теме «Моя специальность».

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## INDUSTRIAL AND HOUSING CONSTRUCTION

### 1. Work in a pairs and discuss the following questions.

1. What do you think the construction engineering deals with?  
Discuss your ideas with the class.
2. What do you think the duties of construction engineers are?  
Express your own point of view.

### 2. Read the text and check whether your ideas are right. Construction engineering

Construction engineering takes the full series of calculus, differential equations, physics, chemistry and structural design. Construction engineers build many of the things that people use every day. Construction engineering involves many aspects of construction including: commercial, residential, bridges, airports, tunnels, and dams. It is an extremely large industry that provides employment and business opportunity to many and continues to grow. Construction engineers have a lot of responsibilities. Typically entry level construction engineers will analyze reports and estimate project costs both in the office and in the field. Other tasks may include: analyzing maps, drawings, blueprints, aerial photography and other topographical information. Construction engineers also have to use computer software to design hydraulic systems and structures while following construction codes. They must calculate load and grade requirements, liquid flow rates and material stress point to ensure that structures can withstand stress. Keeping a workplace safe is key to having a successful construction company. It is the construction engineer's job to make sure that everything is conducted correctly.

Construction engineering build structures that are used by people every day so they must be safe and able to withstand the elements. To complete the job properly construction engineers need the knowledge of many different areas, including engineering, technology, design, mathematics, construction, customer service, management, transportation, public safety and computers. Engineering, technology and maths are necessary to ensure structures are built according to plans and specifications. Customer service, emotional intelligence, psychology, sociology and management is necessary to deal with owners, government officials, public stakeholders, subcontractors, suppliers and the general public. They also use the same knowledge to inform management on the project's progress and if any changes are needed or have occurred.

Most construction engineers have a love for maths and science,

but many other skills are required, including critical thinking, listening, learning, problem solving, monitoring and decision making.

Construction engineers have to be able to think about all aspects of a problem and listen to other's ideas so that they can learn everything about a project before it begins. During project construction they must solve the problems that they encounter using maths and science. Construction engineers must maintain project control of labor and equipment for safety, to ensure the project is on schedule and monitor quality control. When a problem occurs it is the construction engineer who will create and enact a solution.

Construction engineers need many different abilities to do their job. They must have the ability to reason, convey instructions to others, comprehend multivariables, anticipate problems, comprehend verbal, written and graphic instructions, organize data sets, speak clearly, and visualize in time-space.

Computers are an important tool used by construction engineers. They use them to write programs and solve equation. Communication is used everyday to interact with coworkers and supervisors. Documentation is used to record information that needs to be passed on to management. Most documentation is done electronically. Creative thinking is used to come up with ideas and solve problems.

**2. Read the text again and answer the following questions.**

1. What helps a construction company be successful?
2. What knowledge do construction engineers need in they job?
3. What helps construction engineers develop new ideas and solve problems?
4. What abilities do construction engineers need in they job?

**3. Match the column on the left to the column on the right to make up sentences.**

1) Documentation is used	a) is necessary to deal with owners, government officials, public stakeholders, suppliers and the general public.
2) Construction engineering build structures	b) they must solve the problems that they encounter using maths and science.

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3) Other task may include:	c) that are used by people every day so they must be safe and to withstand the elements.
4) During project construction	d) record information that needs to be passed on to management.
5) Customer service, emotional intelligence, psychology, sociology and management	e) to inform management on the project progress and if any changes are needed or have occurred
6) They also use the same knowledge	f) commercial, residential, bridges, airports, tunnels and dams.

**4. Match the English equivalents to the Russian ones:**

1) analyze reports	a) текущие расходы
2) estimate project costs	b) выдерживать давление
3) calculate load	c) принятие решения
4) grade requirements	d) рассчитать расходы
5) liquid flow rates	e) управление проектом
6) material stress	f) принимать решение
7) withstand stress	g) распределение нагрузки
8) problem solving	h) рассчитать стоимость проекта
9) decision making	i) решение задач
10) project control	j) взаимодействовать
11) enact a solution	k) анализировать доклады
12) interact with	l) устойчивость материала

**5. Discuss in pairs.**

1. What do you think the advantages and disadvantages of a job in construction engineering are?
2. What personal characteristics should a construction engineer possess?

## ENVIRONMENTAL ENGINEER

**1. Comment on the statement:** "If a man has created the industrial production and can't exist without it, so there must be people who are appealed to do this manufacture safer and ecologically purer."

**2. Answer the following questions.**

1. Why do you think the science of ecology is so important nowadays?

2. What are the main ecological problems that our planet suffers?

3. Can you name any organization dealing with the environmental protection?

4. Why is the profession of an environmental engineer so vital?

Environmental engineering is the application of science and engineering principles to improve the environment (air, water, and/or land resources), to provide healthy water, air, and land for human habitation and for other organisms, and to remediate polluted sites.

Environmental engineering involves water and air pollution control, recycling, waste disposal, and public health issues as well as a knowledge of environmental engineering law. It also includes studies on the environmental impact of proposed construction projects.

Environmental engineers deal with various kinds of pollution. Pollutants may be chemical, biological, thermal, radioactive, or even mechanical. Environmental engineering emphasizes several areas: process engineering, environmental chemistry, water and sewage treatment (sanitary engineering), waste reduction/management, and pollution prevention/cleanup. Environmental engineering is a synthesis of various disciplines, incorporating elements from the following:

- Civil engineering
- Chemical engineering
- Public health
- Mechanical engineering
- Chemistry
- Biology
- Geology
- Ecology

Environmental engineering is the application of science and engineering principles to the environment. Some consider environmental engineering to include the development of sustainable processes. Environmental engineers conduct hazardous-waste management studies

to evaluate the significance of the such hazards, advise on treatment and containment, and develop regulations to prevent mishaps. Environmental engineers also design municipal water supply and industrial wastewater treatment systems as well as being concerned with local and worldwide environmental issues such as the effects of acid rain, ozone depletion, water pollution and air pollution from automobile exhausts and industrial sources.

Briefly speaking, the main task of environmental engineering is to protect public health by protecting (from further degradation), preserving (the present condition), and enhancing the environment.

### 3. Match the terms with their Russian equivalents.

- |                                  |  |
|----------------------------------|--|
| 1. recycling                     | a) истощение озонового слоя                        |
| 2. to prevent mishap             | b) обработка воды и сточных вод                    |
| 3. water and sewage treatment    | c) экологическое законодательство                  |
| 4. to remediate polluted sites   | d) выхлопные газы                                  |
| 5. waste disposal                | e) утилизация, повторное использование             |
| 6. environmental engineering law | f) устранение отходов                              |
| 7. ozone depletion               | g) восстановление (очищение) загрязненных участков |
| 8. Exhausts                      | h) предотвратить беду                              |

### 4. Read the text again and answer the following questions.

1. What is environmental engineering appealed to do?
2. What spheres does environmental engineering involve?
3. What kinds of pollution do environmental engineers deal with?
4. What disciplines does environmental engineering consist of?
5. What do environmental engineers design?
6. What is the main task of environmental engineering?

### 5. Work in pairs and answer the question.

“What are your plans when you graduate from the University?”



## LOGISTICS MANAGEMENT

### 1. Answer these questions.

1. What do you think the logistics management is?
2. What does a logistician do?

### 2. Read the text and check whether your ideas are right.

**Logistics** is the art of managing the supply chain and science of managing and controlling the flow of goods, energy, information and other resources like products, services and people from the source of production to the marketplace. **Logistics management** is that part of the supply chain which plans, implements and controls the efficient, effective forward and reverse flow and storage of goods, services and related information between the point of origin and the point of consumption in order to meet customers' requirements. A professional working in the field of logistics management is called a *logistician*. It is difficult or nearly impossible to accomplish any international trading, global export/import processes, international repositioning of raw materials/products and manufacturing without a professional logistical support. It involves the integration of information, transportation, inventory, warehousing, material handling, and packaging.

The operating responsibility of logistics is the geographical repositioning of raw materials, work in process and finished inventories where required at the lowest cost possible. The goal of logistics work is to manage the fruition of project life cycles, supply chains and resultant efficiencies. In business, logistics may have either internal focus (inbound logistics), or external focus (outbound logistics) covering the flow and storage of materials from point of origin to point of consumption.

The main functions of a qualified logistician include inventory management, purchasing, transportation, warehousing, consultation and the organizing and planning of these activities. Logisticians combine a professional knowledge of each of these functions so that there is a coordination of resources in an organization. There are two fundamentally different forms of logistics. One optimizes a steady flow of material through a network of transport links and storage nodes. The other coordinates a sequence of resources to carry out some project.

**Commercial Vehicle Operations** is an application of Intelligent Transportation Systems for trucks. A typical system would

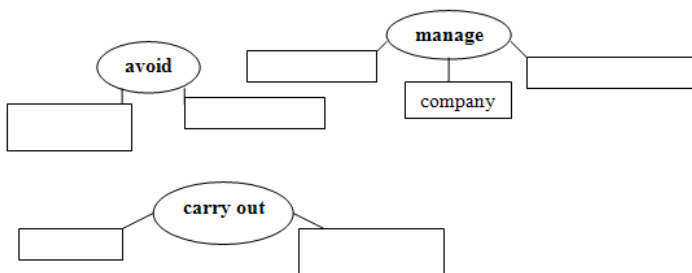
be purchased by the managers of a trucking company. It would have a satellite navigation system, a small computer and a digital radio in each truck. A computer system in the central office manages the fleet in real time under control of a team of dispatchers. To minimize handling-expense, damage and waste of vehicle capacity, optimal-sized pallets are often constructed at distribution points to go to particular destinations. If a truck gets off its route, or is delayed, the truck can be diverted to a better route, or urgent loads that are likely to be late can be diverted to air freight. This allows a trucking company to deliver a true premium service at only slightly higher cost. The controlled routes allow a truck to avoid heavy traffic caused by rush-hour, accidents or road-work.

**3. Read the text again and answer the following questions:**

- a) What does a supply chain mean?
- b) What professional knowledge does a logistics combine?
- c) Why is a logistical support important for international trading?
- d) What is the main goal of logistics?
- e) What are the commercial vehicle operations?
- f) What are some advantages of the intelligent transportation systems?
- g) How does a trucking company control the routes and destinations of the trucks?

**4. Match the nouns and verbs to complete the spidergrams:**

- |                |                   |         |                |
|----------------|-------------------|---------|----------------|
| accident       | road-work         | process | people         |
| <u>trading</u> | <u>purchasing</u> | project | transportation |



## MODERN BUILDING MATERIALS

### 1. Answer these questions.

1. What building materials do you know?
2. What materials are building materials?
3. What are they used for?

Today's building technologies are rich of different higher quality materials. **Building material** is any material, which is used for a construction purpose. Just about every type of available material has been used at one time or another for creating various human and animal homes, structures, and technologies. This reference deals with habitats and structures including homes. Living spaces and their related structures have been created using myriad materials, from mud to metal, and from plastic to grass. Today the production and assembly of various building materials is a multibillion dollar industry, and environmental concern has recently surfaced about the effects of such a massive resource extraction on a global scale.

**Mud, rocks, and small plants** are used as the most basic nature building materials, aside from tents made of flexible materials such as cloth or leather. People all over the world have used these three materials together to create homes to suit their local weather conditions. In general stone and brush are used as basic structural components in these buildings, while mud is used to fill in the space between acting as a type of concrete and insulation. Some examples are the wattle and daub mostly used as permanent housing in tropical countries or as summer structures by ancient northern peoples.

**Mud and clay** Homes built with earth tend to be naturally cool in the summer heat and warm in cold weather. Clay holds heat or cold, releasing it over a period of time like stone. Earthen walls change temperature slowly, so artificially raising or lowering the temperature can use more resources than in say a wood built house, but the heat/coolness stays longer.

Peoples building with mostly dirt and clay, such as cob, sod, and adobe, resulted in homes that have been built for centuries in western and northern Europe as well as the rest of the world, and continue to be built, though on a smaller scale. Some of these buildings have remained habitable for hundreds of years.

**Rock** structures have existed for as long as history can recall. It is the longest lasting building material available, and is usually readily available. There are many types of rock through out the world all with differing attributes that make them better or worse for



particular uses. Rock is a very dense material so it gives a lot of protection too, its main draw-back as a material is its weight. Its **energy density** is also considered a big draw-back, as stone is hard to keep warm with out using large amounts of heating resources.

Dry-stone walls have been built for as long as humans have put one stone on top of another. Eventually different forms of mortar were used to hold the stones together, cement being the most commonplace now.

The granite-strewn uplands of Dartmoor National Park, United Kingdom, for example, provided ample resources for early settlers. Circular huts were constructed from loose granite rocks throughout the Neolithic and early Bronze Age, and the remains of an estimated 5,000 can still be seen today. Granite continued to be used throughout the Medieval period and into modern times.

Mostly stone buildings can be seen in most major cities, some civilisations built entirely with stone such as the Pyramids in Egypt, the Aztec pyramids and the remains of the Inca civilisation.

**Thatch** is one of the oldest of building materials known; grass is a good insulator and easily harvested. Many African tribes have lived in homes made completely of grasses year round. In Europe, thatch roofs on homes were once prevalent but the material fell out of favour as industrialisation and improved transport improved the availability of other materials. Today, though, the practice is undergoing a revival. In Holland, for instance, two-thirds of new builds have thatched roofs.

**Brush** structures are built entirely from plant parts and are generally found in tropical areas, such as rainforests, where very large leaves can be used in the building. Native Americans often built brush structures for resting and living in, too. These are built mostly with branches, twigs and leaves, and bark, similar to a beaver's lodge.

**Ice** was used by the Inuit for igloos, but has also been used for ice hotels as a tourist attraction in northern areas that might not otherwise see many winter tourists.

**Wood** is a product of trees, and sometimes other fibrous plants, used for construction purposes when cut or pressed into lumber and timber, such as boards, planks and similar materials. It is a generic building material and is used in building just about any type of structure in most climates. Wood can be very flexible under loads, keeping strength while bending, and is incredibly strong when compressed vertically. There are many differing qualities to the different types of wood, even among same tree species.

**Metal** is used as structural framework for larger buildings such

as skyscrapers, or as an external surface covering. There are many types of metals used for building.

Other metals used include titanium, chrome, gold, silver. These are used as decoration because they are too soft to provide any structural support.

Metal figures can be seen used in most cosmopolitan cities. It requires a great deal of human labor to produce metal, especially in the large amounts needed for the building industries.

**Glass** Clear windows have been used since the invention of glass to cover small openings in a building. They provided humans with the ability to both let light into rooms while at the same time keeping inclement weather outside. Glass is generally made from mixtures of sand and silicates, and is very brittle.

Modern glass "curtain walls" can be used to cover the entire facade of a building. Glass can also be used to span over a wide roof structure in a "space frame".

**Ceramics** are such things as tiles, fixtures, etc. Ceramics are mostly used as fixtures or coverings in buildings. Ceramic floors, walls, counter-tops, even ceilings. Many countries use ceramic roofing tiles to cover many buildings.

**2. Read the text and complete the table.**

material	properties	Where is used	kinds			

**3. Complete the sentences.**

- a) Building material is any material, which.....
- b) In general stone and brush are used as basic structural components in these buildings, while mud.....
- c) Mostly stone buildings can be seen in most major cities....
- d) Many African tribes have lived.....
- e) Metal figures can be seen used....
- f) Modern glass "curtain walls" can be used.....

**4. Give the definitions to the following words:**

Mud; rock; thatch; brush; wood; metal;  
glass; ceramics.

**5. Discuss the following questions in a group:**

- Compare building materials in different countries.
- What materials are you interested in as future specialists?
- What materials from the text were new to you?
- Which building materials do you think will be popular in the future?

## STANDARDIZATION AND CERTIFICATION OF THE PRODUCT

### 1. Work in a pairs and discuss the following questions.

1. What does the standardization and certification of the product deal with from your point of view? Discuss your ideas with the class.
2. What is your idea about the main function of standardization and certification of the product?

### 2. Read the text below and check whether your ideas are right.

The role of standardization and certification is very vital today.

Today in Russia certification and standardization system becomes important and necessary condition for successful economic activities. The factor which increases an urgency of certification is Russia's integration into world economy and its entering into the World Trade Organization.

Russia's product certification system is little more than twelve years old. It is the country's major mechanism for ensuring the quality and safety of products and services.

Legally, product certification in Russia is based on four Russian Federation laws: "On Protection of Consumer Rights," "On Standardization," "On Certification of Products and Services," and "On Ensuring Measurement Uniformity."

Russian Government requires that consumer products must be certified in accordance with the All Russian State Standard System (GOST R). Russia has accredited testing laboratories and certification centers both inside the country and overseas.

Certification is a method of objective control over quality of products, their compliance with established requirements, as well as their safety to environment, life, health, property of the citizens. Availability of a certificate helps buyers make a competent choice of products and provides a certain guarantee of their quality.

Certification of products may indicate their established suitability for a specified purpose (e.g. a computer system might be certified as being fully compatible with a large software package).

The procedure of certification is rather complicated and consists of several steps: first of all, a submitter (usually a manufacturer of a product) is required to turn over his entire process standard to the certification organization. This includes all information necessary to make the product, including descriptions of the equipment,

ingredients or components. The product intended to be tested is packaged ready for transit and then sent directly to the laboratory where the testing will be conducted in accordance with the nationally accredited standard.

Certification is held by the independent organization which after testing defines whether product is up to the standards and rules established for it. The official certifying document is The Conformity Certificate.

Documents required to support certification may include:

- certificates of origin;
- certificates of quality;
- test results;
- other documents, depending on the product.

Standardization is an activity of the establishment of norms, rules and characteristics (further - requirements) with the aim to maintain safety of products, works or services for the environment, lives, health and property and quality of a product.

Standardization is the process of establishing a technical standard, which could be a standard specification, standard test method, standard definition, standard procedure (or practice), etc. Some standards are mandatory while others are voluntary. Some standards are voluntary and are available if one chooses to use them.

### 3. Answer the following questions.

- a) Is Russia going to enter into the World Trade Organization?
- b) When was the certification system founded in Russia?
- c) What is product certification in Russia based on?
- d) What is the certification of a product?
- e) What organizations in Russia have the right to test products?
- f) What is the standardization of a product?

### 4. Match the column on the left to the column on the right to link words and word's combinations to their definitions.

<p><u>1. 100 Percent Testing</u></p>	<p>a) a procedure which gives a written report that a product, process, or service is up to specified requirements.</p>
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<u>2. Consumer</u>	b) a person or legal entity whose product, process, or service is subjected to certification.
<u>3. Testing Laboratory (center)</u>	c) a procedure when each individual product is tested to determine if it meets the designated standard.
<u>4. Manufacturer</u>	d) a person who uses production and services.
<u>5. Certification</u>	e) is an organization accredited for testing (analysis) of products and processes conducted in connection with certification.

**5. Give the English equivalents for the following:**

- a) важное и необходимое условие;
- b) успешная экономическая деятельность;
- c) увеличивать;
- d) вступление в мировую экономику;
- e) главный механизм;
- f) качество и безопасность продукта;
- g) права потребителей;
- h) признание, подтверждение;
- i) сертификат соответствия;
- j) аккредитованная лаборатория.

**6. Match column on the left to the column on the right to make up collocations.**

condition...	on
integration...	for successful activities
ensuring...	with laws
to be based...	the quality and safety
in accordance...	to the standard
to be held...	into world economy
to be up...	Certificate
the Conformity	by

**7. Make up sentences using the collocations above.**
**8. Work in pairs and discuss the following question.**

Why is the certification and standardization system important nowadays?

## THE ROADS CONSTRUCTION AND ITS HISTORY

### 1. Work in pairs and discuss the following questions.

- How do you understand the term «construction»?
- What do you know about the process of the road construction?

### 2. Read the text and choose the heading for each paragraph.

- Historical road construction
- Transport economics
- Road construction
- Introduction into the topic

### 3. Match the English equivalents to the Russian ones.

1. formal maintenance	a. формальное техническое обслуживание
2. to depend on efficient roads	b. удобство, практичность дороги
3. urban areas	c. древесная дорога
4. timber track	d. сильная связь
5. brick paved	e. быть вымощенным чем-л.
6. sophisticated roads	f. отрасль экономики
7. to be paved with	g. дорога, вымощенная камнем
8. branch of economics	h. городские области (земли)
9. strong linkage	i. спрос и предложение
10. supply and demands	j. зависеть от исправности дорог
11. road easement	k. дороги, отвечающие современным требованиям

### 3. Read the text and answer the questions.

- What is the road? Describe the development of the road.

b) What can you say about the historical construction of the road?

c) Does the transport economics have strong linkages with civil engineering? Why?

d) What do you think about the process of road construction? Speak on the main points of it.

**A.** \_\_\_\_\_

A road is an identifiable route, way or path between places. Roads are typically smoothed, paved, or otherwise prepared to allow easy travel; though they need not be, and historically many roads were simply recognizable routes without any formal construction or maintenance.

The term was also commonly used to refer to roadsteads, waterways that lent themselves to use by shipping. Notable examples being Hampton Roads, in Virginia, and Castle Roads, in Bermuda. In urban areas roads may diverge through a city or village and be named as streets, serving a dual function as urban space easement and route. Economics and society depend heavily on efficient roads. That the first pathways were the trails made by animals has not been universally accepted, arguing that animals do not follow constant paths. Others believe that some roads originated from humans following animal trails. The Icknield Way is given as an example of this type of road origination, where man and animal both selected the same natural line. By about 10,000 BC, rough pathways were used by human travelers.

**B.** \_\_\_\_\_

- Stone paved streets are found in the city of Ur in the Middle East dating back to 4000 BC

- Corduroy roads (log roads) are found dating to 4,000 BC in Glastonbury, England

- The timber trackway; Sweet Track causeway in England, is one of the oldest engineered roads discovered and the oldest timber trackway discovered in Northern Europe.

- Brick paved streets were used in India as early as 3000 BC

- In 500 BC, Darius I the Great started an extensive road system for Persia (Iran), including the famous Royal Road which was one of the finest highways of its time. The road remained in use after Roman times.

- In ancient times, transport by river was far easier and faster than transport by road, especially considering the cost of road construction and the difference in carrying capacity between carts and

river barges.

- In the 700s AD, many roads were built throughout the Arab Empire. The most sophisticated roads were those of the Baghdad, Iraq, which were paved with tar in the 8th century. Tar was derived from petroleum, accessed from oil fields in the region, through the chemical process of destructive distillation.

**C.** \_\_\_\_\_

Transport economics is a branch of economics that deals with the allocation of resources within the transport sector and has strong linkages with civil engineering. Transport economics differs from some other branches of economics in that the assumption of a spaceless, instantaneous economy does not hold. People and goods flow over networks at certain speeds. Demands peak. Advanced ticket purchase is often induced by lower fares. The networks themselves may or may not be competitive. A single trip (the final good from the point-of-view of the consumer) may require bundling the services provided by several firms, agencies and modes.

Although transport systems follow the same supply and demand theory as other industries, the complications of network effects and choices between non-similar goods (e.g. car and bus travel) make estimating the demand for transportation facilities difficult. The development of models to estimate the likely choices between the non-similar goods involved in transport decisions "discrete choice" models led to the development of the important branch of econometrics.

In transport, demand can be measured in numbers of journeys made or in total distance traveled across all journeys (e.g. passenger-kilometres for public transport or vehicle-kilometres of travel (VKT) for private transport).

**D.** \_\_\_\_\_

Road construction requires the creation of a continuous right-of-way, overcoming geographic obstacles and having grades low enough to permit vehicle or foot travel. and may be required to meet standards set by law or official guidelines. The process is often begun with the removal of earth and rock by digging or blasting, construction of embankments, bridges and tunnels, and removal of vegetation (this may involve deforestation) and followed by the laying of pavement material. A variety of road building equipment is employed in road building

After design, approval, planning, legal and environmental considerations have been addressed alignment of the road is set out by a surveyor. The Radii and gradient are designed and staked out to

best suit the natural ground levels and minimize the amount of cut and fill. Great care is taken to preserve reference Benchmarks. Roadways are designed and built for primary use by vehicular and pedestrian traffic. Storm drainage and environmental considerations are a major concern. Erosion and sediment controls are constructed to prevent detrimental effects. Drainage lines are laid with sealed joints in the road easement with runoff coefficients and characteristics adequate for the land zoning and storm water system. Drainage systems must be capable of carrying the ultimate design flow from the upstream catchments with approval for the outfall from the appropriate authority to a watercourse, creek, river or the sea for drainage discharge. A Borrow pit (source for obtaining fill, gravel, and rock) and a water source should be located near or in reasonable distance to the road construction site. Approval from local authorities may be required to draw water or for working (crushing and screening). of materials for construction needs. The top soil and vegetation is removed from the borrow pit and stockpiled for subsequent rehabilitation of the extraction area. Side slopes in the excavation area are not steeper than one vertical to two horizontal for safety reasons.

**4. Give the English equivalents for:**

- a) преодолеть препятствие
- b) геодезист
- c) непрерывное создание прямой дороги (трассы)
- d) отвечать стандартам, установленным законом
- e) процесс часто начинается с
- f) дорожное покрытие
- g) сохранить топографическую отметку
- h) предотвратить эффект разрушения

**5. Make your own sentences with the phrases above.**

**6. Work in pairs. Make up the dialogue on the theme «The history of roads creation & roads construction in our days».**