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# ВВЕДЕНИЕ

В соответствии с действующей программой по английскому языку для неязыковых специальностей вузов цель данного пособия — комплексное развитие у студентов компетенций, связанных с готовностью к использованию иностранного языка на уровне, обеспечивающем эффективную профессиональную деятельность, и способностью анализировать научно-техническую информацию, изучать зарубежный опыт по тематике исследования в процессе самостоятельной работы.

Основу пособия составляют современные аутентичные профессионально ориентированные материалы, подобранные из различных источников. В них содержится интересная и полезная информация по разнообразным общенаучным и инженерно-строительным темам.

Пособие состоит из двух частей: в первой части представлены тексты с упражнениями для работы в группе под руководством преподавателя, а во второй — тексты для самостоятельной работы.

Первая часть состоит из 10 разделов, содержащих предтекстовые лексико-грамматические упражнения с краткими правилами-инструкциями; основной текст для ознакомительного или поискового чтения; послетекстовые задания для проверки понимания прочитанного и упражнения для активизации лексико-грамматического материала.

Занимая центральное место, текст выполняет двойную функцию: с одной стороны, он является «стандартным», т.е. таким текстом, с которым постоянно приходится сталкиваться специалистам при чтении учебной и научной литературы, а с другой — это ценный учебный материал, на основе которого анализируются основные лексические и грамматические явления современного английского языка. Чтение такого текста помогает обучаемому осмыслить сложную письменную речь.

Упражнения лексико-грамматического характера направлены на накопление специальной технической лексики. Упражнения на уровне текста способствуют формированию у студента содержательного высказывания в устной или письменной речи (от подготовленного высказывания к неподготовленному). Упражнения по структурированию информации формируют навыки самостоятельной научной работы с источниками информации на основе определенных правил и критериев. Посредством данных упражнений будущий инженер-строитель приобретает навыки комментирования, аргументирования, ведения дискуссии и т.д.

Задания содержат элементы проектирования, в процессе выполнения которых студенты учатся высказывать свою точку зрения и выслушивать мнение коллег, генерировать и предлагать новые идеи на иностранном языке, непрерывно развивать свои личностно и профессионально значимые качества.

Вторая часть пособия включает неадаптированные тексты для внеаудиторного чтения. Тексты подобраны из оригинальной литературы.

Пособие содержит приложения. Приложение I включает информацию о персоналиях, приложение II — фразы для профессионального общения, приложение III — инженерные шутки. Знание и использование информации приложений должно стимулировать положительную мотивацию к овладению профессиональным английским языком.

Произвольный порядок расположения разделов (а не по принципу нарастания грамматических трудностей) свидетельствует о том, что они могут быть использованы для самостоятельной работы выборочно в зависимости от интересов студентов.

Творческая инициатива преподавателя при работе с пособием способна дать наиболее эффективные результаты обучения в каждом конкретном случае, поэтому мы не считаем, что задания к отдельным текстам надо рассматривать как единственно возможные варианты.

# UNIT 1

## WHAT IS THE BEST JOB FOR THE FUTURE?

**Exercise 1. Read the text and decide which paragraph deals with a, b, c:**

- a) a success in choosing a right job;
- b) pieces of advice to be happy with a job;
- c) dependence of your job on personality type.

### TEXT 1

#### FIND THE JOB THAT'S RIGHT FOR YOU!

1. Nearly 50 % of all workers have jobs they aren't happy with. Don't let this happen to you! If you want to find the right job, don't rush to look through the ads in the newspaper. Instead, sit down and think about yourself. What kind of person are you? What makes you happy?

2. According to psychologist John Holland, there are six types of personalities. Nobody is just one type, but most people are mainly one type. For each type, there are certain jobs that might be right and others that are probably wrong.

*The Realistic* type is practical and likes working with machines and tools.

*The Investigative* type is curious and likes to learn, analyze situations, and solve problems.

*The Artistic* type is imaginative and likes to express himself/herself by creating art.

*The Social* type is friendly and likes helping or training other people.

*The Enterprising* type is outgoing and likes to persuade or lead other people.

*The Conventional* type is careful and likes to follow routines and keep track of details.

3. If you think about who you are, you can make the right job decision. Liz is a good example. Liz knew she wanted to do something for children. She thought she could help children as a school counselor or a lawyer. She took counseling and law courses — and hated them. After talking to a career counselor, she realized the now producing children’s TV shows — and loves it.

**Exercise 2. Read the text and decide if the sentences are true or false.**

1. The percentage of working people who are satisfied with their jobs is equal to those who don’t like their jobs.

2. If a person looks for a job, he/she should look through the ads in a newspaper.

3. To make the right choice choosing a job it is necessary to know your type of personality.

4. Some jobs may not fit your personality.

5. Liz wanted to be a school counselor or a lawyer because she belonged to the Social type.

6. Liz’s dream has come true — she is doing what she wants.

**Exercise 3. Read the text and choose reasons that are very important for you.**

### **SEVEN REASONS TO APPRAISE YOUR FIRST JOB**

Various factors like education, knowledge, individual abilities and talents, technical skills and training and one’s own interest and commitment are the deciding factors in choosing a career and job. Heavy competition in finding jobs compels our educated graduates to work in areas unrelated to their abilities, interest and education. But only by choosing the right job in the beginning itself, can one carry on a life of success.

How to take a right step forward in choosing the right job in the beginning itself? The following tips can help zealous and motivated youngsters in choosing the right job as the first one.

## **1) Self-appraisal of skills**

This is a very important step as one should be aware of his own limits. First you should have a self-reflection about your goals and ambitions in life. You should also be aware how far your talents, skills and interests will enable you to move towards those goals. Your physical, mental, psychological limitations and special skills should also be considered.

## **2) Conduct some researches**

You may have a research in collecting information about job market suitable to your skills and education. It may help you to equip yourself with the education required, training you have to undergo, and the prospects of your choice. It can give you an idea of future opportunities of your choice.

## **3) Search for possibilities**

When you are aware of your own skills and limitations, you can match them with the possible career opportunities. The world is full of different careers, jobs and opportunities that require special skills and training that you have. The world of choices certainly gives you a lot more options. Match them with your talents and skills and find out which one satisfies you the most.

## **4) Speak with qualified people**

Career advice centers, qualified and experienced managers of companies and people who are already in the field that falls as your choice can help you and clarify you in your choice. Though it may take some time, it can help you to choose the right job as your first step.

## **5) Find out real situations of your information**

While collecting information and speaking with qualified people you can find out the real situation of job market. The real picture of situations will help you a lot in analyzing the pros and cons of your information and enable you in choosing a right job that can satisfy you.

## **6) Make use of opportunities**

Today, many colleges and universities have come forward to conduct counseling centers that help people like you. You can make use of them for your choice in the right direction.

## 7) Have knowledge about different fields

The windows of success are wide open and many do not look into them. It is not good to run with the leather visors of a horse not knowing about other things. There may be chances that suit you better in other areas if you have information about them. Hence gaining knowledge in different fields is important in the initial stage.

**Exercise 4. Read what three people say about their jobs. Complete the chart with notes on the good and bad things about Anna's, Tony's, and Erika's jobs.**

Anna, 18

*"I work in a factory. My working hours are 8.00 a.m. to 5 p.m., Monday to Friday. I have a one-hour lunch-break at 12.30. The routine is the same every day. My job is very boring but the pay is quite good. My colleagues and I don't really talk to each other, but I have a lot of friends outside work. My job is just a way to earn money."*

Tony, 23

*"I am a computer programmer. I work a 40-hour week. We have flexible hours so I can start and finish when I want. If we are very busy then I work overtime— I get paid extra for this. There are always problems to solve. This can be difficult, but it can also be creative. I earn a good salary, but my job doesn't rule my life. I like to do different things in my free time."*

Erika, 25

*"I'm a doctor in a large hospital. I work very long hours — 60 or 70 hours a week — often in the evenings and at the weekends. The work is really interesting but it can also be quite stressful. I love my job and my colleagues are also my friends. I don't have time for a social life. When I get home, I'm too tired to do anything except have dinner and watch TV"*

Name	Advantages	Disadvantages
Tony		
Erika		
Anna		

**Exercise 5. Match the highlighted words in the quotes with the definitions.**

1. The people you work with ...
2. The number of hours in the week you spend doing your job ...
3. The money you receive every month for the work you have done ...
4. The things you do, usually with other people, outside work ...
5. The time you have for eating in the middle of the working day ...
6. The time you spend at work after your normal working hours ...
7. A system where you can choose when to start and finish work ...
8. The usual order and way that you regularly do things ...

**Exercise 6. Think of a job you would like, or would not like, to have. Write a short report about it, using the texts in Ex. 4 as models!**

**Exercise 7. Read the CV and write your own CV in English using qualifications you already have or ones that you think you might get in the future. Use Jack's CV as a model for your writing.**

<b>Name</b>	Jack Gardiner
<b>Address</b>	824 Sugarfoot Lane Kokomo, IN 46902
<b>Telephone number</b>	(123)-233-2929
<b>E-mail address</b>	j.gardiner@emailaddress.com
<b>Objective</b>	Seeking a company that will allow me to use my abilities as a Civil Engineer to the fullest potential possible
<b>Education</b>	Bachelor's Degree in Civil Engineering, Keene State College, Keene, NH
<b>Qualifications</b>	— Hands on experience in civil engineering, civil water treatment system engineering design experience — Steep knowledge of building codes, design specifications and automotive manufacturing facilities — Exceptional knowledge of civil and structural engineering and pavement management as well as state and local laws — Solid understanding of techniques used in technical civil engineering report and project estimate formulation



— Ability to handle issues and manage engineering projects

— Excellent CAD skills and AutoCAD Civil 3D skills

— Superior skill to conduct technical research and resolve multi-disciplinary engineering problems

**Work  
experience**

**Civil Engineer, August 2005 — Present**

**Henkels&McCooy, Kokomo, IN**

— Established project criteria and supervised Civil .— Water and Waste Water Treatment system design tasks.

— Evaluated engineering firms and advanced Civil- Water, waste water treatment common systems.

— Imparted material and systems assessments and outlined reports for the reference of the management.

— Represented GM in professional organizations and headed technical people.

— Offered technical consultation.

**Civil Engineer, May 2000 — July 2005**

**JacoB.S in Engineering Group, Kokomo, IN**

— Outlined engineering designs, specifications, costs estimates as well as quantity estimates of public work projects.

— Imparted engineering support to development review procedure.

— Formulated as well as reviewed proposals and bids.

— Monitored accuracy of computations, basic layout and design work from the field and survey data.

— Aided to be a project engineer and evaluated developer plans for public works projects as well as monitored automated computer design projects.

— Coordinated as City Engineer on project management issues in the absence of City Engineer.

**Other  
information**

bi-lingual in Spanish and English;

clean driving license

**Interests**

developing computer games, member of college football team, photography, and playing the guitar

# Applying for a Job Tips



## PREPARATION

- Learn about the organization.
- Ask how many interviewers there will be. Try to get the names and positions of those conducting the interview so you will know how many copies of your portfolio to bring.
- Prepare your portfolio with copies of clean resumes, references, diplomas, degrees, certificates and any samples of past work you would like to showcase.
- Prepare answers to broad questions about yourself.
- Practice an interview.
- Arrive before the scheduled time of your interview.

## PERSONAL APPEARANCE

- Be well-groomed.
- Dress professionally.
- Do not chew gum or smoke.
- Do not apply a lot of cologne, after shave or perfume — many companies have gone to scent free environments.

## THE INTERVIEW

- Relax and answer each question concisely.
- Use good manners — remember to make eye contact.
- Learn the name of your interviewer(s) and greet him/her/ them with a firm handshake.
- Use proper English — avoid slang.
- Be enthusiastic — use body language to show interest.
- Answer questions giving examples of how you will benefit the company in this position.
- Do not lie. If you lie about certain information and are later fired for lying, you may not be able to get unemployment or welfare benefits.

- Ask questions about the position and the organization but avoid questions whose answers can easily be found on the company web site.
- Avoid asking questions about salary and benefits unless a job offer is made.
- Ask interviewer(s) for business cards (this comes in handy for writing thank you notes).
- Prepare for “No”. Say then: “Well, if you do need someone in the future, please give me a call. I’ll leave you a copy of my resume. Thanks for your time”.
- Be sure to thank the interviewer(s) before leaving.



### **AFTER THE INTERVIEW**

- Promptly (within 24 hours) write thank you notes to all interviewers — be sure all notes are different.
- Your thank you note is also your chance to follow up and to reinforce your interest and your qualifications for the position.

**Exercise 8. Work out the project “Find the jobs that’s right for you!”**

# UNIT 2

## WHAT IS ENGINEERING?

**Exercise 1. Read the words and expressions and remember them.**

Chemical engineering — химическое машиностроение

Civil engineering — гражданское строительство

Civil engineer — инженер-строитель

Communications engineering — техника средств связи

Electrical engineering — электротехника; электротехническое машиностроение

Mechanical engineering — машиностроение

Military engineering — военно-инженерное строительство

Nuclear engineering — ядерная техника

Power engineering — энергомашиностроение, энергетика

Power engineer — инженер-энергетик

Space engineering — космическая техника

**Exercise 2. Match the synonyms.**

A

- 1) construction
- 2) house
- 3) design
- 4) branch
- 5) to appear
- 6) profession
- 7) to separate themselves from
- 8) foundation
- 9) to apply
- 10) modern

B

- a) building
- b) project
- c) cottage
- d) to come into use
- e) field
- f) occupation
- g) basis
- h) to branch off
- i) present-day
- j) to use
- k) palace
- l) structure

### Exercise 3. Read and translate the text.

#### TEXT 1 ENGINEERING

A science dealing with design, construction and operation of structures, engines, machines, various devices is known in English as engineering for which it is sometimes difficult to find Russian equivalents.

The proper Russian equivalents are «техника, строительство, инженерное дело». Now the art of building houses, temples, pyramids and other structures is called “civil engineering”.

At the time of the Roman Empire there were already two branches of engineering: civil engineering and military engineering.

Military engineering included the building of fortifications and military devices. One may find the remains of Roman structures in Italy, on the territory of modern England which was under Roman rule for about four centuries.

In the course of time eventually civil engineering grew into a profession requiring college training and has become an important branch of national economy.

With the invention of the steam engine and the growth of factories practical application of the science of mechanics and thermodynamics to the design of machines attracted the attention of civil engineers. They called themselves “mechanical engineers”, separating themselves from civil engineering. It laid the foundation for a new branch of engineering — mechanical engineering.

Mechanical engineering deals with design, construction and operation of engines, turbines, air-conditioning, refrigeration devices, elevators, conveyors, escalators. The mechanical engineer designs machine-tools for various operations and their application in various production processes.

One of many branches of mechanical engineering is aeronautics which deals with the mechanics of moving bodies in the fluid or air.

In the 19th century with the development of the science of electricity a new branch of engineering — electrical engineering appeared.

Electrical engineering is divided into main branches: communications engineering and power engineering. Communications engineering

deals with minute quantities of electricity, used for all kinds of communications; power engineering — with the means for producing power. Therefore, the electrical engineer designs radio, television and telephone equipment; the power engineer — generators, switches, transformers, etc.

In the middle of the 20th century there appeared new branches of engineering — nuclear engineering and space engineering.

Nuclear is based on atomic physics. Space engineering is impossible without all modern scientific achievements.

Present day engineering includes chemical engineering, dealing with processes and equipment possible to change the state, energy content, physical and chemical composition of various materials.

Nowadays there are hundreds of subdivisions of engineering but all of them branched off from civil, mechanical, electrical or chemical engineering.

**Exercise 4. Choose the sentences containing information from the text.**

1. The word “engineering” has many meanings.
2. There are some Russian equivalents of the term “engineering”.
3. The art of building was known hundreds years ago.
4. There wasn't any other branch of engineering besides civil engineering at the times of the Roman Empire.
5. The profession of a civil engineer deals with many branches of national economy and science.
6. Electrical engineering is older than mechanical engineering.

**Exercise 5. Give the proper term to the following definitions:**

*nuclear engineering, engineering, civil engineering,  
military engineering, mechanical engineering*

1. ... is a science which deals with design, construction and operation of structures, machines, engines, devices used in industry and everyday life.

2. We call ... .. the art of building houses, palaces, temples and other structures.

3. ... .. includes the building of fortifications and military devices.

4. .... .. deals with the design and construction of steam engines, turbines, airconditioning, and refrigeration devices.

5. ... .. is based on atomic physics.

### **Exercise 6. Translate into English the following sentences.**

1. Термин “engineering” имеет много значений. Одним из самых распространенных значений слова “engineering” является «техника».

2. Старейшей (ранней) отраслью техники считается гражданское строительство зданий, дорог, мостов.

3. Появление машиностроения было связано с изобретением паровой машины.

4. Инженер-механик имеет дело с проектированием и конструированием различных машин.

5. Появление электротехники связано с достижениями в области электричества.

6. В середине XX в. появились новые отрасли машиностроения: ядерная техника и космическая техника.

7. Ядерная техника основана на атомной физике.

8. Космическая техника базируется на достижениях всех отраслей науки и техники.

### **Exercise 7. Find the English equivalent to the following Russian sentence.**

1. Именно этот ученый играл основную роль в решении этой проблемы.

a) This scientist played an essential part in solving this problem.

b) It was this scientist who played an essential part in solving this problem.

c) It was at the time when that scientist was solving this problem.

2. Именно гражданское строительство связано со строительством домов, храмов, пирамид и т.д.

a) It is civil engineering that deals with construction of houses, temples and pyramids.

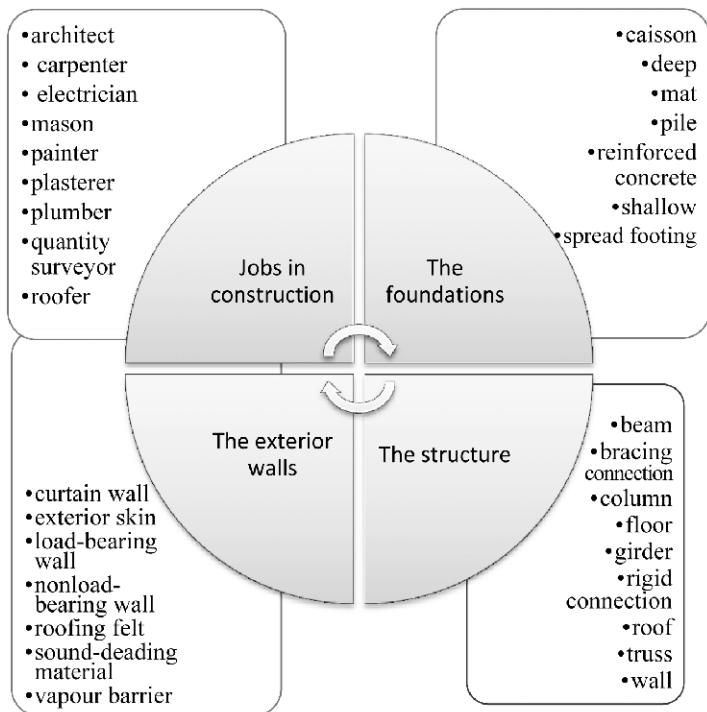
b) Civil engineering deals with construction of houses, temples and pyramids.

c) It is construction of houses that civil engineering deals with.

### Exercise 8. Read and translate the text.

## TEXT 2 CONSTRUCTION

Construction means the erection or assembly of large structures, primarily those which provide shelter, such as commercial and residential buildings. It also includes major works such as ships, aircraft, and public works such as roads, dams, and bridges.





***The major elements of a building include:***

- the foundation, which supports the building and gives it stability;
- the structure, which supports all the imposed loads and transmits them to the foundation;
- the exterior walls, which may or may not be part of the primary supporting structure;
- the interior partitions, which also may or may not be part of the primary structure the environmental-control systems, including the heating, ventilating, air conditioning, lighting, and acoustic systems;
- the power, water supply, and waste disposal systems.

Jobs in construction are many and varied, ranging from architects to painters. However, every building needs a solid foundation on which the structure can be erected, paying special attention to the exterior walls which will need to withstand the elements.

**Exercise 9. Choose the correct word in the following sentences.**

1. A flat roof is usually covered in with roofing *felt/skin* for protection against the weather.
2. Rooms in a building are divided by interior *supports/partitions*.
3. To prevent water entering the cavity of the wall, moisture barriers are used on the external surface and *vapour/insulating* barriers are used on the internal face.
4. The *assembly/structure* of a building transfers all the loads acting on the building to the ground.
5. The *ventilating/acoustics* system provides fresh air.
6. Sound-*deadening/-barrier* material is used to reduce the sound passing from one room to another.
7. The foundations for a skyscraper building must be *deep/shallow*.
8. Spread *footing/caisson* piers *is/are* used when the soil is weak.

**Exercise 10. Complete the text with words from the opposite page.**

There are two main methods of building houses. In one, solid walls known as (a) ... walls are constructed. They support the floors and the

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