**Lesson 1**

1. **Learn the vocabulary from the text by heart:**

Vocabulary:

to comprise - включать в себя

automated manufacturing of products - автоматизированное производство товаров

robotics - робототехника

horizons - горизонты

cheap - дешевый

to generate - генерировать, производить

to transmit - передавать

to store - хранить

scale - масштаб

unprecedented in history - не имеющий прецедентов в истории

indication - указание, свидетельство

explosive - взрывной

to deal with - иметь дело с, заниматься чем-либо

integration - интеграция

application - приложение, использование

circuits - электрические схемы, цепи

device - устройство

transmission - передача

processing - обработка

to rely - полагаться

Fourier analysis - анализ Фурье

linear systems theory - теория линейных систем

linear algebra - линейная алгебра

differential equations - дифференциальные уравнения

probability theory - теория вероятности

extensively - широко

replacement - замещение

fibre optics - оптоволоконные технологии

copper - медь

digital - цифровой

immunity - защищенность, невосприимчивость

carrying capacity - пропускная способность

light - легкий

rapidly growing - быстрорастущий

artificial intelligence - искусственный разум

sophisticated - сложный

superconducting - сверхпроводимость

ADD TO YOUR ACTIVE VOCABULARY:

mechanical engineer - инженер-механик

electric engineer - инженер-электрик

electronic engineer - инженер электроник

computer engineer -инженер-компьютерщик

military engineer - военный инженер

prestigious job (work) - престижная работа

well-paid job - высокооплачиваемая работа

employee - наемный рабочий

employer - наймодатель

businessman -предприниматель, бизнесмен

state-employed -государственный служащий

white-collar worker - «белый воротничок», работник умственного труда

blue-collar worker- «синий воротничок», работник физического труда

unskilled worker- неквалифицированный рабочий

experienced worker - опытный работник

to be hired for a job-быть нанятым на выполнение работы

to look for a new job (work, position)- искать новую работу

to apply for a new job -претендовать на какую-либо должность

application for a position of - заявление на какую-либо должность

resume - резюме

to be fired - быть уволенным

to retire - уходить на пенсию

to be unemployed - быть безработным

skilled worker - квалифицированный рабочий

1. **Read and translate the text:**

**MY FUTURE PROFESSION**

I want to become a specialist in computer technologies - a computer engineer. Computer industry is developing so fast, that it comprises almost all spheres of professional life. No business now is possible without computers. This is especially true about automated manufacturing of products and robotics. Computer control of automated production opens new horizons for the cheap and quality production of goods. Information is now generated, transmitted, received, and stored electronically through computer networks on a scale unprecedented in history, and there is every indication that the explosive rate of growth in this field will continue. Computer engineering is a general field. It deals with both electric and electronic industries. Electronic engineering deals with the research, design, integration, and application of circuits and devices used in the transmission and processing of information. Engineers in the field of electric and electronic engineering are concerned with all aspects of electrical communications, from fundamental questions such as «What is information? » to the highly practical, such as the design of telephone systems. In designing communication systems, engineers rely on various branches of advanced mathematics, such as Fourier analysis, linear systems theory, linear algebra, differential equations, and probability theory. Engineers work on control systems which are used extensively in automated manufacturing and in robotics. Major developments in the field of communications and control have been the replacement of analogue systems with digital systems; fibre optics are used now instead of copper cables. Digital systems offer far greater immunity to electrical noise. Fibre optics are likewise immune to interference; they also have great carrying capacity, and are extremely light and inexpensive to manufacture. Computer engineering is now the most rapidly growing field. The electronics of computers is the design and manufacture of memory systems, of central processing units, and of peripheral devices. The most prospective industry now is the Very Large Scale Integration (VLSI) and new computer architectures. The field of computer science is closely related to computer engineering; however, the task of making computers more «intelligent» (artificial intelligence), through creation of sophisticated programs or development of higher level machine languages or other means, is generally regarded as the dream of computer science. One current trend in computer engineering is microminiaturization. Engineers continue to work to fit greater and greater numbers of circuit elements onto smaller and smaller chips. Another trend is towards increasing the speed of computer operations through the use of parallel processors and superconducting materials.3. How do you see your future profession?

**Answer the following questions:**

1) What kind of work are you interested in?

a) well paid b) interesting c) in a large and famous company

d) quiet e) in an industry which has a future f) prestigious

g) not to sit the whole day in the office h) to travel a lot

2) What position would you like to have?

a) to manage people - manager

b) to work for someone else - an employee

c) to be your own boss - self-employed, businessman

**Lesson 2**

**Read the text and translate it:**

**THE FUTURE OF THE ENGINEERING PROFESSION**

Among various recent trends in the engineering profession computerization is the most widespread. The trend in modern engineering offices is also towards computerization. Computers are increasingly used for solving complex problems as well as for handling, storing, and generating the enormous volume of data modern engineers must work with. Scientific methods of engineering are applied in several fields not connected directly to manufacture and construction. Modern engineering is characterized by the broad application of what is known as systems engineering principles. Engineers in industry work not only with machines but also with people, to determine, for example, how machines can be operated most efficiently by workers. A small change in the location of the controls of a machine or of its position with relation to other machines or equipment, or a change in the muscular movements of the operator, often results in greatly increased production. This type of engineering work is called time-study engineering. A related field of engineering, human-factors engineering, also known as ergonomics, received wide attention in the late 1970s and 1980s when the safety of nuclear reactors was questioned following serious accidents that were caused by operator errors, design failures, and malfunctioning equipment. Human-factors engineering seeks to establish criteria for the efficient, human-centered design of, among other things, the large, complicated control panels that monitor and govern nuclear reactor operations.

2. Answer the questions.

1. What is the most widespread trend in the engineering profession?

2. What are computers used for in modern engineering?

3. What approaches are used in modern engineering?

4. What is «ergonomics»?

5. What do human-factors engineering deal with?

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