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**МЕТОДИЧЕСКИЕ УКАЗАНИЯ ПО КУРСУ «ТЕХНИЧЕСКИЙ ПЕРЕВОД**  
**В ИНФОРМАЦИОННЫХ ТЕХНОЛОГИЯХ»**

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Пособие включает ..... Данное учебное пособие является дополнительным компонентом к учебно-методическим комплектам по английскому языку.

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## UNIT 1

### TEXT 1. INFORMATION TECHNOLOGY

The definition of information technology (IT) is as follows: the use of technology to provide the capture, storage, retrieval, analysis and communication of information, which can be done either in the form of data, text, image or voice.

With the invention and exploitation of the integrated circuit or 'chip' since the 1960s, the growth of applications using electronics has been phenomenal. Modern electronic computers can process data, graphics and speech at extremely fast rates. The microprocessor is at the heart of what is known as the IT revolution.

Information and communications technologies are changing the way we work, study, do research, and educate our children and ourselves. They are influencing the way we do our banking, pay our bills, entertain ourselves and do business. New options (choices) are being provided for us in the field of health care, education, environmental protection, culture, and business. Computers control washing machines, cookers, televisions, telephones, home computers, cameras, video games, digital watches and many other devices.

Offices and factories now use microprocessors in the everyday life, as do cars, fax machines, aircraft fly control, railway signaling, police computer databases, etc. The aim of the IT revolution has been to transform labour-intensive work, such as mining, agriculture, iron, steel and cotton industries, hardware manufacturing, etc., into an industry where a few highly-skilled workers manage large factories with mainly automated labour.

The influence of the Multimedia is part of the IT revolution. The change from analogue to digital television made it possible to develop special effects, such as the original full screen television image which could be shrunk (уменьшить) to occupy a small portion of the screen.

Compact discs can record complete encyclopedias, as well as provide sound and pictures. The impact of this information revolution on our society cannot yet be fully measured or predicted at this time.

#### Vocabulary

application - применение, использование, прикладная задача

to process (data) - обрабатывать (данные)

digit - цифра;

to entertain - развлекать

definition - определение

to provide - обеспечивать,

skill - навык, умение

image - образ, изображение

to invent - изобретать

to record - записывать

to measure - измерять, мерить

to predict - предсказывать  
 research - исследование  
 to require – требовать

**Task 1. Find synonyms. Make sentences with the words.**

Rate, choice, great, fast, impact, speed, speech, image, exploitation, picture, use, growth, sound, rapid, voice, option, influence, considerable, increase.

**Task 2. Complete the sentences using the information from the text.**

1. Modern electronic computers can process data, graphics and .....
2. Computers cannot control .....
3. Offices and factories now use microprocessors in the everyday life.
4. The influence of the Multimedia is part of .....
5. The impact of this information revolution on our society cannot yet be fully measured.....

**Task 3. Answer the questions on the text.**

1. What is Information Technology? 2. When was the integrated circuit invented? 3. What can modern electronic computers do? 4. What is the heart of the Information Technology revolution? 5. In what way (how) are information and communication technologies changing our life? 6. In what fields are information and communication technologies used nowadays? 7. What is the aim of the Information Technology revolution? 8. What was the result of the change from analogue to digital television? 9. Is it possible to record large books on compact disks?

**Task 4. Match the right and the left columns.**

1. Modern electronic computers can....	a) record complete encyclopedias.
2. Computers control ...	b) Information Technology revolution.
3. The microprocessor is at the heart of..	c) process data, graphics and speech
4. Compact disks can ...	d) the way we work, study, do research and educate our children
5. Information and communication.....	e) part of the TV revolution.
6. The influence of the Multimedia is.....	f) washing machines, television, telephones, cameras
	g) technologies are changing

**Task 5. Group work. Role play the following situation:**

1. What are the most important computers or technical skills needed in the following jobs: (1) teacher, (2) auto mechanic, (3) engineer, (4) doctor, (5) store manager, and (6) architect. Explain your reasons.

Suppose you are applying to work for a computer software company. What qualifications and skills would be needed in different positions within a company? What kinds of questions do you think you would be asked in a job interview for such positions?

### **Task 6. Translate the following sentences from Russian into English.**

1. Наука оказывает огромное влияние на нашу жизнь. 2. Она является основой современной технологии. 3. Сегодня, когда люди говорят о технологии, они имеют виду Промышленную технологию. 4. Открытия и изобретения ученых помогают нам формировать наши взгляды о себе и о нашем месте во Вселенной. 5. Ученые изучают широкий круг проблем. 6. Некоторые ученые ищут разгадку происхождения Вселенной. 7. Другие изучают строение клетки. 8. Некоторые исследуют причины нашего поведения. 9. Ученые используют систематические методы изучения проблем.

## **TEXT 2. DEVELOPMENT OF TELECOMMUNICATIONS**

We cannot deny the role of telecommunications in our life. The Internet, phones, telegraph, cell phones, radio, television are all the means of communication or telecommunication. Nowadays we live in information era, when information is the key and engine of progress. Our society needs perfect means of information exchange that is why all types of telecommunication are under the permanent developing.

Currently hundreds of millions of people use wireless communication means. Cell phone is no longer a symbol of prestige but a tool, which lets to use working time more effectively. Considering that the main service of a mobile connection operator is providing high quality connection, much attention in the telecommunication market is paid to the spectrum of services that cell network subscriber may receive.

Today we can easily connect to the Internet using our cell phone or to take a picture or to take a short movie, using our video cell phone.

Before the outbreak of the First World War wireless telegraphy was established as a means of regular communication with ships at sea and provided a valuable supplement to existing telegraph lines. In the next few years the telephone systems of all the chief countries were connected with each other by radio.

Telephones are as much a part of infrastructure of our society as roads or electricity, and competition will make them cheaper.

Lots of other new communication services — on-line film libraries, personal computers that can send video-clips and sound-bites as easily as they can be used for

writing letters, terrestrial mobile-telephone systems cheap enough to replace old sets — are already technically possible.

### **Vocabulary**

telecommunication — телекоммуникация, дальняя связь; телефон, телеграф,

to deny — отрицать, отказываться от чего-либо

exchange — обмен

to consider — считать, полагать

subscriber — подписчик, клиент

gradually — постепенно, понемногу

to compete — конкурировать, соревноваться

contribution — содействие, вклад

wireless — беспроводной, дистанционный

to establish — основывать, создавать

valuable — ценный, полезный

supplement — дополнение, добавление

immediate — внезапный, безотлагательный, немедленный

to broadcast (past broadcast, р.р. broadcast) — передавать в эфире, вещать

### **Task 1. Find in the text English equivalents of the following words.**

роль телекоммуникаций, средства связи, информационная эпоха, в постоянном развитии, символ престижа, рабочее время, спектру услуг, абонент сотовой сети, подключиться к интернету, сделать снимок, средство регулярной связи, звуковые фрагменты, достаточно дешевые, заменить.

**Task 2.** Read the text again and decide whether the following statements are true or false.

1. The Internet, phones, telegraph, cell phones, radio, television are all the means of communication.
2. Our society does not need perfect means of information exchange
3. Currently ten millions of people use wireless communication means.
4. Today we can easily connect to the Internet using our cell phone.

### **Task 3. Answer the questions on the text:**

1. Can we connect to the Internet using our cell phone today?
2. What was invented late in the nineteenth century?
3. What technology made a great contribution to a long-range communication?
4. Was there wireless telegraphy as a means of regular communication before the outbreak of the First World War?
5. What new telecommunication services do you know?

### **Task 4. Match the words having a similar meaning.**

- |                |              |
|----------------|--------------|
| 1. To vary     | a. Income    |
| 2. Profit      | b. Vital     |
| 3. To contain  | c. To reduce |
| 4. To decrease | d. To alter  |

- |              |               |
|--------------|---------------|
| 5. Important | e. To include |
| 6. To design | f. To create  |
| 7. To refer  | g. Group      |
| 8. Set       | h. To relate  |

### TEXT 3. THE PROFESSION OF A PROGRAMMER

A programmer, or a computer programmer, is a person who writes programs to work on a computer. Computer programs are detailed instructions that computers must follow to do their functions. A programmer can be a specialist in one area of computer programming or a generalist who writes codes for many kinds of programs. Programmers also make, design, and test logical structures for solving problems by a computer. Many technical innovations in programming – modern computing technologies and new languages and programming tools - have changed the role of a programmer and enriched much of the programming work today.

British mathematician Ada Lovelace (who was the famous British poet Lord Byron's daughter) was the first to write a program for a computing machine. The machine was Charles Babbage's Analytical Engine, and Ada wrote and published an algorithm to make the calculations of Bernoulli numbers in October 1842. Unfortunately, her work never ran because Babbage's machine was never finished in her time.

The first person to successfully run a program on a computer was a computer scientist Konrad Zuse, who succeeded in it in 1941.

The American ENIAC (Electronic Numerical Integrator and Computer) programming team, consisting of Kay McNulty, Betty Jennings, Betty Snyder, Marlyn Wescoff, Fran Bilas and Ruth Lichterman were the first regularly working programmers.

International Programmers' Day is celebrated annually on the 7th of January. In Russia starting from the year of 2009 a professional annual holiday known as Programmers' Day is celebrated on the 13th of September (the 12th of September in leap years).

#### Vocabulary:

programmer – программист  
 design – разрабатывать  
 innovation – новшество  
 enrich – обогащать  
 publish – публиковать  
 celebrate – праздновать, отмечать  
 annually – ежегодно

#### Task 1. Complete the following sentences using the information from the text.

1. Computer programs are detailed instructions that computers must.....
2. A programmer can be a specialist in one area of computer programming or a specialist who.....

3. Programmers also make, design, and test logical structures for.....
4. The first person to successfully run a program on a computer was.....
5. International Programmers' Day is celebrated.....

**Task 2. Answer the following questions using the information from the text and your own experience:**

1. Who is a programmer? 2. Who was the first programmer in the history of computing? Prove your opinion. 3. When is International Programmers' Day celebrated? 4. Why is Programmers' Day in Russia celebrated on the other date?

**Task 3. Give synonyms to the following words:** *modern, to design, to test, to finish, success*

**Task 4. Give antonyms to the following words:** *unfortunately, to change, to enrich, international, to start*

**Task 5. Complete the interview questions with the words from the box.**

work, offer, tell, good, motivates, sort, know,  
strengths, weaknesses, important, learn

1. \_\_\_ me about yourself.
2. Why should we \_\_\_ you the job?
3. What \_\_\_ you?
4. What are you \_\_\_ at?
5. What \_\_\_ of person are you?
6. What are your \_\_\_ and \_\_\_?
7. What do you \_\_\_ about our company?
8. Do you like to \_\_\_ in a team or on your own?
9. How \_\_\_ is work to you?
10. What did you \_\_\_ in your last job?

**Task 6. Translate the following sentences:**

1. `Работа программиста – сложная, но интересная, она подходит для нас.
2. Мы выбрали её из многих других профессий и надеемся стать хорошими специалистами.
3. Хотя некоторые люди думают, что в сфере компьютеров уже больше нечего открывать, мы знаем, что наши открытия ещё впереди.
4. Записи и чертежи Чарльза Баббеджа вдохновили учёных из Британского музея науки на создание машины, придуманной им.
5. Мировое научное сообщество признаёт достижения Ады Лавлейс и считает её первым программистом.
6. Уже в 17 веке были первые попытки создания электронных машин; это, например, счётные машины Лейбница и Паскаля. . Считается, что коллегой Конрада Цусе, помогавшим ему с созданием Зед -1 был Гельмут Шрейер.

## **Task 7. The tree represents a person with his/her skills and personal qualities.**

### **LEAVES: personal qualities and skills**



Each student will get this tree. Put your qualities and skills connected with working with the computer in the leaves.

- Exchange the trees with each other. Study the trees and make a presentation of each other's qualities and skills
- After each presentation the whole group tries to find the appropriate job for each candidate trying to explain their choice.

Here you can find some ideas:

- Having ambition
- Working hard
- Getting on with people
- Being adaptable
- Looking smart
- Having sense of humor
- Being motivating
- Being competent
- Being a good team player
- Having good communication skills
- Having patience and tenacity
- Having logical reasoning
- Having problem solving skills

## **Task 8. Answer the following questions**

1. What computer specialties do you know? 2. What are the responsibilities of different computer specialists? 3. Have you chosen an appropriate job for yourself? 4. What responsibilities are you suitable for?

Here you can find some ideas:

- to work on the full range of development activities - analysis, design, coding, testing and implementation
- to perform formal analysis of operational needs
- to run data-processing equipment (data control and editing)
- to facilitate systems integration
- to provide messaging, data storage, networking
- to develop and maintain web-based applications

- to possess analytical problem solving skills
- to handle customer support calls
- to set up equipment
- to maintain security of documents and customers
- to install, configure and maintain software and hardware systems
- to assess potential risks
- to conduct trainings to new hires, users and technical teams as needed
- to analyze system issues and provide resolutions.
- to recommend process improvements
- to ensure system reliability, security, integrity and performance
- to conduct computer diagnostics

#### **TEXT 4. FUTURE TRENDS**

1. By all accounts, nanotechnology - the science of making devices from single atoms and molecules - is going to have a huge impact on both business and our daily lives. Nano devices are measured in nanometers (one billionth of a meter) and are expected to be used in the following areas.

- **Nanocomputers:** Chip makers will make tiny microprocessors with nanotransistors, ranging from 60 to 5 nanometers in size.
- **Nanomedicine:** By 2020, scientists believe that nano-sized robots, or nanobots, will be injected into the body's bloodstream to treat diseases at the cellular level.
- **Nanomaterials:** New materials will be made from carbon atoms in the form of **nanotubes**, which are more flexible, resistant and durable than steel or aluminium. They will be incorporated into all kinds of products, for example stain-resistant coatings for clothes and scratch-resistant paints for cars.

2. Artificial Intelligence (AI) is the science of making intelligent machines and programs. The term originated in the 1940s, when Alan Turing said: "A machine has artificial intelligence when there is no discernible difference between the conversation generated by the machine and that of an intelligent person. A typical AI application is robotics. One example is ASIMO, Honda's intelligent humanoid robot. Soon, engineers will have built different types of android, with the form and capabilities of humans. Another AI application is expert systems – programs containing everything that an 'expert' knows about a subject. In a few years, doctors will be using expert systems to diagnose illnesses.

3. Imagine you are about to take a holiday in Europe. You walk out to the garage and talk to your car. Recognizing your voice, the car's doors unlock

Does it sound futuristic? Well, the future is here. Biometrics uses computer technology to identify people based on physical characteristics such as fingerprints, facial features, voice, iris and retina patterns.

4. In the ideal smart home, appliances and electronic devices work in sync to keep the house secure. For example, when a regular alarm system senses that someone is breaking into the house, it usually alerts the alarm company and then the police. A smart home system would go further, turning on the lights in the home and then send-

ing a text message to the owner's phone. Motorola Home sight even sends images captured by wireless cameras to phones and PCs. Smart homes can remember your living patterns, so if you like to listen to some classical music when you come home from work, your house can do that for you automatically. They will also know when the house is empty and make sure all appliances are turned off. All home devices will be interconnected over a home area network where phones, cable services, home cinemas, touch screens, smart mirrors and even the refrigerator will cooperate to make our lives more comfortable.

### Vocabulary

nanotechnology – нанотехнология

nanotransistors– нанотранзисторы

android– человекоподобный

expert system – экспертные системы

expect–ожидать

bloodstream – кровообращение

cellular level – клеточный уровень

resistant – прочный;

scratch-resistant - стойкий к механическим повреждениям

artificial intelligence - искусственный интеллект

discernible – видимый; различимый;

appliances - бытовая техника

### Task 1. Match the right and the left columns.

hardware layer	виртуальная среда
application layer	контроль ID
capability	интерфейс со звуком (голосом)
a positive feedback loop	интеллектуальная база данных
offspring	отвод
smart database	доступ
virtual environments	визуальная технология
ID verification	нанотранзисторы
natural voice interface	положительный цикл обратной связи
visualization technology	уровень аппаратного обеспечения
access	прикладной уровень

bandwidth communication	встроенные системы
ubiquitous computing	полоса частот
pervasive computing	повсеместная компьютеризация
15. embedded systems	компьютеризация, проникающая во все сферы

**Task 2. Make up sentences.**

1. should, operator, check, in order to, hardware layer provide, smart database
2. will, future, provide, developments, a positive feedback loop, computer, between, human being
3. of extreme importance is, user, capability, for computer
4. considered, is, it, will, replaced, be, that, human-brain, human machine equivalence, by
5. on business, daily life, and will a huge impact, have, nanotechnology
6. system embedded, interact, will hundreds, with, smart devices
7. have built, will, engineers, soon android, of, types, different, form, with, capabilities, human, of.

**Task 3. Translate the following sentences.**

1. Nanotechnology is the science of making devices from single atoms and molecules.
2. Nanodevices are measured in nanometers (one billionth of a meter).
3. Artificial intelligence is the science of making intelligent machines and programs.
4. By 2020 scientists believe that nanorobots will be injected into the body bloodstream to treat diseases at the cellular level.
5. Hardware layer, computers, phones, and consumer electronics are converging.
6. In the near future we may have electronic pets with video camera eyes and microphone ears.
7. This technology development will push every field of knowledge forward.
8. Electronic money will be very secure but much more versatile than physical alternatives.
9. Telecoms applications will soon be bundled together in much the same way as office application suits are today.

**Task 4. Complete the sentences using the following phrases:**

integrated systems, microscopic robot, pervasive computing, artificial, embedded systems, artificial, intelligence, Biometrics, smart devices. android, electrical devices, nanomaterials.

1. P..... с..... is a new approach in which computer functions are integrated in everyday life.

- 2.E..... s..... is a special computer system designed to perform one or more special functions.
- 3.The verification of i..... s..... will be done by in...r.....
- 4.E..... d..... controlled by computers are very popular nowadays.
- 5.A..... i..... is a science making intelligent machines and programs.
- 6.B..... id used today to identify people based on physical characteristics.
- 7.In the future people will interact with hundreds of s..... d.....
- 8.Soon engineers will have built different types of android.
- 9.N..... will be made from carbon atoms in the form of nanotubes.
10. E..... c..... can be completely global and could be used as de facto standard.

## **TEXT 5. TYPES OF COMPUTERS**

When most people hear the word computer, they think of a personal computer such as a desktop or laptop. However, computers come in many shapes and sizes, and they perform many different functions in our daily lives. When you withdraw cash from an ATM, scan groceries at the store, or use a calculator, you're using a type of computer.

### Desktop computers



Many people use desktop computers at work, home, and school. Desktop computers are designed to be placed on a desk, and they're typically made up of a few different parts, including the computer case, monitor, keyboard, and mouse.

Supercomputers are the world's largest and fastest computer system with the highest performance computing power vital to provide national security, industry, technology, science and improve everyday products, services, and processes.

### Laptop computers



The second type of computer you may be familiar with is a laptop computer, commonly called a laptop. Laptops are battery-powered computers that are more portable than desktops, allowing you to use them almost anywhere.

## Tablet computers



Tablet computers—or tablets—are handheld computers that are even more portable than laptops. Instead of a keyboard and mouse, tablets use a touch-sensitive screen for typing and navigation. The iPad is an example of a tablet.

### **Servers**

A server is a computer that serves up information to other computers on a network. For example, whenever you use the Internet, you're looking at something that's stored on a server. Many businesses also use local file servers to store and share files internally.

### **Other types of computers**

Many of today's electronics are basically specialized computers, though we don't always think of them that way. Here are a few common examples.

- **Smart phones:** Many cell phones can do a lot of things computers can do, including browsing the Internet and playing games. They are often called smart phones.

**Wearables:** Wearable technology is a general term for a group of devices—including fitness trackers and smart watches—that are designed to be worn throughout the day. These devices are often called wearables for short.

**Game consoles:** A game console is a specialized type of computer that is used for playing video games on your TV.

**TVs:** Many TVs now include applications—or apps—that let you access various types of online content. For example, you can stream video from the Internet directly onto your TV.

### **Vocabulary**

laptop - ноутбук

daily life - повседневная жизнь

groceries - продовольственные товары

tablet computer – планшет

stream - передавать, направлять

application - приложение

### **Task 1. Find the equivalents to the following words and word-combinations from the text.**

Типы компьютеров, персональный компьютер, ноутбук, в нашей повседневной жизни, использовать калькулятор, настольный компьютер, портативный компьютер, планшеты, сенсорный экран, для внутреннего хранения и обмена файлами, специализированные компьютеры, позволяют получать доступ.

**Task 2 . Complete the sentences using the information from the text:**

1. When you withdraw cash from an ATM, scan groceries at the store, or use a calculator, you're using .....
2. The second type of computer you may be familiar with is .....
3. ....is an example of a tablet.
4. Many businesses also use local file servers to store and ....
5. .... can do a lot of things computers can do, including browsing the Internet and playing games.

**Task 3. Make up pairs of synonyms from the given words.**

Verbs: to name, to complete, to calculate, to develop, to keep, to interpret, to communicate, to fulfill, to apply, to translate, to improve, to build, to call, to store, to communicate, to figure out, to perform, to use, to finish, to construct, to connect.

Nouns: speed, aim, storage, information, machine, significance, computation, data, device, rate, calculation, purpose, memory, importance

**Task 4. Choose the most suitable word or phrase.**

- 1.Nick is going to buy a new laptop / desktop PC that he can take to work.
- 2.A mainframe is more powerful than a supercomputer because it runs and supports more applications and users together / simultaneously.
- 3.A calculator / highways navigation in my smart phone allows me to find the way in an unfamiliar part of the city.
- 4.A supercomputer / desktop PC is the most powerful machine in the world.

## **TEXT 6. TYPES OF SOFTWARE**

Software – programs for directing the operation of a computer or electronic data. Software is the final computer system component. These computer programs instruct the hardware how to conduct processing. Computers can input, calculate, compare and output data as information. Software determines the order in which these operations are performed.

Software programs are of two types: systems software and applications software.

Systems software are the programs designed to control the operation of a computer system. They do not solve specific problems. They are written to assist people in the use of the computer system by performing tasks, such as controlling all of the operations required, to move data into and out of a computer and all of the steps in executing an application program. The person who prepares systems software is referred to as a systems programmer. Systems programmers are highly trained specialists and important members of the architectural team.

Applications software are the programs written to solve specific problems (applications), such as payroll, inventory control, and investment analysis. The word program usually refers to an application program, and the word programmer is usually a person who prepares applications software.

Often programs, particularly systems software, are stored in an area of memory not used for applications software. These protected programs are stored in an area of memory called read only memory (ROM), which can be read from but not written on.

### **Vocabulary**

system software — системное программное обеспечение

application software — прикладное программное обеспечение

to conduct - проводить

to execute applications programs — выполнять прикладные программы

to refer to — относиться к; ссылаться на

payroll -платёжная ведомость

to train – обучать, тренировать

### **Task 1. Find in the text English equivalents of the following words.**

Системное программное обеспечение, проводить; завершать; оборудование; использовании компьютерной системы, требовать; перемещения данных, конкретный; помощь; выполнять прикладные программы; устанавливать, переносить; высококвалифицированные специалисты, управление запасами, платёжная ведомость.

### **Task 2. Read the text again and mark the sentences as true or false.**

- 1.Computer programs only instruct the hardware how to handle data storage.
- 2.System software controls internal computer activities.
- 3.System software is very dependable on the type of application software being used.
- 4.The information about memory capacity, the model of the processor and disc drives is unavailable for system software.
- 5.It is very reasonable to ask for a driver when you buy a new piece of hardware.
- 6.Systems programmers are highly trained specialists and important members of the architectural team.
- 7.Application software is merely a general-purpose instrument.

### **Task 3. Translate into English**

- 1.Программное обеспечение определяет порядок выполнения операций.
- 2.Прикладные программы выполняют поставленную вами конкретную задачу.
- 3.Этот класс программ самый многочисленный и перспективный с точки зрения маркетинга.
- 4.Системные программы предназначены для конкретных устройств компьютерной системы.
- 5.Устанавливая драйвер, вы учите систему понимать вновь присоединенное устройство.
- 6.Когда компьютер впервые включается, одна из системных программ должна быть загружена в его память.

### **Task 4. Answer the questions.**

1. What is software?

2. In what two basic groups could software be divided?
3. What is systems software?
4. Is an operating system an application or system software?
5. What is an application software?
6. What is the tendency in application software market in recent years?
7. What is the application of the communication software?

**Task 5. Match the words on the left with their definitions on the right.**

- |                |                                                      |
|----------------|------------------------------------------------------|
| 1. medium      | a. the process of getting back information           |
| 2. digit       | b. computer programs                                 |
| 3. retrieval   | c. part of a computer controlling all its operations |
| 4. maintenance | d. and electronic parts of a computer                |
| 5. application | e. information in a form that a computer can use     |
| 6. software    | f. way of communicating or expressing smth           |
| 7. hardware    | g. the work done to keep smth in good condition      |
| 8. database    | h. computer program for a particular purpose         |
| 9. processor   | i. any of the numbers from 0 to 9                    |
| 10. data       | j. information stored in a computer system           |

**Task 6. Choose the correct translation:**

1. Insert source diskette
  - а) Дискета, с которой осуществляется копирование, вставлена.
  - б) Вставьте дискету, с которой осуществляется копирование.
  - в) Копирование осуществляется со вставленной дискеты.
2. Strike any key
  - а) Все клавиши нажаты.
  - б) Нажмите любую клавишу
  - в) Клавиша нажата
3. Enter new date
  - а) Новая дата введена
  - б) Введите новую дату.
  - в) Введение новой даты.
4. Re-insert diskette for drive X
  - а) Дискета снова вставлена в дисковод X.
  - б) Вставьте снова дискету для дисковода X.
  - в) Повторная вставка дискеты в дисковод X.
5. Please check it
  - а) Пожалуйста, проверьте это.
  - б) Пожалуйста, это проверено.
  - в) Проверка проведена, пожалуйста.

**TEXT 7.**

**COMPUTER VIRUSES? WHAT REALLY IS IT?**

One might think of a computer virus as a tiny computer program designed to perform mischief. Most computer users have heard about computer viruses. A computer virus is the result of a destructive program that someone has written and placed inside a computer program, which unsuspecting people then place in their computer system.

Some viruses can erase all the information from the place where it's stored on the computer's hard disk. But each virus is different. Some display strange messages on your computer screen; others make small changes in your computer programs.

Where do these viruses come from? They certainly don't float around in the air like some human viruses. Instead, like any other computer program, a human must create them.

Why do people create them? It's hard to say. Some people create these programs out of meanness to get even. While others create them just as a challenge. Why do you think people create these very destructive programs? How does your computer get a virus? Almost exactly the way humans do. The computer gets exposed to one. Well, it's not quite that easy.

Many people get contaminated computer programs by trading programs with other people. Others get contaminated computer programs through the use of modems, which allow computers to communicate over telephone lines (i.e. the Internet)

Most of the time, programs that arrive by modem or a trade are perfectly safe to use. However, you do stand a chance of getting a program that has been tampered with. Here a computer program virus is hiding inside the normal program. Many computer programs that are traded were copied illegally.

When this program enters your computer through your input device, it hides in your computer's memory and starts to duplicate itself like a disease. When you save your data, you also save the virus. Slowly but surely, the virus crowds out your data and causes major system problems.

The virus can't affect the computer's ROM (Read Only Memory), but it can affect RAM (Random Access Memory) and your computer disks. When you shut off your computer a virus that has been picked up will be lost, just like any other memory that is held in RAM.

If the virus is on your disk or hard drive, it will return to the computer when you use the program again. If you switch from one program to another without shutting down the machine, the virus will attach itself to the new program. In this way, it can slowly infect all your programs before you know that it exists. Today millions of dollars are being spent to rid and protect computer systems from these virus programs.

Commercial and shareware programs have been created with the sole purpose of detecting and fixing suspect programs that might be viruses infected. These detection programs should be run when any disk is put into your disk drive or every time your computer is first started up each day to scan the computer's hard drive.

### **Task 1. Read the article and mark the statements true (T) or false (F).**

**1.** A computer virus is the result of a destructive program that someone has written and placed inside a computer program

- 2.The virus affects the computer's ROM (Read Only Memory), RAM (Random Access Memory) and your computer disks.
- 3.If the virus is on your disk or hard drive, it will return to the computer when you use the program again.
- 4.If you switch from one program to another without shutting down the machine, the new program won't be tampered with.
- 5.Most people create destructive programs just as a challenge.
- 6.You should use detection programs just to scan the computer's hard drive once a month.

**Task 2. Read the article again and answer the questions.**

- What is a computer virus?
- What are some of the things that viruses can do?
- Where do viruses come from?
- Why do people create viruses?
- How do computers acquire viruses?
- Can a virus affect the ROM of a computer?
- What can be done to avoid getting a computer virus?
- What can be done when someone knows they have a virus?

**Task 3. Match a verb from A with a word or phrase from B to make phrases from the article.**

A	B
<ol style="list-style-type: none"> <li>1. Shut</li> <li>2. erase</li> <li>3. fix</li> <li>4. perform</li> <li>5. make</li> <li>6. shut</li> <li>7. switch</li> <li>8. communicate</li> <li>9. cause</li> <li>10.duplicate</li> <li>11.crowd</li> <li>12.arrive</li> </ol>	<ul style="list-style-type: none"> <li>• a. mischief erase</li> <li>• b. all the information</li> <li>• c. small changes</li> <li>• d. over telephone lines</li> <li>• e. by modem</li> <li>• f. itself like a disease</li> <li>• g. out your data</li> <li>• h. major system problems</li> <li>• i. off your computer</li> <li>• j. from one program to another</li> <li>• k. down the machine</li> <li>• l. suspect programs</li> </ul>

**Task 4. Find words in the article which fit these meanings.**

1. a piece of electronic equipment that allows information from one computer to be sent along telephone wires to another computer
2. the part of a computer where information can be stored
3. information in a form that can be stored and used, especially on a computer

4. the part of a computer that acts as a temporary store for information so that it can be used immediately
5. the part of a computer where permanent instructions and information are stored
6. the part of a computer where information and programs are stored, consisting of hard discs and the electronic equipment that reads what is stored on them
7. free or cheap computer software, usually produced by small companies, that you can use for a short time before you decide whether to buy it

**Task 5. Use the words from Exercise 4 to complete these sentences.**

1. There are two versions of this utility, ..... and for-fee.
2. When deciding on a system, I start by choosing the chipset because the chipset decision then dictates the processor, ....., input/output, and expansion capabilities.
3. Select the option to program the new BIOS file into the FLASH .....
4. Like its predecessor, Windows Me, Windows XP Home supports networking, ..... sharing, and other fancy tricks.
5. By backing up data you rarely use and deleting the original data from your ....., you free up space once occupied by that data.
6. Most are fixed size, but a few, such as the buffer cache and certain page table structures, depend on the amount of ..... available.
7. If you select this option, ..... will be exported using Automation.

## **TEXT 8. CLOUD AND SECURITY**

Today, innovations in information technology are creating a new paradigm for human communication and collaboration on a global scale. The Internet is evolving into the cloud: the means through which everything will be delivered as a service — from computing power to business processes and personal interaction. The cloud is fundamentally changing the way we connect with each other and with information.

At Hewlett-Packard Labs the research is focused on delivering the secure application and computing end-state of “Everything-as-a-Service.” This research envisions billions of users securely accessing millions of services through thousands of service providers, over millions of servers that process exabytes of data, delivered securely through terabytes of network traffic. They’re creating the foundational technologies to expand the use and relevance of cloud computing in the enterprise. They’re working on an enterprise cloud platform, from computing resources to human skills. And they’re working on the security analytics that will automate enterprise-grade security and address one of the biggest obstacles in the broad adoption of the cloud in the enterprise.

The curious vision is to lead HP in becoming the foremost Service Providers’ Service Provider, delivering a set of cloud capabilities that enable service providers to take full advantage of the power of the cloud. HP’s work enables service providers of

all types to tap into foundational cloud capabilities – general purpose horizontal capabilities, as well as those tailored for specific industry verticals – that make it easy for them to develop, host and manage their services to deliver value from the cloud, and to integrate with an ecosystem of services from other providers.

### Automating Security

HP's security research agenda focuses on developing analytical and architectural computing models to support assured governance of information security management. In the context of a worsening threat environment, increased consumerization of IT, and the highly sought-after cloud computing paradigm, they are creating technology and methodologies that will improve situational awareness and help assure customers that security of their information assets is appropriately managed. Their approach is to introduce innovative analytics in the lifecycle of security management, to help analyze and drive appropriate desired security outcomes at the governance level; and to design the next generation of trusted system architectures that will help ensure that IT operations can achieve those outcomes reliably and with strong assurances.

### Vocabulary

end-state – конечное состояние

bet – пари, ставка

exabytes – эксабайт, квадриллион килобайт

terabytes – терабайт, 1000 Гбайт

cloud – глобальная сеть

governance – управление

envision – представлять себе; предвидеть

relevance – значимость; существенность; важность

to have relevance to smth. – иметь отношение к чему-л.

assets – средства; фонды; имущество

### Task 1. Match the words with their definitions:

- |                    |                                                                                   |
|--------------------|-----------------------------------------------------------------------------------|
| 1. to evolve       | a) something difficult to see through or into                                     |
| 2. cloud computing | b) to gradually change or develop over a period of time                           |
| 3. obstacle        | c) all the things that need to be done or that need to be thought about or solved |
| 4. enterprise      | d) the final result of a process, meeting, activity etc.                          |
| 5. agenda          | e) made for a particular purpose, situation, or need                              |
| 6. to automate     | f) to change a factory or process so that machines do the work instead of people  |
| 7. outcome         | g) a large or important project, especially one that is new or different          |
| 8. sought-after    | h) wanted by many people but not easy to get                                      |
| 9. to host         | i) difficulty or problem that prevents you from achieving something               |
| 10. tailored       | j) most important or most well known                                              |
| 11. foremost       | k) to arrange and provide                                                         |

**Task 2. Answer the questions:**

1. What is the research at HP Labs focused on?
2. What is the Internet evolving into?
3. Define the term “cloud”.
4. Are Hewlett-Packard Labs working on (that will automate enterprise-grade security and address one of the biggest obstacles in the broad adoption of the cloud in the enterprise)?
5. What enables service providers to take full advantage of the power of the cloud?
6. What enables service providers of all types to get some benefit from foundational cloud capabilities?
7. Why does HP’s security research agenda focus on developing analytical and architectural computing models?
8. What will help ensure that IT operations can achieve the outcomes reliably and with strong assurances?

**Task 3. Find the words in the text which have similar meanings:**

1. The degree to which something is important or useful
2. A typical example or model of something
3. To put information into a computer in order to organize it

**Task 4. Match the words to make word expressions:**

- |                |                                    |
|----------------|------------------------------------|
| 1. information | a) communication and collaboration |
| 2. human       | b) traffic                         |
| 3. global      | c) agenda                          |
| 4. computing   | d) interaction                     |
| 5. personal    | e) power                           |
| 6. network     | f) technology                      |
| 7. research    | g) scale                           |

**Task 5. Translate the chains of nouns:**

- enterprise cloud platform
- information assets
- governance level
- cloud capabilities

**TEXT 9. COMPUTER SYSTEMS**

(1) Computers can be divided into three main types, depending on their size and power. Mainframe computers are the largest and most powerful. They can handle large amounts of information very quickly and can be used by many people at the same time. They usually fill a whole room and are sometimes referred to as main-

frames or computer installations. They are found in large institutions like universities and government departments.

(2) Minicomputers, commonly known as minis, are smaller and less powerful than mainframes. They are about the size of an office desk and are usually found in banks and offices. They are becoming less popular as microcomputers improve.

(3) Microcomputers, commonly known as micros, are the smallest and least powerful. They are about the size of a typewriter. They can handle smaller amounts of information at a time and are slower than the other two types. They are ideal for use as home computers and are also used in education and business. More powerful microcomputers are gradually being produced; therefore they are becoming the most commonly used type of computers.

(4) A computer can do very little until it is given some information. This is known as the input and usually consists of a program and some data.

(5) A program is a set of instructions, written in a special computer language, telling the computer what operations and processes have to be carried out and in what order they should be done. Data, however, is the particular information that has to be processed by the computer, e.g. numbers, names, measurements. Data brought out of the computer is known as the output.

(6) When a program is run, i.e. put into operation, the computer executes the program step by step to process the data. The same program can be used with different sets of data.

(7) Information in the form of programs and data is called software, but the pieces of equipment making up the computer system are known as hardware.

(8) The most important item of hardware is the CPU (Central Processing Unit). This is the electronic unit at the center of the computer system. It contains the processor and the main memory.

(9) The processor is the brain of the computer. It does all the processing and controls all the other devices in the computer system.

(10) The main memory is the part of the computer where programs and data being used by the processor can be stored. However it only stores information while the computer is switched on and it has a limited capacity.

(11) All the other devices in the computer system, which can be connected to the CPU, are known as peripherals. These include input devices, output devices and storage devices.

(12) An input device is a peripheral, which enables information to be fed into the computer. The most commonly used input device is a keyboard, similar to a typewriter keyboard.

(13) An output device is a peripheral, which enables information to be brought out of the computer, usually to display the processed data. The most commonly used output device is a specially adapted television known as a monitor or VDU (Visual Display Unit). Another common output device is a printer. This prints the output of the CPU onto paper.

(14) A storage device is a peripheral used for the permanent storage of information. It has a much greater capacity than the main memory and commonly uses magnetic tape or magnetic disks as the storage medium. These are the main pieces of

hardware of any computer system whether a small "micro" or a large mainframe system.

**Task 1. Define the main idea of the text:**

1. Microcomputers.
2. The types of computers.
3. The main pieces of hardware of a computer system.
4. The components of a computer system and their functions.

**Task 2. Give a title to each passage. Find the sentence expressing the main idea in each paragraph.**

**Task 3. Match the headings to the correct paragraph:**

- |                         |                             |
|-------------------------|-----------------------------|
| 1. The main memory.     | 8. Microcomputers.          |
| 2. The data.            | 9. Central Processing Unit. |
| 3. A keyboard.          | 10. A monitor               |
| 4. A program.           | 11. A storage device        |
| 5. Peripherals.         | 12. Minicomputers           |
| 6. Mainframe computers. | 13. Software                |
| 7. The input.           | 14. The processor           |

**Task 4. Answer the following questions:**

1. Computers are now widespread, aren't they?
2. Does good knowledge of English help to operate the computer better?
3. What type of computer is most suitable for home use?
4. What is a program?
5. What are the functions of main memory, input device, storage device?
6. What is data?
7. What are the functions of processor, output device, monitor?

**Task 5. Match each component in column A with its function in column B:**

- | <b>A</b>          | <b>B</b>                                                      |
|-------------------|---------------------------------------------------------------|
| 1. Storage device | a) It displays the processed data                             |
| 2. Input device   | b) It holds the programs and data being used by the processor |
| 3. Output device  | c) It does all the processing and controls the peripherals    |
| 4. Main memory    | d) It allows data to be entered                               |
| 5. Processor      | e) It provides permanent storage for program and data         |

**Task 6. Give the synonyms of the following words:**

Powerful; to improve; amounts; gradually; commonly; type; to store; to display; to connect; to carry out; suitable; element.

**Task 7. Give the opposites of the following words:**

permanent; to divide; to improve; to enable; to switch; capacity; particular; a part; similar; the same; popular; common.

**Task 8. True or false?**

1. Microcomputers can't handle smaller amounts of information at a time.
2. The main memory has a much greater capacity than a storage device.
3. A storage device is a peripheral used for the temporary storage of information.
4. A program plus some data is the input.
5. Peripherals include input, output and storage devices.
6. Minicomputers are getting less popular.
7. One can see minicomputers in large institutions and government departments.
8. Microcomputers are getting the most commonly used type of computers.

**Task 9. What's missing? You can help yourself referring to the text.**

1. Data is the particular ..... that has to be processed by the computer.
2. Minicomputers are becoming less ..... as microcomputers improve.
3. The main memory only ..... information while the computer is switched on and it has a limited capacity.
4. A storage device is a ..... used for the permanent storage of information.
5. Information in the form of programs and data is called ....., but the pieces of equipment making up the computer system are known as .....
6. The most commonly used output ..... is a specially adapted television known as a .....
7. .... are the smallest and least powerful.
8. .... computers are the largest and most powerful.

**Task 10. Look through the text and find the English equivalents of the following words:**

Доступ к компьютерам; изменить к лучшему; компьютеры общего пользования; принципы хакерской этики; неограниченный и полный; творить на компьютере искусство и красоту; должна быть бесплатной; не верь властям; с наименьшим числом; выполнять ту же самую задачу.

**Task 11. Are you baffled by computer language? Choose A, B, C or D. (Only one choice is correct)**

- |                         |                         |                    |
|-------------------------|-------------------------|--------------------|
| 1. cursor, <i>n</i> —   | A: coarse speaker.      | B: indicator.      |
|                         | C: moneychanger.        | D: technician.     |
| 2. network, <i>n</i> —  | A: TV channel.          | B: digital design. |
|                         | C: system of computers. | D: filter.         |
| 3. download, <i>v</i> — | A: to copy.             | B: scramble.       |
|                         | C: erase.               | D: belittle.       |
| 4. virus, <i>n</i> —    | A: flaw.                | B: poison.         |
|                         | C: fatigue.             | D: infection.      |

- |                                           |                                                                |                                                        |
|-------------------------------------------|----------------------------------------------------------------|--------------------------------------------------------|
| 5. browser is software that allows you to | <b>A:</b> explore the Internet.<br><b>C:</b> send a fax.       | <b>B:</b> eavesdrop.<br><b>D:</b> save a file.         |
| 6. cracker, <i>n</i> —                    | <b>A:</b> fanatic.<br><b>C:</b> burglar.                       | <b>B:</b> intruder.<br><b>D:</b> expert.               |
| 7. hit, <i>n</i> —                        | <b>A:</b> accident.<br><b>C:</b> unit of measurement.          | <b>B:</b> stumbling block.<br><b>D:</b> visit.         |
| 8. authenticate, <i>v</i>                 | <b>A:</b> to fade.<br><b>C:</b> confirm.                       | <b>B:</b> complicate.<br><b>D:</b> test.               |
| 9. emoticon, <i>n</i> —                   | <b>A:</b> robot.<br><b>C:</b> trick.                           | <b>B:</b> radiation.<br><b>D:</b> illustration.        |
| 10. boot, <i>v</i> —                      | <b>A:</b> to fail gradually.<br><b>C:</b> adjust.              | <b>B:</b> enlarge.<br><b>D:</b> start up.              |
| 11. server, <i>n</i> —                    | <b>A:</b> central computer.<br><b>C:</b> power supply.         | <b>B:</b> speed control.<br><b>D:</b> trouble-shooter. |
| 12. modem, <i>n</i> —                     | <b>A:</b> digital code.<br><b>C:</b> visual display.           | <b>B:</b> keyboard.<br><b>D:</b> connecting device.    |
| 13. compress, <i>v</i> —                  | <b>A:</b> to shrink.<br><b>C:</b> fix.                         | <b>B:</b> understand.<br><b>D:</b> soften.             |
| 14. pixel, <i>n</i> —                     | <b>A:</b> picture element.<br><b>C:</b> brief blur.            | <b>B:</b> programming oddity.<br><b>D:</b> long delay. |
| 15. ink, <i>n</i> —                       | <b>A:</b> missing piece.<br><b>C:</b> related site.            | <b>B:</b> space station.<br><b>D:</b> warning signal.  |
| 16. scanner — machine that                | <b>A:</b> reproduces images.<br><b>C:</b> searches a document. | <b>B:</b> translates files.<br><b>D:</b> adds color.   |
| 17. log on, <i>v</i> —                    | <b>A:</b> to pile.<br><b>C:</b> waste time.                    | <b>B:</b> gain access.<br><b>D:</b> stretch.           |
| 18. shareware, <i>n</i> -                 | <b>A:</b> hand-me-down clothing.<br><b>C:</b> relic.           | <b>B:</b> free hardware.<br><b>D:</b> trial software.  |

## TEXT 10. THE FIRST HACKERS

(1) The first “hackers” were students at the Massachusetts Institute of Technology (MIT) who belonged to the TMRC (Tech Model Railroad Club). Some of the members really built model trains. But many were more interested in the wires and circuits underneath the track platform. Spending hours at TMRC creating better circuitry was called “a mere hack.” Those members who were interested in creating innovative, stylistic, and technically clever circuits called themselves (with pride) hackers.

(2) During the spring of 1959, a new course was offered at MIT, a freshman programming class. Soon the hackers of the railroad club were spending days, hours, and nights hacking away at their computer, an IBM 704. Instead of creating a better circuit, their hack became creating faster, more efficient program — with

the least number of lines of code. Eventually they formed a group and created the first set of hacker's rules, called the Hacker's Ethic.

(3) Steven Levy, in his book *Hackers*, presented the rules:

Rule 1: Access to computers — and anything, which might teach you, something about the way the world works — should be unlimited and total.

Rule 2: All information should be free.

Rule 3: Mistrust authority — promote decentralization.

Rule 4: Hackers should be judged by their hacking, not bogus criteria such as degrees, race, or position.

Rule 5: You can create art and beauty on a computer.

Rule 6: Computers can change your life for the better.

(4) These rules made programming at MIT's Artificial Intelligence Laboratory a challenging, all encompassing endeavor. Just for the exhilaration of programming, students in the AI Lab would write a new program to perform even the smallest tasks. The program would be made available to others who would try to perform the same task with fewer instructions. The act of making the computer work more elegantly was, to a bonafide hacker, awe-inspiring.

(5) Hackers were given free reign on the computer by two AI Lab professors, "Uncle" John McCarthy and Marvin Minsky, who realized that hacking created new insights. Over the years, the AILab created many innovations: LIFE, a game about survival; LISP, a new kind of programming language; the first computer chess game; The CAVE, the first computer adventure; and SPACEWAR, the first video game.

### **Task 1. Define the main idea of the text:**

1. The rules to be referred to.
2. The Tech Model Railroad Club.
3. The Hacker's Ethic.
4. Hackers: the beginning.

### **Task 2. Find the sentence expressing the main idea in each paragraph.**

### **Task 3. Match the headings to the correct paragraph:**

1. The hacker's rules.
2. The AI Lab innovations.
3. The formation of the group.
4. MIT students.
5. Writing a new program.

### **Task 4. True or false?**

1. Those who can, do. Those who cannot, teach. Those who cannot teach, HACK!
2. The first hackers were interested in railroad circuitry.
3. The first hackers studied at MIT.
4. The point of a hacker's work was to create a faster and smaller code.
5. Hackers had their own Ethic Code.
6. TMRC stands for Toy Machinery Railroad Car.

7. Hackers sabotaged the work of the AI Lab.
8. An elegant computer was, to a real hacker, awe-inspiring.
9. At AI Lab hackers wrote a computer program for every other task.
10. Hackers were quite prolific in innovations.
11. Hackers were given free reign on the two AI Lab professors.

**Task 5. Put the proper words into sentences:**

*programming, insights, innovation, ethic, instructions,*  
*exhilaration, endeavor, awe-inspiring, encompass, freshmen,*  
*authority, bogus, mistrust.*

1. Decentralization results in ... to the chief.
2. Holding the door for a lady is the question of...
3. This still life isn't Picasso's; it's a...
4. The report you've presented doesn't ... some of the problems.
5. If you can survive both in the jungle and the desert, a ... Indian you are.
6. The ... in how hardware works is obligatory for a good programmer.
7. Each ... is another step to a new technological revolution.
8. In 1961 the Soviet Scientists' ... to conquer the space was a success.
9. ... without any reason proves one's carelessness.
10. Iron grip boss expects you to carry out all his ...
11. Annually MIT gains over 5000 ...
12. ... should cause ... terror in your heart.

**Task 6. Answer the questions:**

1. What is the Russian for hacker?
2. Are hackers good or bad?
3. What examples of computer abuse do you know?
4. Do we need hackers?
5. Should we store personal information in computer files?
6. Do you think hackers have their own Ethic Code today?
7. Computer-related crimes have diminished, haven't they?

**Task 7. Give the synonyms of the following words:**

Freshman, access to, authority, reign, pride, innovation, bogus, endeavor, exhilaration, insights, to encompass, to promote, bonafide, awe-inspiring, mere, efficient.

**Task 8. Give the opposites of the following words.**

Common, to reveal, former, by accident, total, artificial, available, fewer, the least, success, to survive, careless, authorized person, confidential information, experts, to detect, abuse.

**Task 9. Put the sentences logically in the right order according to the text:**

1. Those two professors understood that hacking created new insights.

2. Finally they formed a group.
3. Levy presented the hacker's rules in his book.
4. The first hackers belonged to the TMRC.
5. They offered a new course at MIT.
6. At the AI Lab many innovations were created.
7. Other members were fond of the wires and circuits underneath the track platform.

**Task 10. What's missing? You can help yourself referring to the text.**

1. Computers can ..... your life for the better.
2. Those members who were ..... in creating innovative, stylistic, and technically clever circuits called themselves.....
3. Hackers were given .... ..... on the computer by two AI Lab professors.
4. Access to computers should be .....and total.
5. The first "hackers" were ..... at the Massachusetts Institute of Technology (MIT) who .....to the TMRC.
6. John McCarthy and Marvin Minsky realized that hacking created new .....
7. During the spring of 1959, a new course was ..... at MIT, a ..... programming class.

**Task 11. Match the words given in the left column with their definitions in the right column.**

- |               |                                                         |
|---------------|---------------------------------------------------------|
| 1. Innovation | a) functioning well with little waste of effort         |
| 2. Hacker     | b) introduction of new ideas or methods                 |
| 3. Available  | c) help to make something happen or increase            |
| 4. Access     | d) obtain data from a computer                          |
| 5. Promote    | e) one who breaks into the computer system of a company |
| 6. Bona fide  | f) genuine                                              |
| 7. Efficient  | g) obtainable or accessible.                            |

**TEXT 11.**

**SECURITY AND PRIVACY ISSUES IN THE PDF DOCUMENT FORMAT**

UPM Facultad de Informática researchers compile information on security and privacy for authors or readers of PDF documents, the most popular format for publication of digital documents.

This work by researchers from the Universidad Politécnica de Madrid's Facultad de Informática surveys security and privacy threats related to digital document publishing. It addresses publisher-related information that is leaked once the document is sent over the Internet, as well as reader-related information that might be disclosed every time they open a downloaded document for examination. The work mainly focuses on the PDF document format that is the most popular document format for digital document publishing.

Publication of digital documents over the Internet poses serious security and privacy threats to both authors and readers. Previous research by the UPM Facultad

de Informática's Distributed Systems Laboratory researchers addressed information leakage in popular Microsoft Office document formats. This research focuses on the PDF document format, which is the de facto standard for digital document exchange. Many institutions worldwide have adopted PDF as their document standard, and it has been estimated that billions of PDF documents are published or downloaded every day. The results of this research were published in the Journal of Systems and Software.

Published documents could include additional author-related data, such as user name, document location on the author's machine and even parts of the documents that were deleted before publication.

Some of this information, such as the user name or the last day the document was edited, are referred to as meta-data and are used by reader or editor applications to improve the user experience; however, they could lead to privacy breaches mainly because authors are not aware of their disclosure upon document publication. Other sensitive information is leaked because of the poor design of the document format. For example, whenever a paragraph of a document is deleted, PDF authoring applications do not remove the paragraph but rather mark it as "invisible." This way, the reader application does not visualize the deleted text when the document is opened for reading. Hence deleted data is kept along with the document and can be read by any malicious user that knows where to look for it. UPM researchers have developed several tools to extract information from PDF documents that are not accessible with standard document readers.

**Task 1. Match the words with their definitions.**

- |                |                                                                       |
|----------------|-----------------------------------------------------------------------|
| a) Security    | 1) an action that breaks a law, rule, or agreement                    |
| b) Privacy     | 2) the state of being free from public attention                      |
| c) Leakage     | 3) a piece of computer software which does a particular job           |
| d) Application | 4) serious study of a subject to discover new facts or test new ideas |
| e) Breach      | 5) the deliberate spreading of secret information                     |
| f) Research    | 6) protection from danger                                             |

**Task.2 Choose the most suitable word (from task 1) to complete the sentences.**

1. We regard the publication of this information as a serious ..... of trust.
2. With seven people squashed in one house, you don't get much .....
3. We received training on a number of spreadsheet and database .....
4. I'm still doing ..... into the causes of cancer for my thesis.
5. We are strongly worried by massive ..... of confidential information.
6. We have been asked not to say anything for ..... reasons.

**Task 2. What is described in the text as:**

invisible, deleted, not accessible, downloaded, previous, most popular.

**Task 3. Look through the text and say whether these statements are true, false or not mentioned.**

1. PDF format is the least popular format for publication of digital documents.
2. There are security and privacy threats posed by the publication of digital documents.
3. There are several formats that are de facto standard for digital document exchange.
4. Edition date and user names are supposed to be meta-data.
5. The poor design of the document format can't trigger the leakage of sensitive information.
6. The deleted data of a PDF document can be read by any malicious user.

**Task 4. Answer the questions.**

1. What does the work survey?
2. Which format does the research focus on and why?
3. What author-related data can be included in published documents?
4. What is meant by "meta-data"?
5. What usually happens to a deleted part of a PDF document?
6. What solution to the leakage problem is proposed by UPM researchers?

**TEXT 12.**

**MAKING THE WEB MORE ACCESSIBLE TO PEOPLE WITH DISABILITIES AND SPECIAL NEEDS**

In posting information to the Internet, one of the main aims is for that information to reach as many people as possible. That usually means achieving a prominent position in the search engine results pages, providing legible and attractive enough information for potential readers to read it and ensuring that it meets the demands of users with disabilities. Researchers in Hungary suggest that only if all these criteria are fulfilled does a website become truly accessible.

Medical informatics expert Erzsébet Forczek, explains that access to the Internet, and more specifically the world wide web, has become essential for all members of society. Physical access is a prerequisite but the availability, retrieval and processing of information on the web must be supported by information technology.

"Information on the web is global in the sense that it can be seen or used by anyone around the world," says Forczek. "However, for information to become global, it is not sufficient merely for it to appear on the web; it has to be searchable, and its contents identifiable and interpretable, since immediately available information is crucial in economic and business life, in education, in research, in health care and in virtually every other sphere of life." She adds that, "We have to consider how disabled people can access the information available on websites and how they can utilise it.

Forczek has investigated how well the needs of the visually impaired are addressed by web sites, especially those offering multimedia. Similarly, those with hearing impairment are often excluded from audio media. "The most important principle of accessibility to a web page is to provide alternatives for the different media

applications and their navigating functions," says Forczek. Similarly, software that addresses the issues faced by people with special needs is essential for accessibility, Forczek adds.

Particular aspects of web design that must be taken into consideration in ensuring as wide accessibility as possible include: a syntactically and semantically correct web page that can be parsed correctly by assistive software, the use of style sheets to allow a page to be rendered fully in alternative formats, clarification of the meaning of any acronyms used, the provision of alternative texts for non-textual information, such as images and audio files, the provision of synchronised alternatives to time-dependent media, such as audio applications or videos, and the provision of full navigation via the keyboard so that mouse control is not a prerequisite for accessing the information.

**Task 1. Match the words with their definitions.**

- |                    |                                                                           |
|--------------------|---------------------------------------------------------------------------|
| 1. Accessible      | a) to use something for a particular purpose                              |
| 2. Impairment      | b) the process of getting back information stored on a computer system    |
| 3. Utilize         | c) a condition in which a part of a person's mind or body is damaged      |
| 4. Disabled people | d) a place on the Internet where you can find information about something |
| 5. Retrieval       | e) a computer program that helps you find information on the Internet     |
| 6. Website         | f) easy to obtain or use                                                  |
| 7. Search engine   | g) those who cannot use a part of their body properly                     |

**Task 2. Fill in the gaps with the words from task 1.**

1. We must consider how best to ..... what resources we have.
2. The ..... of his ability to think and concentrate is caused by his illness.
3. A new system that should speed up information..... is currently being developed.
4. The new ..... proved to be unsafe and unreliable.
5. Responses will be posted on the..... .
6. Computers should be made readily ..... to teachers and pupils.
7. The theatre has good access for the ..... .

**Task 3. Match the words and phrases that go together in A and B and translate them.**

A	B
access	of any acronyms
search	via the keyboard
meaning	people with special needs
alternative text for	to the Internet
navigation	engine
issues faced by	for potential readers
providing legible information	non-textual information

## **1. Answer the questions to the text.**

1. Which one of the main aims of posting information is mentioned in the text?
2. What problem are the researchers from Hungary trying to solve?
3. What demands should any information meet to become global?
4. Which principle of accessibility is called the most important one?
5. Give the aspects of web design that must be taken into consideration to ensure wide accessibility of a website for the disabled.

### **TEXT 13.**

#### **NEW WIRELESS TECHNOLOGY DEVELOPED FOR FASTER, MORE EFFICIENT NETWORKS**

A new technology that allows wireless signals to be sent and received simultaneously on a single channel has been developed by Stanford researchers. Their research could help build faster, more efficient communication networks, at least doubling the speed of existing networks.

Stanford researchers have developed the first wireless radios that can send and receive signals at the same time.

This immediately makes them twice as fast as existing technology, and with further tweaking will likely lead to even faster and more efficient networks in the future.

"Textbooks say you can't do it," said Philip Levis, assistant professor of computer science and of electrical engineering. "The new system completely reworks our assumptions about how wireless networks can be designed," he said.

Cell phone networks allow users to talk and listen simultaneously, but they use a work-around that is expensive and requires careful planning, making the technique less feasible for other wireless networks, including Wi-Fi.

A trio of electrical engineering graduate students, Jung Il Choi, Mayank Jain and Kannan Srinivasan, began working on a new approach when they came up with a seemingly simple idea. What if radios could do the same thing our brains do when we listen and talk simultaneously: screen out the sound of our own voice?

In most wireless networks, each device has to take turns speaking or listening. "It's like two people shouting messages to each other at the same time," said Levis. "If both people are shouting at the same time, neither of them will hear the other."

Their main roadblock to two-way simultaneous conversation was this: Incoming signals are overwhelmed by the radio's own transmissions, making it impossible to talk and listen at the same time.

"When a radio is transmitting, its own transmission is millions, billions of times stronger than anything else it might hear [from another radio]," Levis said. "It's trying to hear a whisper while you yourself are shouting."

But, the researchers realized, if a radio receiver could filter out the signal from its own transmitter, weak incoming signals could be heard. "You can make it so you don't hear your own shout and you can hear someone else's whisper," Levis said.

Their setup takes advantage of the fact that each radio knows exactly what it's transmitting, and hence what its receiver should filter out. The process is analogous to noise-canceling headphones.

**Task 1. Match the words with their definitions.**

- |                |                                                                                |
|----------------|--------------------------------------------------------------------------------|
| 1. channel     | a) equipment that sends out radio or television signals                        |
| 2. tweak       | b) several pieces of equipment that work together in a system                  |
| 3. overwhelm   | c) a range of sound waves for sending and receiving radio messages             |
| 4. transmitter | d) to make small changes to a system to improve the way it works               |
| 5. headphones  | e) to cover completely and suddenly                                            |
| 6. setup       | f) a piece of equipment to listen to the radio without other people hearing it |

**Task 2. Fill in the gaps with the following words: *feasible; setup; transmitter; headphones; wireless network; receiver; channel; whisper; filter out.***

1. Request means a signal sequence sent via a communication ... from the client computer to a server computer.
2. Next, the ... program checks the version of your operating system and the availability of the administrative permissions.
3. As long as the potential difference between the ... and ... remains within the common-mode input range of the receiver, the system will function.
4. There was no external speaker, but the ... from Goodyear's iPod fitted one of the sockets.
5. "Get up!" he said, in a frightened ..., raising her. "Get up at once!"
6. ... unwanted data from a query's result set.
7. The presence of interference decreases the performance of a ... .
8. This approach is ... for languages with reflective programming capabilities, such as Java, C#, or Smalltalk, and awkward for those that don't, such as C++.

**Task 3. Match the sentence halves.**

1. It's trying to hear a whisper while
  2. Further tweaking will likely lead to even
  3. A new technology allows wireless signals to be sent and received
  4. A radio receiver could filter
  5. In most wireless networks, each device has
  6. They use a work-around that is
  7. Incoming signals are overwhelmed
- 
- a) to take turns speaking or listening.
  - b) you yourself are shouting.

- c) by the radio's own transmissions.
- d) simultaneously on a single channel.
- e) out the signal from its own transmitter.
- f) faster and more efficient networks in the future.
- g) expensive and requires careful planning.

**Task 4. Correct the statements according to the text.**

1. Cell phone networks never use a work-around as they are expensive and require careful planning.
2. In conventional networks, devices ‘speak’ and “listen” simultaneously.
3. The described technology suggests a new type of communication networks.
4. The technology is based on people’s ability to speak slower or faster whenever they want to.
5. Each radio can’t know exactly what is transmitting at the moment.
6. Though the setup is not able to double the speed of existing networks, it allows to improve the design of them.

**Task 5. Answer the questions.**

1. What technology have Stanford researchers developed?
2. What advantage does the new technology offer?
3. Who is Philip Levis?
4. How do our brains work when we listen and talk simultaneously?
5. Which way do traditional networks work?
6. What principle does the new setup based on?

## UNIT II

### ADDITIONAL TEXTS

#### 1. HOW TO CHOOSE THE RIGHT COMPUTER

1. When you want to buy a personal computer (PC), the first question you must ask yourself is "What will I use it for?" If you are going to use it for studying, for office work, for Internet and for games, you should buy a really powerful modern PC.
2. The power of the computer depends on the speed and the capacity: the speed of the processor and the capacity of the memory and the hard disk.
3. The speed of the processor shows how fast the computer processes data. Speed is usually given in megahertz and gigahertz. The faster the processor, the more powerful the computer.
4. The capacity shows how much storage space there is in the computer. The capacity depends on how much memory there is, how big the hard disk is.
5. There are two types of memory: RAM (Random Access Memory) and ROM (Read Only Memory). We measure RAM and video memory in megabytes. You will also have cache memory in your PC, it is in kilobytes.

6. As for hard disk memory, it is in gigabytes. Always look for the computer with the highest numbers. Remember: the higher the number, the more powerful is the computer.

**Task 1. Read the text and find the equivalents to the following Russian words and expressions.**

Кэш память, объем памяти, скорость процессора, жесткий диск, память только для чтения, обрабатывать данные, мощный компьютер, скорость дается в мегагерц и гигагерц, чем больше.... тем мощнее, скорость зависит от...

**Task 2 Answer the questions on the text.**

1. What does the power of the computer depend on?
2. Which parameter of the computer tells how fast the computer works?
3. Is the speed given in megahertz and gigahertz?
4. Why must users look for the biggest numbers of speed and memory capacity?
5. Do we measure RAM in kilobytes or megabytes?

**Task 3. Which paragraph of the text tells us about:**

- a) The storage space in the computer;
- b) Hard disk memory;
- c) The general recommendation when choosing a computer,
- d) Units of measurement which we use to measure speed?

## 2. BUSES

All components of the CPU are connected to the rest of the computer by buses. A bus is a group of parallel wires which carry different signals between different parts of the computer. Some buses are bidirectional, which means they allow data to flow in both directions. Most computers have three main buses: the data bus, the address bus and the control bus. The data bus is a bidirectional bus. It carries data and instructions from the memory to the CPU and from the CPU to memory. The address bus is a unidirectional bus. Data can flow only one way - from the processor to the memory. Data are addresses which identify places in the memory where data or instructions may be found or stored. The control bus is a bidirectional bus. It carries instructions to and from the CPU and from the CPU and other parts of the computer. The control bus is a collection of lines which carry different signals. For example, the clock line carries a signal from the clock chip to synchronize the operations of the processor.

**Task 1. Read the text and find the equivalents to the following Russian words and expressions.**

Шина управления, адресная шина, тактовый генератор, двунаправленная шина, переносить различные сигналы, большинство компьютеров, могут быть найдены или храниться, поток данных может идти только в одном

направлении, между различными частями компьютера.

**Task 2. Answer the questions.**

1. What do bidirectional buses allow?
2. What three main buses most computer have?
3. Is the address bus unidirectional or bidirectional?
4. What does the address bus do?
5. Do lines of the control bus carry different signals?

**3. WORLD-WIDE WEB**

1. The web (World-Wide Web) is an Internet-based computer network that allows users on one PC to access information stored on another computers through the world wide network. The popularity of the Internet is increasing and people become more aware of its colossal potential.

2. The WWW project is based on the principle of universal readership. "If information is available, then any person has a right to access it".

3. The structure of the internet has two principles: the client and the server. The client, like the Netscape or Lynx, knows how to present data, and the servers know where to take information, how to extract it.

4. One of the main features of the WWW documents is their hypertext structure. The user is to click with a mouse and the referenced document will appear. Hypertext structure allows not to copy information every time a user needs it; data is stored only once, and all referenced to it is linked to the original document.

**Task 1 Answer the questions.**

1. What is a WWW?
2. What is the basic principle of the WWW project?
3. Does any Internet user have a right to the information if it is available on the net?
4. What are the functions of the client and the server?
5. Why is the hypertext structure of the documents convenient for the users?

**Task 2. Finish the sentences.**

1. The WWW allows internet users .....
2. If the information is available, the .....
3. The WWW project is based on
4. A referenced document will appear after you .....
5. Hypertext structure allows not to .....

**Task 3. Read these statements and decide which is true and which is false. Put "T" or "F" against each statement.**

1. The Internet project is based on the principle of universal readership.
2. The Internet structure has got clients and servers.
3. Data is stored in the Internet many times and occupies much memory.
4. Internet does not have potential.

5. The hypertext structure of the Web-documents helps to find referenced information very easily

#### 4. “COMPUTER MAINTENANCE TECHNICIAN”

1. A Computer maintenance technician is called a support technician. He or she is in charge of proper operation of hardware and software.

All workstations, including printers should function properly. If there is a stop in the process, the computer maintenance technician trouble-shoots all the parts of the computer systems.

2. In order to perform this job a technician must have deep knowledge of hardware and software. A person doing this job should have analytical mind to find out what has caused a particular computer problem.

3. Very often IT maintenance technicians in large companies help remote users calling them by phone. To troubleshoot remote machines a support technician must know how to use remote maintenance tools so that he/she can remotely reconfigure the machine. When a support technician works at a call center he/she has to deal with users with different levels of computer knowledge.

4. To help a user remotely a hot-line technician should be able to listen to callers and ask right questions. The questions to be asked will be different depending on the level of technical knowledge a caller with a problem has.

A hot-line technician should decide how much technician jargon to use depending on the level of the user’s computer knowledge.

#### Task 1. Answer the questions.

1. What is a computer maintenance technician in charge of?
2. What does an IT technician do when the computers fail to operate?
3. Why must specialists in this job have an analytical mind?
4. Can a hot-line technician always use a lot of technical jargon to help users with computer problems?
5. Why is knowledge of remote maintenance tools so important for hot-line technicians?
6. Would you like to be a hot-line technician in a call center?
7. Have you got an analytical mind to troubleshoot problems with hardware of software?

#### Task 2. Insert the right word from the box and finish the sentences.

<b>Troubleshoots;</b>	<b>a hot-line technician;</b>	<b>remote maintenance tools;</b>
<b>in order to perform his duty;</b>	<b>user’s level of computer knowledge;</b>	
<b>a maintenance technician or support technician;</b>	<b>work stations</b>	

1. A person who is in charge of faultless operation of computer systems is called \_\_\_\_\_.

2. If he or she works at a call center in a large computer company and helps computer users by phone, he or she is called \_\_\_\_\_.
3. A support technician must have deep knowledge of hardware and software \_\_\_\_\_.
4. To troubleshoot remote machines is often a difficult task and a hot-line technician must know how to use \_\_\_\_\_ and reconfigure the remote machine.
5. A hot-line technician has to ask users a lot of questions which will depend on the \_\_\_\_\_.
6. If a maintenance technician performs his duties well, all \_\_\_\_\_ function properly.
7. To find the trouble with the computer system, a technical support technician \_\_\_\_\_ all the parts and connections of the computer system.

**Task 3. Read the text again and write the number of the paragraph which tells about:**

- A The type of mind a computer maintenance technician must have to perform his/her duties;
- B How to help remote users;
- C Technical means to reconfigure remote machines;
- D Duties of a computer maintenance technician;
- E Necessity to limit technical jargon when speaking with some inexperienced users.

## **5. PROFESSIONS IN IT**

### **DATABASE ADMINISTRATOR (DBA)**

1. The company's information system is made up of different databases which are used by management of different levels and by various departments.

2. Punctuality, analytical mind and good communication skills are necessary for people in this job. Database administration must have very good knowledge of DBMSs which stands for database management systems.

Automating certain tasks demands knowledge of several programming languages, including the query language SQL (Structured Query Language). DBA's duties involve the optimizing queries, adjusting DBMS settings or fine-tuning of monitoring tools used for database access. Data Backups and restoration plans should also be developed by DBA.

3. Besides technical knowledge DBA should have good understanding of the company's business he or she should be able to understand what users of databases need and how to develop and edit databases in accordance with their needs.

4. An ideal DBA has sufficient experience with designing information systems and UML model (UML is unified modeling language).

5. Data base administrators are called to help development teams to fix their problems or assist them to carry out complicated queries. The duty of DBA may involve technical support needed for client application users.

6. The salary of database administrators can depend on the size of the company or organization and the size and complexity of its database systems.

**Task 1 Answer the questions.**

1. What does DBMS stand for?
2. Why should database administrators know several programming languages, including SQL?
3. What do DBA's duties involve?
4. Do Data Base Administrators develop and edit existing databases?
5. What experience must an "ideal" DBA have?
6. What queries of development teams does DBA help to carry out?
7. Is the job of DBA attractive for you?

**Task 2** Inset the words or expressions and finish the sentences.

*Database management, fix, DBM Settings, automating certain tasks, optimizing queries, sufficient experience, involv,*

1. DMBS stands for\_\_\_\_\_.
2. For a DBA with good knowledge of programming languages \_\_\_\_\_ is a standard task which is not very complicated.
3. The duties of DBA involve \_\_\_\_\_and adjusting DMBS setting.
4. \_\_\_\_\_ is necessary in all IT jobs.
5. You should know what the duties of DBA\_\_\_\_\_.
6. Development teams need sometimes the help of DBA to \_\_\_\_\_ their problems with complicated queries.
7. Without DBA nobody can change \_\_\_\_\_.

**Task 3.** Read and write what paragraph tells about

A	The duty of DBA.
B	Skills which are necessary for people in this job.
C	A good DBA s understanding of the company's business which is necessary for automating and editing data bases to match the requirements of various departments in the company.
D	How DBA can help development teams.
E	What technical knowledge will allow DBA to automate certain tasks?

**6. COMMON REPAIR GUIDE FOR EVERYONE**

Computers and all machines need constant maintenance at regular intervals. It helps them to run without problems and live longer. We need to keep a good check of

all the parts and aspects of a machine. Hardware and software are the main two parts of a PC. We should take care of both things to extend the life of the PC. You should also know basic repairing skills so that you can fix your system in the time of need. This is why we have made a checklist for computer maintenance and repair.

A laptop or a desktop has many parts such as screen, keyboard, mouse, touchpad, processor, motherboard, hard disk, ram, fans, and chassis. All of them have their own role and all of them need equal care. Some are less sensitive while some are highly sensitive. So the level and frequency of maintenance are different. In this article, we want to help you learn some basic things so that you can be saved from a hefty service charge of a computer maintenance technician.

### *1) Clean your computer regularly*

This is the first and foremost important thing. PC performance decreases when a computer is dusty or dirty. The parts become hot and the performance decreases due to thermal throttling. Debris and dirt build-up can also cause the system to fail. It is very important to clean your computer parts such as desktop casing, keyboards, mouse, fans, and other parts. In order to open a desktop CPU case, just disconnect everything and open the side panels using screws at the back or side. Mostly there are thumb screws for easiness.

You can use an electrical blower to blow away all dust with ease. Else you have to clean each part with care. You can use cloth, painting brush to clean the dirt. If you are confident and know components well, then take out the components and clean them individually for better results. Dirty fans and components cause less cool airflow and overheating. This reduces performance and decreases the life of the PC. Clean your computer at least once every 6 months. If your place has more dust, increase cleaning frequency.

We know cleaning a laptop is not easy because you have to open it. So if you are confident enough to open your back cover then definitely get a screwdriver and open your laptop. Remove the back using a screwdriver and hinges carefully and clean the inside carefully using compressed air or small brush. If possible clean the fans because they accumulate the most amount of dirt and grease. Do clean your keyboard and mouse because we interact with them a lot. Most of the times you will find lots of dirt inside a desktop keyboard. Therefore invert it and gently pat on the back.

### *2) Keep good ventilation and cooling*

Do clean your fans and radiators thoroughly. They are very important for cooling. All computer parts are electronics, so they generate heat. They need cooling and most users use fan air coolers. Few people use liquid cooling systems like AIO or custom loop. Whatever your choice may be, just use a good CPU cooler to keep temperatures down. We have seen many people not putting attention to ventilation and cooling. People don't install case fans for intake and exhaust. They are cheap and they can lower your temperatures significantly. A positive airflow also helps to maintain less dirt build-up inside a casing.

The next important thing is the thermal compound or thermal paste. It is a compound or pastes usually put between heat-sink and processor or other heat-producing components. You can see them on top of the processor's IHS, graphics card, and some VRM as well. They help to transfer heat to copper and aluminum

heatsink. The problem is that they dry after long use. They dry up and the heat-conducting capacity is decreased. We suggest changing thermal paste after a few years like 1-2 years as a part of the annual computer maintenance schedule. This alone can drastically decrease your temperatures and improve speeds as well.

#### Intel Core Processor Stock Fan

Make sure the heatsink, vents, and air filters on the top, bottom, front, and sides of the case are clean and. It is best to keep your CPU in a less conjugated place where it can intake a good volume of clean air easily. People usually put their CPU case on carpet or dusty corners and the side fans take all those dirt and build up inside causing harm to your system

#### *3) Only charge when necessary*

Many people have a habit of keeping their laptops plugged in even after the power level has hit 100%. We do this mistakenly or don't care about it. This is not so much dangerous practice because modern laptops stop charging when they hit 100%. But as the power level falls down to about 95% they again start to charge. This keeps the battery in stress and the life span is decreased. The battery doesn't show a huge problem but it builds up and you start seeing the decrease in the capacity and up-time. Next thing is that the battery and computer both heat up during the charging process which can cause some negative effects. We have discussed this in our other article on tips to increase the laptop's battery life.

#### *4) Cleanup unnecessary programs and files*

You should always keep your operating system and software clean. Don't keep and install unnecessary programs that you don't use. These programs take valuable resources such as hard disk, RAM, and processing power. They might run in the background and make the system work harder and slower. Some hidden applications may also run on startup and give more stress to the computer. In the long run, the extra work and heat can make the computer slower. This is why we should only install applications that we need. Do the same thing with files and folder. Don't keep unwanted files, photos, videos, and folders. If you can access through network and internet then don't burden your device. However, do keep a backup of important files. If you have a hard disk, you should optimize and do "Defragmentation". It is already built up in Windows

#### *5) Keep software, drivers, OS & BIOS updated*

Software is the soul of any electronic device. It is very important to always update your devices. Always update your software to the latest version possible. Do update Microsoft Windows operating system (OS) and drivers regularly. Use the latest drivers as far as possible. Always go to the company's official site to download drivers. Mainly motherboard, chipset, and graphics card drivers are very important.

New software mostly brings security patches, performance upgrades, and bug fixes. These things keep your system in a safe and healthy state. Also, update BIOS of your laptop and desktop motherboard. They sometimes come with microcode update for patching vulnerabilities of processor and board. Sometimes we see that vendors and software making companies might push buggy software by mistake. These might cause problems, so always read news and wait a bit before jumping into the new one.

### 6) Use Antivirus and Firewall

Microsoft Windows has a built-in firewall and its Defender is also very good at security. However, if you want better and stronger security, definitely go for a premium Antivirus. They give you many functions such as sandboxing, disinfecting, and password protection. There are many expensive options in the market with great options but if you want, you can choose free options as well. For example, Kaspersky Security Cloud, AVG, and Avast are some popular freeware in the market. Keep them running and keep their databases updated. Always run full deep scan of your computer at least once a month. Always scan files and folders when downloading new files from the internet, using an external USB drive and portable hard disks.

A firewall is a thing just like it sounds. It protects your computer from malware and unauthorized access. It blocks bad traffic and gives security to a network-connected device. Many antiviruses run their own firewall after installation. But Windows Firewall is already built-in and it is also very good. The Windows Defender Firewall can be turned on by just going to the control panel. This thing is very crucial so always keep it on.

### 7) Create regular backup and follow 3-2-1 rule

Creating backup of your files, folders and OS is one of the types of computer maintenance. It is a preventive measure. It saves you from the misery of failure of storage device. Any storage might fail because they are electronics and accidents can happen any time. Hard Disks, Solid State Drives, NAS may fail without showing any sign. Thus we must be very careful because we know that our files, photos, videos and memories are very important. We can buy songs, movies and series but our photos, videos can't be bought back.

## 7. APPLE VS MICROSOFT

### Task I. Discuss in pairs:

1. Why do people prefer one operating system to another?
2. What operating system do you like? Give your reasons.
3. What products does the Microsoft Company issue?
4. What products does the Apple Company have?
5. Product of what company do you prefer?

### Task II. Complete the table with the arguments in favor of each company's products:

MICROSOFT	APPLE

**Task III. Read the computer magazine article and find more information in favor or against these companies' products.**

**MACS® AND PCS**

As Apple® grows in popularity, the Mac® versus PC debate continues. Many businesses experience trouble choosing between the two. However, businesses must realize that each computer is suited for different needs. The two differ most in their operating systems. With PC you have a variety of OS options from Microsoft® and other sources. Macs® come with one of the proprietary Apple® OSes like OS X®. You can install Windows® on a Mac®, but many users prefer the Mac® OS regardless.

Macs® have proven themselves vital in publishing, particularly the prepress process. Mac® has superior typography and color matching. Once printed, products look exactly as good as they do on the computer screen.

Meanwhile, PCs are noted for their fast processing speed and adaptability. Users can customize a PC to their needs. Additionally, their video subsystems are more powerful. This makes PCs desirable for game designers and others who need advanced graphics.

However, both computers have their limitations. While PCs are cheaper, they are also more susceptible to viruses. Macs® usually cost more but are less susceptible to computer viruses. However, Macs® tend to have fewer third-party software options than PCs. Businesses need to consider such concerns and make the right decisions when buying computers for their companies.

**Task IV. Match the words with the definitions.**

1. Apple®	a) company that creates the most common PC operating system
2. Windows®	b) part of the computer that creates visuals
3. customize	c) system that is likely to be harmed by a virus
4. OS X®	d) operating system for PCs
5. processing speed	e) changing a computer for your needs
6. video subsystem	f) company that creates Macs®
7. Microsoft®	g) operating system for Macs®
8. susceptible system	h) a measurement of how quickly a computer works

**Task V. Work with the Internet**

Surf the net and find additional arguments in favor of each company.  
[www.computerhope.com](http://www.computerhope.com)

<http://www.computerworld.com/article/2507485/vertical-it/apple-vs--microsoft-by-the-numbers.html>

<http://americasmarkets.usatoday.com/2014/07/23/apple-vs-microsoft-by-the-numbers/>.

### UNIT III

**Read and translate the dialogues. Revise the vocabulary of the topics.**

#### CODE SIGN/SYMBOL NAMES

In the following conversation between two work colleagues, Juan asks Peter what the names are of different signs and symbols used in computer code. The names of the signs and symbols are **in bold**.

*Juan:* "Do you know what one of the biggest problems is with computer code?"

*Peter:* "No, what?"

*Juan:* "I can never remember the names in English of some of the signs or symbols that are used in computer code. It's not a problem when writing the symbol, but you look stupid when you have to write or type the symbol when talking to someone, because you don't know its name. For example, what do you call this symbol ' - '? Is it called a dash?"

*Peter:* "Yes, the ' - ' is commonly called a **dash** in computer code, but it is also called a hyphen when writing in both English and in computer code. And you call this symbol ' \_ ', an **underscore**."

*Juan:* "I knew that. What's the name for the little star symbol?"

*Peter:* "Do you mean ' \* ' this?"

*Juan:* "Yes."

*Peter:* "The ' \* ' symbol is called an **asterisk**."

*Juan:* "And the ' @ ' symbol which you use in email addresses?"

*Peter:* "The ' @ ' symbol is called an **at sign**."

*Juan:* "Another symbol I have seen, is this ' / '."

*Peter:* "The ' / ' symbol is called **forward slash**, because its top part is leaning forward."

*Juan:* "So I suppose the ' \ ' symbol is called backslash because the top part is leaning back?"

*Peter:* "That's right. It's called backslash."

*Juan:* "And what do you call this symbol ' # '?"

*Peter:* "It has many names, it's often called the pound sign in America, but everywhere else, ' # ' is called **hash**."

*Juan:* "And the ' ( ' and ' ) ' symbols?"

*Peter:* "They are called **parentheses**, although they are sometimes called brackets (but not in America). The ' ( ' symbol is normally called open parenthesis and the ' ) ' symbol, close parenthesis."

*Juan:* "I am confused. I thought that the brackets symbols were ' [ ' and ' ] '?"

*Peter:* "They are type of brackets, and although they are sometimes called brackets in America, the ' [ ' and ' ] ' symbols are normally called **square brackets**. There are another two types of brackets that are used. ' < ' and ' > ' are called **angle brackets** and ' { ' and ' } ' are normally called **curly brackets**. With all types of brackets, the first bracket is called 'open' and the second bracket is called 'close'. So, for example, ' < ' is called 'open angle bracket' and ' ] ' is called 'close square bracket'. Does that make sense?"

*Juan:* "I think so."

## HOW A COMPUTER NETWORK WORKS

Read the following conversation between Juan and Peter. Peter is explaining to Juan how the computer network at their office works. From the context, try to guess what the meaning of the words/phrases **in bold** are.

*Juan:* 'I know that it sounds stupid, but how is it possible that I can open the same word document on any of the **workstations** in the office. It doesn't matter which computer I'm on here, I can still open it.'

*Peter:* 'That's because all the computers or workstations in the office are connected to each other in a network. For our office, this network is called a **LAN** which is an abbreviation of 'Local Area Network'.'

*Juan:* 'So every computer I use in the office can access or open any file or document on my computer?'

*Peter:* 'No, they can't. You can only open files and documents from any computer/workstation you use here, when the file or document is saved on a **server** and not on your computer. A server is basically a powerful computer on the network which is dedicated to doing one thing, like storing files, or connecting to the internet or running an application etc... All the computers or workstations that people use at their desks can connect to these servers. Any application or file which people want to be shared or used by multiple computers are stored or put on to a server.

If you don't want to share a file with anybody, you can save or store it to the **local drive** of your computer or laptop. A local drive is the hard drive on your computer. Keeping a file on only your computer's local drive means that you can't open the file from another computer and if the computer breaks, the file is lost. So it's better to save it to your own personal folders on a **network drive**. This is like a local personal drive for each user of a network, but all files are stored on a file server, a server dedicated to saving/storing files.

In addition, they are all **backed up** regularly. So even if the file server breaks down, there will always be a copy of all the files or documents stored on a different file server.'

*Juan:* 'So how does my computer access and open the word document on the file server?'

*Peter:* 'Well, your computer is connected to the LAN or office's computer network by an **ethernet cable** at the back of the computer. The ethernet cable is used to send

and receive all the data from the computer to the server, other computers, the internet etc...'

*Juan:* 'Like emails or web pages?'

*Peter:* 'Yes, when you open a document on a server, the ethernet cable sends the request to the file server and the file server sends the data in the file to your computer through the ethernet cable to your computer. This data comes to your computer in what is called **packets**. For example, when a file server sends a word document that is on a network drive to your computer, the document is not sent all together, but is divided into small parts which are then sent one by one. When these small parts or packets reach your computer they are reassembled or joined back together and make the document. Data is sent on computer network in packets to make the network run quicker.'

*Juan:* 'It sounds complicated. But how does the file server know where to send the document or any type of data?'

*Peter:* 'Well, every computer, server, printer etc... has its own unique address. This is called an **IP address**. So, that's how a file server knows where to send a word document.'

*Juan:* 'So, there's a direct ethernet cable from all the computers on the LAN network in the office to the file server?'

*Peter:* 'No. In most offices, schools etc..., there are too many computers or servers to connect an ethernet cable directly between each one. In our office there are 213 workstations/computers and 13 servers. It would be impossible for each computer to have 225 different ethernet cable. Each computer or server only has one ethernet cable. Those cables connects directly to a device called a **switch**. A switch is an electronic box that is used to direct the data traffic on the network to the correct IP address. All data is sent from a computer or server to it first. It's like a postman, when it receives the data (like an email, file, update) it reads the IP address of where it wants to go to (which is contained in the data) and sends it to the computer, server, printer on the network with that IP address.'

*Juan:* 'Makes sense. But what happens if I want to send an email to somebody outside the company?'

*Peter:* 'Well, the email is divided into packets and these packets are sent from your computer through the ethernet cable to the switch. When the switch reads the IP address in the packets of data and knows that it's not for a computer or server on the LAN network, it sends the packets to the **router** on the LAN network. A router is another piece of **hardware** or device on the network that is used to send or receive data traffic from a LAN network (like in our office) to or from computers or servers which are outside the LAN network (like the internet, other companies or other offices).'

*Juan:* 'So if I open a web page from the internet on my computer here, the data of the web page comes to my computer from the internet through the router, then the switch, then the ethernet cable and finally to my computer?'

*Peter:* 'Basically, yes. The router is the first place on the LAN network that receives data from outside of the LAN network. The router often has a **firewall** on it to make

sure that any data it receives doesn't contain a virus or words or material which have been banned or prohibited by the company. Some companies ban their staff from accessing some websites and it's this **software** or program on the router that stops the web page.'

*Juan:* 'Thanks Peter for explaining it.'

## TECHNICAL PROBLEMS BEFORE A MEETING

Read the following conversation between Juan and Peter. Peter is having problems with his laptop before giving a short Power Point presentation in a meeting. From the context, try to guess what the meaning of the words/phrases **in bold** are.

*Juan:* 'What's happening Peter, you look frustrated?'

*Peter:* 'My laptop won't **turn on**. It was working before; I don't know what's wrong!'

*Juan:* 'Is it **plugged in**?'

*Peter:* 'Yeah, I have connected it to the mains electricity, but that shouldn't be important because the laptop's **battery** still has charge or power.'

*Juan:* 'Are you sure that the **socket** in the wall has power? Try to plug it into another socket.'

*Peter:* 'I've tried that already and the socket has power. I thought that there may be a problem with the power **cable**, but it's working fine with the other laptop here.'

*Juan:* 'I had a problem with my desktop computer last year where the **wires had come loose in** the power cable. So I had to replace the power cable. You can use my laptop to show it.'

*Peter:* 'Thanks Juan, but I only saved the presentation to my **hard drive**. So I can't show the presentation on your laptop.'

*Juan:* 'Can you remember when I had that problem with my laptop in July. When suddenly the screen **froze** and the laptop wouldn't respond when I **pressed** any of the **keys** on the keyboard or when I moved my finger on the **touch pad**. Sometimes it recovered and I could continue to use the application, but other times it **crashed** and stopped working completely. So, I had to **reboot** the laptop. It was so frustrating, because I sometimes lost all of the work I'd been doing. Then the application **didn't load** at all, so I couldn't even use it then. The IT Engineer told me it was a software **fault** with the application. So she just **reinstalled** the application and it's been working fine.'

*Peter:* 'I'm happy for you, but I don't have any power to the laptop, so it's not a software fault. It seems like a hardware fault.'

## UNIT IV

### Check your English vocabulary

#### 1. Some useful verbs

#### *Choose the best verb.*

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. Please \_\_\_\_\_ the CD ROM.  
a. insert                      b. introduce                      c. inject
5. The projector isn't working because it isn't \_\_\_\_\_.  
a. plugged                      b. plugged in                      c. plugged into
6. The batteries in my digital camera are nearly dead. They need  
a. to change                      b. exchanging                      c. changing
7. I have to \_\_\_\_\_ a computer screen for eight hours a day.  
a. see                      b. look at                      c. watch
8. Switch off your computer and \_\_\_\_\_ it from the wall socket.  
a. deplug                      b. unplug                      c. non-plug
9. I turned off the photocopier and \_\_\_\_\_ the plug.  
a. pulled out                      b. extracted                      c. took away
10. I \_\_\_\_\_ any key to continue.  
a. kick                      b. smash                      c. hit
11. The mouse moves on a \_\_\_\_\_.  
a. mouse mat                      b. mouse carpet                      c. mouse table
12. TV and computer screens are usually measured in \_\_\_\_\_.  
a. feet                      b. miles                      c. inches
13. Before you start work, \_\_\_\_\_ the height of your chair.  
a. adjust                      b. change                      c. rearrange
14. To get sound from your computer, plug in a pair of \_\_\_\_\_.  
a. loudhailers                      b. loudspeakers                      c. loud voices
15. The computer is connected to the telephone line via a \_\_\_\_\_.  
a. module                      b. modem                      c. mod
16. You can increase the functions or performance of a computer with an  
a. extension card                      b. explodind card                      c. xpansion card
17. Mobile phones and PDAs can communicate with computers via \_\_\_\_\_.  
a. Bluebeard                      b. Blueberry                      c. Bluetooth
18. There's a spare \_\_\_\_\_ in the workstation.  
a. electric hole                      b. powerpoint                      c. electrical opening
19. SD cards can be read in a computer's \_\_\_\_\_.  
a. storage reader                      b. memory reader                      c. card reader

## 2.The keyboard.

*Choose the correct word to fill the spaces.*

<b>shift key</b>	<b>alt key</b>	<b>control key</b>	<b>escape key</b>
<b>delete key</b>	<b>tab key</b>	<b>caps lock key</b>	<b>backspace key</b>

- 1.To go back one space, hit the \_\_\_\_\_.
- 2.To change to capital letters, press the \_\_\_\_\_.
- 3.To change the capital letters permanently, hit the \_\_\_\_\_.
- 4.To insert a tabulation, press the \_\_\_\_\_.
- 5.To activate the "Ctrl" functions, press the \_\_\_\_\_.
6. To activate the "alt" functions, hit the \_\_\_\_\_ .
7. To stop the computer doing something, you can press the \_\_\_\_\_.
- 8.Select the text you want to remove, and hit the \_\_\_\_\_ .

## 3.Processors and memory.

*Choose the correct word to fill the spaces.*

<b>chips</b>	<b>dual core</b>	<b>megabytes</b>	<b>megahertz</b>
<b>motherboard</b>	<b>processor</b>	<b>speed</b>	<b>upgraded</b>

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 procesors 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\_\_\_\_\_. If a computer has 1,024 megabytes of memory, and the memory type is SDRAM, this is written as 1,024 MB SDRAM, and is pronounced "a thousand and twenty-four megabytes ess-dee-dram". 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\_\_\_\_\_.

## 4.Power.

*Choose the correct word to fill the spaces.*

<b>disconnect</b>	<b>fan</b>	<b>mains electricity</b>
<b>overheating</b>	<b>shock</b>	<b>spikes</b>
<b>supply</b>	<b>surge protector</b>	<b>transformer</b>

1. Laptops are powered by batteries or \_\_\_\_\_.
2. Mains electricity is converted to lower voltage by \_\_\_\_\_ .
3. A \_\_\_\_\_protects electronic equipment from damage caused by power \_\_\_\_\_ .
4. If you remove the cover from a computer, make sure you \_\_\_\_\_ the electricity \_\_\_\_\_ . Otherwise, you may get an electric \_\_\_\_\_ .

---

5. The computer is cooled by a \_\_\_\_\_. This prevents the processor from \_\_\_\_\_.

**5.Data storage.**

*Choose the correct word to fill the spaces.*

<b>burn</b>	<b>capacity</b>	<b>card</b>	<b>drawer</b>
<b>eject</b>	<b>free space</b>	<b>hard drive</b>	<b>stick</b>

1. The data and applications on your computer are stored on the \_\_\_\_\_.
2. To run this application, you need at least 50MB of \_\_\_\_\_ on your hard drive.
3. My computer's hard drive has a \_\_\_\_\_ of 120GB.
4. Do you like this CD? I can \_\_\_\_\_ you a copy if you want.
5. The opposite of "Insert the DVD" is "\_\_\_\_\_ the DVD".
6. I can't eject the CD. I think the \_\_\_\_\_'s stuck.
7. Digital cameras usually store pictures on a memory \_\_\_\_\_ or a memory\_\_\_\_\_.

**6.Software: the basics.**

*Choose the correct word to fill the spaces.*

1. Turn on your computer. It will usually take a few minutes to \_\_\_\_\_.  
a. boot itself                      b. boot up                      c. get booted
2. Windows XP, Macintosh OSX and Linux are \_\_\_\_\_.  
a. operating systems              b. operating tools              c. operators
3. On my computer, I have a picture of my cat as the \_\_\_\_\_.  
a. desktop background              b. desktop picture              c. desktop scene
4. Microsoft Word, Adobe Acrobat and CorelDraw are programs or \_\_\_\_\_.  
a. applicators                      b. appliers                      c. applications
5. To open Microsoft Word, click on the \_\_\_\_\_,  
a. picture                      b. symbol                      c. icon  
I keep all my digital photos in a \_\_\_\_\_ called "Photons".  
a. folder                      b. packet                      c. box
6. Is it possible to open Microsoft Excel \_\_\_\_\_ in Word?  
a. texts                      b. files                      c. pages
7. In Microsoft Word, to start typing a new letter, open a new \_\_\_\_\_.  
a. document                      b. page                      c. paper
8. When you \_\_\_\_\_ a document, it's sent to the recycle bin.  
a. destroy                      b. erase                      c. delete
9. Deleted documents stay in the recycle bin until you \_\_\_\_\_ it.  
a. wash                      b. empty                      c. clean
10. In Windows, the icon is just a \_\_\_\_\_ to the application. If you delete the icon the application will still be on your computer.  
a. connector                      b. shortcut                      c. link
11. If the computer crashes, you can try pressing the \_\_\_\_\_ button.

- a. restart                      b. recommence                      c. replay
12. When I've finished using my computer, I always \_\_\_\_\_ .
- a. close it down                      b. shut it down                      c. shut it off
13. If I leave my computer on without using it, after a while it goes into \_\_\_\_\_ mode.
- a. stand down                      b. waiting                      c. standby

*Match the words on the left with the words on the right.*

### Set 1

- |                                |                          |
|--------------------------------|--------------------------|
| 1. <b>arrange</b> the          | a. a Microsoft Word file |
| 2. <b>cut</b> and <b>paste</b> | b. a new window          |
| 3. <b>install</b>              | c. photo. It's too big.  |
| 4. <b>open</b> the document in | d. an application        |
| 5. <b>resize</b> the           | e. some text             |
| 6. <b>save</b> it as           | f. icons on the desktop  |

### Set 2

- |                          |                             |
|--------------------------|-----------------------------|
| 1. <b>copy</b> the       | a. for a lost file          |
| 2. <b>customize</b> your | b. a program                |
| 3. <b>launch</b>         | c. "search" function        |
| 4. <b>search</b>         | d. text into a new document |
| 5. <b>send</b> the file  | e. to a different folder    |
| 6. <b>use</b> the        | f. desktop                  |

### 7.Punctuation and symbols

*Match the words with the punctuation marks and symbols.*

- |                     |        |
|---------------------|--------|
| 1. full stop        | a. !   |
| 2. comma            | b. @   |
| 3. exclamation mark | c. ,   |
| 4. question mark    | d. &   |
| 5. single quotes    | e. .   |
| 6. double quotes    | f. =   |
|                     | ‘Hello |
|                     | ’      |
| 7. dollar sign      | g. ’   |
| 8. percentage sign  | h. %   |
| 9. ampersand        | i. *   |
|                     | “Hello |
|                     | ”      |
| 10. asterisk        | j. *   |
| 11. hash            | k. #   |

12. brackets	l. -
13. left bracket	m. ?
14. square brackets	n. /
15. underscore	o. ( )
16. hyphen	p. \$
17. plus sign	q. \
18. equals sign	r. [ ]
19. colon	s. %
20. semicolon	t. (
21. "at" sign	u. #
22. forward slash	v. :
23. backward slash	w. +
24. arrow	x. ;

## 8. The internet: the basics.

A. Choose the best word from each pair in grey type.

### What's the difference between the Web and the internet?

Some people think that the internet and the Web are the same thing, but in fact they are different. The internet (often called simply "the net") is a global 1 **network / net** of interconnected computers. These computers communicate with each other 2 **over / through** existing telecommunications networks – principally, the telephone system. The World Wide Web (usually known as just "the Web") is the billions of web pages that are stored on large computers called web 3 **servers / services**.

To 4 **see / access** the web, you need a computer and a modem. You then connect over your telephone line to an internet service 5 **port / provider** (ISP), which sends your request to view a particular web page to the correct web server.

Websites are not the only service available on the internet. It is also used for many other functions, including sending and receiving email, and connecting to newsgroups and 6 **discussion / talking** groups.

You could say that the internet is a system of roads, and web pages and emails are types of traffic that travel on those roads.

B. Put these operations in the order that you do them (variations are possible).

close down your browser

connect to your ISP

disconnect from the internet

enter a web address (also known as a URL\*) into the address field

launch your browser (for example, Internet Explorer, Netscape Navigator or Mozilla Firefox)

perhaps wait for a few seconds while the web-page downloads

view the page

\* URL stands for Uniform Resource Locator, but the full term is almost never used

**C. Choose the best words.**

1. ADSL\* is more commonly known as \_\_\_\_\_.  
a. longband                      b. broadband                      c. wideband
2. Broadband internet connection is much faster than \_\_\_\_\_.  
a. dial-in                      b. dial-through                      c. dial-up
3. Before you can connect to the internet for the first time, you have to \_\_\_\_\_ an account with an ISP.  
a. set                      b. set up                      c. set in
4. Each time you want to connect to your ISP's system, you have to enter a log-in name and a \_\_\_\_\_.  
a. security word                      b. safe word                      c. password
5. You can set your computer to \_\_\_\_\_ your log-in details, so you don't have to type them in each time.  
a. store                      b. remember                      c. recall
6. With a broadband connection, you usually have to pay a \_\_\_\_\_.  
a. fixed monthly price                      b. fixed monthly fee                      c. fixed monthly cost
7. With dial-up, you can usually choose a \_\_\_\_\_ tariff.  
a. pay-as-you-go                      b. pay-what-you-want                      c. pay-if-you-like
8. Some broadband contracts limit the amount of \_\_\_\_\_ you can have each month.  
a. pages                      b. traffic                      c. use
9. Looking at web pages can be called "navigating the Web" but is more commonly called \_\_\_\_\_.  
a. "surfing the net"                      b. "skiing the net"                      c. "swimming the net"
10. You can often find the answer to a question by \_\_\_\_\_ on the internet.  
a. looking at it                      b. looking for it                      c. looking it up
11. When your computer is not connected to the internet, it is \_\_\_\_\_.  
a. out of line                      b. offline                      c. off the line
12. Internet banking is also called \_\_\_\_\_.  
a. online banking                      b. on the line banking                      c. inline banking
13. An unexpected disconnection from the internet is called a \_\_\_\_\_.  
a. lost connection                      b. missed connection                      c. dropped connection
14. A file which is copied from the internet onto your computer is called \_\_\_\_\_.  
a. an upload                      b. a download                      c. a load
15. Downloading files from the internet can \_\_\_\_\_ your computer with a virus.  
a. infect                      b. contaminate                      c. dirty

\*ADSL stands for asymmetric digital subscriber line, but the full term is almost never used.

**D. Choose the best words to complete the sentences.**

- "The website gets a thousand hits a week" means the website has a thousand \_\_\_\_\_ a week.  
**a. sales**                      **b. visits**                      **c. search engine matches**
- The words, images and other material that make up a website are called \_\_\_\_\_.  
**a. the contents**              **b. the content**              **c. the filling**
- Designs and drawings in websites are usually called \_\_\_\_\_.  
**a. web pictures**              **b. web graphics**              **c. web illustrations**
- Moving pictures in websites are usually called \_\_\_\_\_.  
**a. cartoons**                      **b. movies**                      **c. animations**
- Websites with sounds and/or video clips and/or animations have \_\_\_\_\_ content.  
**a. multimedia**              **b. many-media**              **c. mixed-media**
- A space in a website where you enter information is called a \_\_\_\_\_.  
**a. box**                              **b. strip**                              **c. field**
- A place with computers for public internet is usually called an internet café or \_\_\_\_\_ even if they don't serve coffee.  
**a. web cafe**                      **b. computer cafe**              **c. cyber café**
- Internet cafes offer internet \_\_\_\_\_.  
**a. connection**              **b. availability**              **c. access**
- A program that adds functions to a browser is called a \_\_\_\_\_.  
**a. plug**                              **b. plugged-in**                      **c. plug-in**
- Temporary internet files are stored in the \_\_\_\_\_.  
**a. cash**                              **b. cache**                              **c. cashe**

**9. Internet security**

**A. Choose the best words to go into each of the spaces.**

- A person who illegally accesses somebody else's computer over the internet is called a \_\_\_\_\_.  
**a. pirate**                              **b. back**                              **c. hacker**
- A website which (in theory) cannot be accessed by a hacker is \_\_\_\_\_.  
**a. strong**                              **b. secure**                              **c. clean**
- A website which can only be viewed by authorised people has \_\_\_\_\_ access.  
**a. reduced**                              **b. small**                              **c. restricted**
- Unwanted advertising emails are popularly known as \_\_\_\_\_.  
**a. meatloaf**                              **b. spam**                              **c. sausages**
- Software which blocks attempts by others to access your computer over the internet is called a \_\_\_\_\_.  
**a. firewall**                              **b. fire blanket**                      **c. fire engine**
- It's essential to \_\_\_\_\_ your anti-virus protection regularly.  
**a. up-to-date**                              **b. date**                              **c. update**
- Anti-virus software can \_\_\_\_\_ your computer for viruses.  
**a. detect**                              **b. review**                              **c. scan**
- Anti-virus software can also \_\_\_\_\_ viruses on removable media (floppy disk).



To list advantages and disadvantages	<b>one advantage of...</b> <b>another advantage of...</b> <b>one other advantage of...</b> <b>a further advantage of...</b> <b>the main advantage of...</b> <b>the greatest advantage of...</b> <b>the first advantage of...</b>
To list points	<b>firstly</b> <b>first of all</b> <b>in the first place</b> <b>secondly</b> <b>thirdly</b> <b>finally</b> <b>to start/to begin with</b>
To list points to a specific sequence	<b>first/to start/to begin with/first of all</b> <b>secondly/after this (that)/afterwards/then/next</b> <b>finally/lastly/last but not the least</b>
To add more points to the same topic	<b>what is more</b> <b>furthermore</b> <b>also</b> <b>moreover</b> <b>apart from this/that</b> <b>in addition (to this/that)</b> <b>besides (this)</b> <b>...not to mention the fact that...</b> <b>not only...but...</b> <b>...both...and...</b>
To refer to other sources	<b>with reference to...</b> <b>according to...</b>
To express cause	<b>because...</b> <b>owing to the fact that...</b> <b>due to the fact that...</b> <b>on the grounds that...</b> <b>since...</b> <b>as...</b> <b>in view of...</b> <b>because of...</b> <b>owing to...</b> <b>for this reason</b>

	<p>seeing that...</p> <p>... that...</p>
To express effect	<p><b>thus</b></p> <p><b>therefore</b></p> <p><b>so</b></p> <p><b>consequently</b></p> <p><b>as a result</b></p> <p><b>as a consequence</b></p>
To express purpose	<p>...so that...</p> <p>...so as to/in order to...</p> <p>...in case...</p> <p>...with the purpose/view/intention of...</p>
To emphasize a point	<p><b>indeed</b></p> <p><b>naturally</b></p> <p><b>clearly</b></p> <p><b>obviously</b></p> <p><b>of course</b></p> <p><b>needless to say</b></p>
To express reality	<p><b>it a fact that...</b></p> <p><b>in effect...</b></p> <p><b>in fact...</b></p> <p><b>as a matter of fact...</b></p> <p><b>actually...</b></p> <p><b>in practice...</b></p> <p><b>indeed...</b></p>
To give examples	<p><b>for instance, ...</b></p> <p><b>for example,..</b></p> <p><b>...such as....</b></p> <p><b>...like...</b></p> <p><b>...particularly...</b></p> <p><b>...in particular...</b></p> <p><b>...especially...</b></p>
To make general statements	<p><b>as a (general) rule,..</b></p> <p><b>by and large...</b></p> <p><b>generally,..</b></p> <p><b>in general,..</b></p> <p><b>on the whole...</b></p>
To make partially true statements	<p><b>up to the point,..</b></p> <p><b>to a certain extent/degree,..</b></p> <p><b>in a sense,..</b></p>

	<b>to a limited extent,..</b> <b>in a way,..</b>
To express limited knowledge	<b>to the best of my knowledge...</b> <b>as far as I know...</b>
To state other people's opinions	<b>it is popularly believed that...</b> <b>people often claim that...</b> <b>it is often alleged that...</b> <b>some people argue that...</b> <b>many argue that...</b> <b>most people feel that...</b> <b>some people point out that...</b> <b>contrary to this belief...</b>
To make contrasting points	<b>yet although</b> <b>however even though</b> <b>nevertheless regardless of the fact that</b> <b>nonetheless in spite of the fact that</b> <b>but despite the fact that</b> <b>even so while</b> <b>still on the contrary</b> <b>on the other hand</b>
To express balance (the other side of the argument)	<b>opponents of...argue (claim, believe) that...</b> <b>while it is true to say that..., in fact...</b> <b>the fact that...contradicts the belief (the idea) that...</b>
Negative addition	<b>neither... nor...</b> <b>nor</b> <b>neither</b> <b>either</b>
To express exception	<b>apart from</b> <b>but</b> <b>except (for)</b>
To clarify/rephrase	<b>in other words</b> <b>that is to say</b> <b>to put it another way</b>

