МИНИСТЕРСТВО НАУКИ И ВЫСШЕГО ОБРАЗОВАНИЯ
РОССИЙСКОЙ ФЕДЕРАЦИИ
Федеральное государственное автономное образовательное учреждение
высшего образования
«ТЮМЕНСКИЙ ГОСУДАРСТВЕННЫЙ УНИВЕРСИТЕТ»

ИНОСТРАННЫЙ ЯЗЫК В ПРОФЕССИОНАЛЬНОЙ СФЕРЕ (АНГЛИЙСКИЙ)

Методические рекомендации по выполнению лабораторных работ
для обучающихся по направлению подготовки
15.03.06 Мехатроника и робототехника
Профиль: автоматизированные системы управления технологическим процессом
форма обучения очная

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Лабораторный практикум
для обучающихся по направлению подготовки
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Тюмень - 2020

Введение

Основной **целью** курса является овладение студентами необходимым и достаточным уровнем коммуникативной иноязычной компетенции для решения профессиональных задач, общения с зарубежными партнерами и дальнейшего самообразования.

Задачами освоения дисциплины являются:

1. Совершенствование умений и навыков диалогической и монологической речи в ситуациях профессионального общения с учетом требований речевого этикета.
2. Развитие грамматических навыков, обеспечивающих коммуникацию профессионального характера.
3. Развитие навыков ознакомительного, просмотрового и изучающего чтения текстов профессионального характера.
4. Расширение лексического запаса общенаучной и профессиональной тематики.
5. Развитие навыков работы со словарями, в том числе – электронными.
6. Совершенствование навыков письменного перевода с английского языка на русский язык текстов профессионального характера.
7. Формирование навыков аннотирования и реферирования текстов профессионального характера.
8. Формирование навыков устного публичного выступления профессионального характера.
9. Развитие способности находить, анализировать и критически оценивать информацию, полученную из англоязычных источников (в том числе – из сети Интернет).
10. Развитие способности к непрерывному самообразованию в области иностранного языка в профессиональной сфере.

Примерные задания для текущего контроля:

Unit 1. Personal Computing

Reading and Vocabulary

1) **advantage (N)** – преимущество
2) **assemble (V)** – собирать, **assemblage (N)** – сборка, монтаж
3) **back (V)** – поддерживать, субсидировать; **back up (V)** – дублировать, резервировать
4) **binary (A)** – двоичный
5) **bus (N)** – шина
6) **capacity (N)** – емкость, мощность
7) **capital (N)** – капитал; **capitalize (V)** – использовать для своей выгоды
8) **circuit (N)** – сеть, система, цепь; **circuitry (N)** – схема, плата
9) **compatible (A)** – совместимый
10) **compete (V)** – конкурировать
11) **curriculum vitae, CV –** жизнеописание, биография, резюме
12) **desktop** – настольный; **desktop publishing, DTP** – настольная издательская система
13) **develop (V)** – разрабатывать
14) **device (N)** – устройство
15) **digit (N)** – цифра; **digital (A)** – цифровой
16) **draft (A)** – черновой
17) **dual core** – двухъядерный
18) **environment (N)** – среда (разработки)
19) **external (A)** – внешний
20) **feasible (A)** – осуществимый, возможный, доступный
21) **hardware (N)** – аппаратное обеспечение
22) **inkjet printer** – струйный принтер
23) **input / output** – ввод / вывод
24) **internal (A)** – внутренний
25) **kit (N)** – набор, комплект
26) **landscape orientation** – альбомная ориентация (страницы)
27) **lay out (V)** – размечать, **layout (N)** – разметка
28) **manufacture (V)** – производить
29) **network (N)** – сеть
30) **portable (A)** – переносной
31) **portrait orientation –** книжная ориентация (страницы)
32) **process (V)** – обрабатывать
33) **proliferate (V)** – расти, распространяться
34) **pull-down menu** – всплывающее меню
35) **purchase (V)** – приобретать
36) **rival (N)** – соперник, конкурент
37) **routine (A)** – текущий
38) **run (V)** – работать
39) **scale (N)** – шкала, масштаб
40) **semiconductor (N)** – полупроводник
41) **share (V)** – совместно использовать
42) **software (N)** – программное обеспечение
43) **still (A)** – неподвижный
44) **store (V)** – хранить; **storage (N)** – хранилище
45) **upgrade (V)** – совершенствовать
46) **various (A)** – различный

Task 1. Answer the questions.

1) Have you got a PC at home? Is it a desktop, or a notebook?

2) Do you have an opportunity to use a PC at university?
3) Where do you prefer to use a computer, at home or at university? Why?
4) What do you use a PC for?

Task 2. Read the text and match each highlighted word with its correct definition.

A) A display format that allows the user to select commands, call up files, start programs, and do other routine tasks by using a device called a mouse to point to pictorial symbols (icons) or lists of menu choices on the screen.
B) A semiconductor chip that contains all the arithmetic, logic, and control circuitry needed to perform the functions of a computer's central processing unit.
D) Various devices used to enter information and instructions into a computer and to deliver processed data to a human operator.
E) The generic term for any microcomputer that is designed to be carried around.
F) The use of a computer system to perform many of the functions of a printing shop, including page layout and design, choice of fonts, and the inclusion of illustrations.
G) A type of microcomputer designed for use by only one person at a time.
H) The ability to address a given quantity of data held in memory storage.

1) Personal computers generally are low-cost machines that can perform most of the functions of larger computers but use software oriented toward easy, single-user applications. A typical **personal computer (1)** assemblage consists of a central processing unit; primary, or internal, memory, consisting of hard magnetic disks and a disk drive; various **input/output devices (2)**, including a display screen (cathode-ray tube), keyboard and mouse, modem, and printer; and secondary, or external, memory, usually in the form of floppy disks or CD-ROMs (compact disc read-only memory).
2) Computers small and inexpensive enough to be purchased by individuals for use in their homes first became feasible in the 1970s, when large-scale integration made it possible to construct a sufficiently powerful microprocessor on a single semiconductor chip. A small firm named MITS made the first personal computer, the Altair. This computer, which used the Intel Corporation's 8080 microprocessor, was developed in 1974. Though the Altair was popular among computer hobbyists, its commercial appeal was limited, since purchasers had to assemble the machine from a kit. The personal computer industry truly began in 1977, when Apple Computer, Inc., founded by Steven P. Jobs and Stephen G. Wozniak, introduced the Apple II, one of the first pre-assembled, mass-produced personal computers. Radio Shack and Commodore Business Machines also introduced personal computers that year. These machines used 8-bit **microprocessors (3)**, which process information in groups of 8 bits, or binary digits, at a time and possessed rather limited memory capacity. But because personal computers were much less expensive than mainframes, they could be purchased by individuals, small and medium-sized businesses, and primary and secondary schools.
3) The IBM Corporation, the world's dominant computer maker, did not enter the new market until 1981, when it introduced the IBM Personal Computer, or IBM PC. The IBM PC was only slightly faster than rival machines, but it had about 10 times their **memory capacity (4)**, and it was backed by IBM's large sales organization. The IBM PC became the world's most popular personal computer, and both its microprocessor, the Intel 8088, and its operating system, which was adapted from the Microsoft Corporation's MS-DOS system, became industry standards. Rival machines that used Intel microprocessors and MS-DOS became known as “IBM compatibles” if they tried to compete with IBM on the basis of additional computing power or memory and “IBM clones” if they competed simply on the basis of low price.
4) In 1983 Apple introduced Lisa, a personal computer with **a GUI, graphical user interface (5),** to perform routine operations. This type of format had certain advantages over interfaces in which the user typed text- or character-based commands on a keyboard to perform routine tasks. A GUI's windows, pull-down menus, dialog boxes, and other controlling mechanisms could be used in new

programs and applications in a standardized way, so that common tasks were always performed in the same manner. The Lisa's GUI became the basis of Apple's Macintosh personal computer, which was introduced in 1984 and proved extremely successful. The Macintosh was particularly useful for **DTP, desktop publishing (6)** because it could lay out text and graphics on the display screen as they would appear on the printed page. The Macintosh's graphical interface style was widely adapted by other manufacturers of personal computers and PC software. In 1985 the Microsoft Corporation introduced Microsoft Windows, a graphical user interface that gave MS-DOS-based computers many of the same capabilities of the Macintosh. Windows became the dominant operating environment for personal computers. These advances in software and operating systems were matched by the development of microprocessors containing ever-greater numbers of circuits, with resulting increases in the processing speed and power of personal computers.

5) By 1990 some personal computers had become small enough to be completely **portable (7)**; they included laptop computers, which could rest in one's lap; notebook computers, which were about the size of a notebook; and pocket, or palm-sized, computers, which could be held in one's hand. At the high end of the PC market, multimedia personal computers equipped with CD-ROM players and digital sound systems allowed users to handle animated images and sound (in addition to text and still images) that were stored on high-capacity CD-ROMs. Personal computers were increasingly interconnected with each other and with larger computers in networks for the purpose of gathering, sending, and sharing information electronically. The uses of personal computers continued to multiply as the machines became more powerful and their application software proliferated.

Task 3. Answer these questions about the text.

1) What parts does a typical PC include?
2) What company was the first to introduce a PC?
3) When did the PC industry begin?
4) What is the difference between “IBM compatibles” and “IBM clones”?

Task 4. Decide if the statement is true, false or there is no information in the text.

1) The first personal computer was developed by IBM Corporation, the world’s dominant computer maker.
2) The widespread availability of computers has in all probability changed the world for ever.
3) The first IBM PC was nearly as fast as rival machines.
4) The IBM PC is particularly useful for desktop publishing.
5) The price of a desktop PC is not much higher than that of a portable computer.

Task 5. Using the paragraph number references given, look back in the text and find words that have a similar meaning to.

cheap (1)
bought (2)
mount (2)
benefits (4)
prevailing (4)
growth (4)
comprised (5)

Task 6. Using the paragraph number references given, look back in the text and find the reference for the words in *italics*.

1) ... *that* can perform most of the functions (1).
2) ... *which* used the Intel Corporation's 8080 microprocessor (2).
3) ... *they* could be purchased by individuals (2).
4) but … *it* had about 10 times their memory capacity (3).
5) in … *which* the user typed text- or character-based commands (4).
6) because … *it* could lay out text and graphics (4).
7) and … *their* application software proliferated (5).

Task 7. Choose the correct words.

1) To turn on the computer, _____ the "Start" button.
A. touch B. press C. switch

2) The printer has _____ of ink.
A. finished B. ended C. run out

3) Unfortunately, my scanner isn't _____ at the moment.
A. working B. going C. doing

4) _____ any key to continue.
A. Kick B. Smash C. Hit

5) The projector isn't working because it isn't _____.
A. plugged B. plugged in C. plugged into

6) The mouse moves on a _____.
A. mouse mat B. mouse carpet C. mouse table

7) TV and computer screens are usually measured in _____.
A. feet B. miles C. inches

8) Oh dear! I pressed the _____ button.
A. incorrect B. wrong C. false

9) I can't use my mobile phone. The battery's _____.
A. over B. flat C. exhausted

10) Keeping files on a computer database is a _____ solution.
A. new-tech B. now-tech C. high-tech

Writing and Translation

Task 8. Read the texts, fill in the gaps using the words below, and translate into Russian.

Processors and memory

The "brain" of a computer is the __(1)____. Most of these are made by Intel and AMD, and are sometimes referred to as "___(2)___". The fastest processors are ____(3)____, which means that there are two processors working together. The ____(4)_____ of a processor is measured in ___(5)__, which is usually written as MHz. A computer's memory is measured in ___(6)___. The processor and memory modules are located on the ____(7)___. Changing a computer's processor is not generally practical, but the memory can usually be ____(8)__.

chips dual core megabytes megahertz
motherboard processor speed upgraded

Structure of the processor

The processor consists of a ___(1)__, which is a circuit board on which are mounted ___(2)_, memory chips, and other components linked together by __(3)_ lines or channels in the form of control, address, and data __(4)_. In addition, a processor has ___(5)___, which are electronic circuits providing specialized functions such as graphics, or which connect a system board to __(6)_ The system board also consists of electronic devices, such as an electronic ___(7)__ for controlling the speed of operation; ___(8)__, which store numeric data during the course of processing; and various __(9)__ including sequence control register, address register, and function register.

adaptor boards *registers* *microprocessor*
clock *conductive* *buses*
system board *accumulators* *input or output devices*

Task 9. Make the written translation into Russian (2,000 characters).

The history of the multi-billion dollar PC industry has been the hisrory of mistakes. Xerox Corporation funded the initial research on personal computers in their Palo Alto laboratory in California. However, the company failed to capitalize on this work, and the ideas that they put together went into the operating system developed for Apple's computers. This was a graphical interface: using a mouse, the user clicks on icons which represent the function to be performed.

The first IBM PC was developed using existing available electrical components. With IBM's badge on the box it became the standard machine for large corporations to purchase. When IBM were looking for an operating system, they went initially to Digital Research, who were market leaders in command-based operating systems (these are operating systems in which the users type in commands to perform a function). When the collaboration between IBM and Digital Research failed, IBM turned to Bill Gates, then 25 years old, to write their operating system. Bill Gates founded Microsoft on the basis of the development of MS/DOS, the initial operating system for the IBM PC. Digital Research have continued to develop their operating system, DR/DOS, and it is considered by many people to be a better product than Microsoft's. However, without an endorsement from IBM, it has become a minor player in the market. Novell, the leaders in PC networking, now own Digital Research, so things may change.
The widespread availability of computers has in all probability changed the world for ever. The microchip technology which made the PC possible has put chips not only into computers, but also into washing-machines and cars. Some books may never be published in paper form, but may only be made available as part of public databases. Networks of computers are already being used to make information available on a world-wide scale.

Task 10. True or false? Read the text and check your answers.
1) On unheaded notepaper, you should always write your name above your address.
2) On unheaded notepaper, the address of the sender is on the right.
3) *Our ref.* refers to the writer's filing system.
4) In the UK, the date 2/4/09 means February 4th, 2009.
5) You should always write the name and position of the person you are writing to above his/her company address.
6) You use the salutation *Dear Sir* or *Dear Madam* when you know that the person you are writing to is older or more senior than you.
7) If you begin with *Dear Sir,* you end with *Yours faithfully.*
8) The initials *p.p.* indicate that the person signing the letter is doing so on behalf of someone else.
9) It is unusual for the writer to put his/her company position at the end of the letter.
10) In business letters, dates should appear as numbers separated by full points (.) or obliques (/).

Hints on writing business letters

Most company notepaper is headed. However, if you are writing on unheaded paper, put your address (but not your name) in the top right-hand corner. The address of the company you are writing to should appear on the left so that it can be seen through an envelope with a window. If you are writing to a specific individual in the company, his/ her name and position goes above the address.
Dates can cause some confusion. 2/ 3/ 2009 means 'the second of March' in English letters, but 'February third' in American ones. Confusion can be avoided by writing dates as follows: *2 March* (or *March 2* in the USA)
2009. The names of the months should not be abbreviated in formal letters.
When you receive a business letter, there is usually a reference number at the top following the words *Our ref.* This is designed to help the sender to file related correspondence, and you should quote this reference when you reply.
If you do not know the name of the person you are writing to, or you are not sure if you are writing to a man or woman, you should begin *Dear Sir or Madam (Gentlemen:* in the USA) and end *Yours faithfully (Yours truly* in the USA). If you know the person's surname, begin (for example) *Dear Mrs Jones* and end *Yours sincerely.* If the person is more of a friend, begin (for example) *Dear Peter,* and end *Best wishes.* In opening and closing salutations and in addresses, it is common not to use full stops and commas.
Refer to men as *Mr.* Refer to women as *Ms,* unless in previous correspondence from them they have indicated that they use the title *Mrs* (for married women) or *Miss* (for unmarried women). Women

will often indicate their preferred title by writing it in brackets after their signature, for example: *Catherine Honey (Mrs).* Most correspondents will assume you are a man unless told otherwise, so if you sign a letter *H. Jones,* most people will reply beginning *Dear Mr Jones.*
When you sign your name, it is common practice to type it out as well and to put your position in the company below it. If someone in a company signs a letter on behalf of someone else, the initials *p.p.* (per pro) should be used before the name to indicate this.
If something is being sent with a letter, *Enc.* or *Encl.* (enclosure) should appear in the bottom left-hand corner of the page. State your message clearly, concisely, and politely.

Task 11. Read the covering letter and fill in the gaps.

A. Subject
B. Enclosure
C. interview
D. ABC Company, Ltd
E. resume

____(1)____
Green Street
Liverpool, England, BZ244

____(2)____ : CV OF JOHN JONES
Dear sirs,
I read with interest your advertisement for engineering positions at ABC Company. Your company is one of the leaders in the electronics industry, and I am interested in being employed by a company with your background.
Enclosed is a copy of my resume that details my academic qualifications and practical experience gained through the cooperative education program. As you can see from my ___(3)____, I have a firm foundation in electrical engineering.
Thank you for taking your time to review my resume. I would welcome the opportunity to discuss how my education, practical skills, and background would qualify me to be a member of the ABC Company.
Please contact me at 287 99 23 or john@email.com to set up a time for an ____(4)_____. I look forward to hearing from you.
Sincerely,
JOHN JONES
_____(4)_____ : CV

Task 12. Read the CV of John Jones and answer the questions.

1) How old is John?
2) What academic degrees does he have?
3) Is John single?
4) Will he be able to work as the ABC representative in Russia? Why / Why not?

Curriculum Vitae

PERSONAL	
First name	John
Surname	Jones
Nationality	British
Date of birth	1981, June, 4
Place of Birth	Glasgow, UK
Sex	Male
Marital status	Married with two children

Passport No, Validity	TR-F 250301, 09/06/2011
Place and Date of Issue	London, 10/06/2008
Permanent Address	7, Red Road, London, UK
Telephone No	(44312) 287 99 23
E-mail	john@email.com

EDUCATIONAL BACKGROUND

Sep 1986- June 1998	West High School, Glasgow
Sep 1998- Nov 2002	Oxford Technical University, Oxford Faculty of Computer Science B. Sc. Degree
Sep 2002- June 2004	College of Political Sciences, Oxford Business Administration Department Master of Business Administration

WORK HISTORY

1. Jan 2005 - Dec 2006	British Petroleum Corporation, London Project engineer
2. Dec 2006 – June 2008	Headquarters of BST Industrial Plants Programmer

TECHNICAL EXPERIENCE
Languages: C++, CORE JAVA, VB 6.0, UNIX shell scripts, HTML
Platforms: Windows XP/98/95,2000,NT, Red hat Linux (9.0, ES, WS)
Concepts: networking, operating systems
LANGUAGES
English, French

Task 13. Write your own CV using the text in Task 12 as a sample.

Speaking
Task 14.
A) Which type of printer is each phrase about?
1. cheaper to buy
2. cheaper to run
3. faster printing speed
4. takes up more space
5. uses liquid ink
6. uses toner
7. more reliable
8. cartridges need changing more often

B) True or false?
1. Inkjet cartridges can be refilled up to three times.
2. Inkjet cartridges are very difficult to change.
3. Photo-paper is a lot more expensive than plain paper.
4. Recycled paper is made out of old bottles
5. Some inkjet printers have three print qualities: draft, normal and best.
6. Before you can use a new printer, you have to install the driver from a CD-ROM.
7. When a print job has started, it can't be cancelled.

C) Do you have a printer at home? Is it a laser printer or an inkjet one? Describe to your partner the characteristics of the printer you would like to use.

Task 15. Which do you think is the best solution for each problem? More than one solution is possible for some of problems.

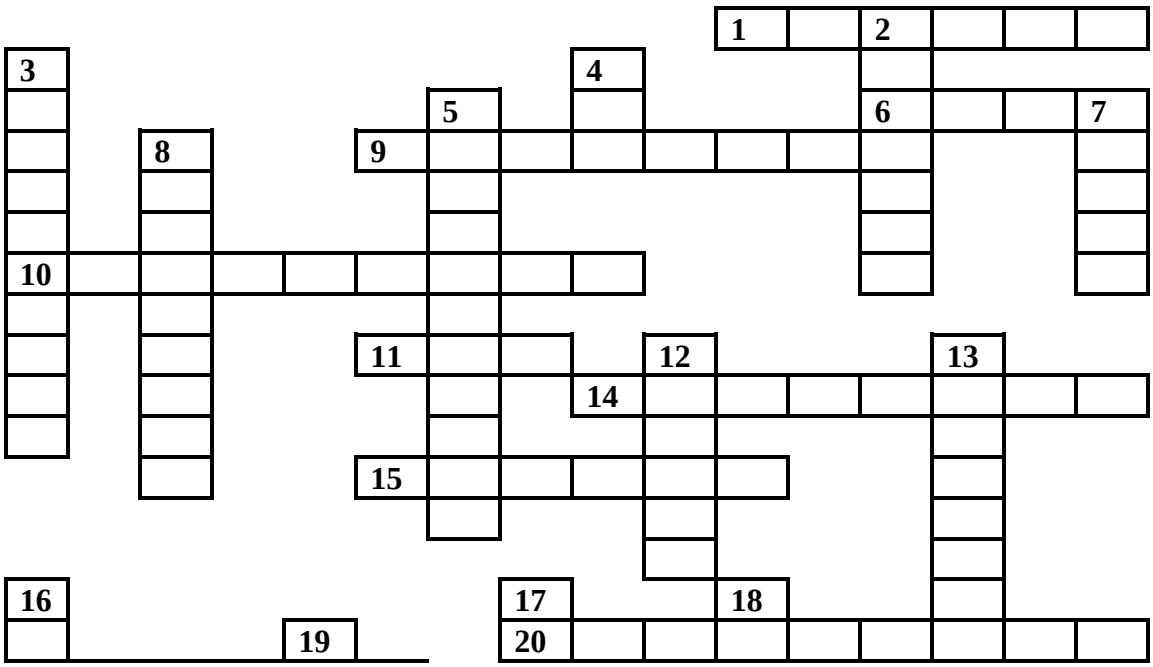
1. I want to make a copy of a music CD.
2. I want to store some files. I may need to update them in the future.
3. I want to back up data on my computer. I want to update it every day.
4. My computer's having problems with reading and writing CDs.
5. I want to add 100MB of extra storage to my computer.
6. I want to give a copy of a small file to a friend. He has an old computer.
7. My computer's running slowly.

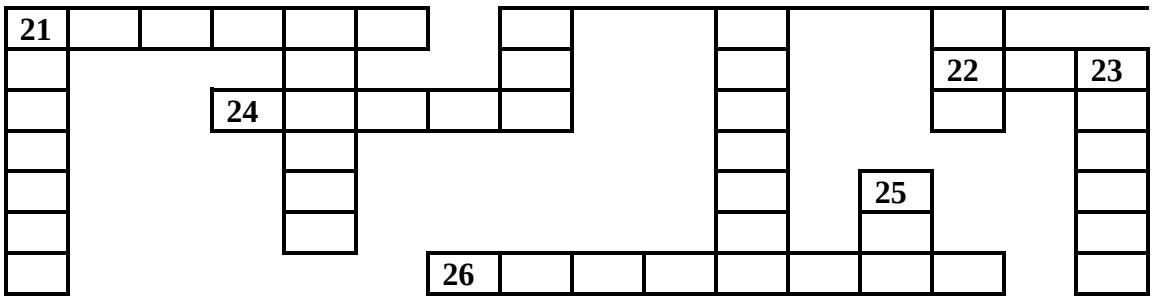
A. You need an external hard drive.
B. Use a CD-R.
C. Try a USB flash drive.
D. Perhaps you need a new internal CD drive.
E. Put them on a CD-RW.
F. Perhaps you need to defragment the hard drive.
G. You could put it on a floppy disk.

Task 16.
A. Comment on these forecasts about computing.
1. "Computers in the future may weigh no more than 1.5 tons." (*Popular Mechanics, 1949)*
2. "There is a world market for maybe five computers." (*Thomas Watson, chairman of IBM, 1943)*
3. "I have traveled the length and breadth of this country and talked with the best people, and I can assure you that data processing is a fad that won't last out the year." (*The editor in charge of business books for Prentice Hall, 1957)*
4. "But what is it good for?" (*Engineer at the Advanced Computing Systems Division of IBM, 1968, commenting on the microchip)*
5. "There is no reason anyone would want a computer in their home." (*Ken Olson, president, chairman and founder of Digital Equipment Corp., 1977)*
Notes: fad – причуда, кратковременное увлечение

B. Tell about the history of PC.

Task 17. Review crossword





Across

1. A camera connected to the Internet. (6 letters)
6. To send an SMS message. (4)
9. The most common page orientation. (8)
10. A computer's "brain". (9)
11. It prevents a computer from overheating. (3)
14. A connection without wires. (8)
15. The place where you put a plug. (6)
20. Processor speeds are measured in these. (9)
21. The cheapest type of printer. (6)
22. Lift this before you use your scanner. (3)
24. The shop assistant does this to your credit card. (5)
26. The strip on the back of a credit or debit card. (8)

Down

2. When it's dead, recharge it or replace it. (7)
3. You speak into this. (10)
4. The mouse moves on this. (3)
5. A computer, printer and scanner on a desk with a chair. (11)
7. Laser printers use this instead of ink. (5)
8. A design (for example, a type of keyboard) which is better for your body. (9)
12. An image on a screen is made up of thousands of these. (6)
13. Printers, scanners, webcams etc. (11)
16. A very large computer which never moves. (9)
17. A photo or drawing. (5)
18. You need to change or refill this when your printer runs out of ink. (9)
19. Two or more computers connected together. (7)
23. The slowest form of Internet connection. (4, 2)
26. Image resolution is usually measured in this. (3)

Список литературы

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