IT

IT ENGLISH READING

英语阅读教程

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IT 英语阅读教程

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内 容 简 介

　　本书通过英语阅读课文的形式,用地道的英语从计算机和信息技术发展史、软硬件安装维护、计算机和网络安全、网络技术应用等方方面面介绍了信息技术的基础知识,融当代必备的两大技能——计算机和英语——于一炉,集知识性、趣味性和实用性为一体,非常适合作为高职高专英语、信息、计算机等相关专业的教材,同时,感兴趣的读者也可把它作为一本英语科普读物来阅读。

序

更新知识的必学必读

我常常对我的学生说，当老师这个行当最大的好处就是教一辈子、学一辈子，要想做一个合格的教师，一天都不能放弃学习。就是教同一种教材，教一遍有一遍的心得，在教这一遍的时候要和前一遍不一样才行。何况在我们这个瞬息万变的时代，每种教材的寿命都变得越来越短，这是因为知识更新的速度越来越快的缘故。我教了40年英语，对此感触很深。

都说当今是一个"知识爆炸"的时代，细想一下此话并不夸张。20世纪50年代我上大学的时候，根本没有英国文学史、美国文学史及选读之类系统学习的课程，只有英美文学选读一门课，更没有什么应用语言学、心理语言学、词汇学、语义学、翻译理论与实践等等课程。现在这些都已经成为英语专业本科的必修课程。就连这些较新的课程每年全国都有几十种教材供各个学校选择使用。随着知识的丰富积累乃至爆炸，人们获取知识的手段也大大增加和增强了。除了图书馆等传统的途径，电脑成了人们开阔眼界获取知识的重要手段。

现在电脑已经进入了我们的社会生活和家庭生活。它的功能比它刚刚出现的时候也大大扩充了。原来大多数人用电脑是作为文字处理器来使用，现在这一功能早就变成了次要功能。不要说大学生张口闭口谈"上网"，连中小学生也有时间在电脑上上网"冲一冲浪"。除了玩游戏之外，在网上找一些新奇的东西涉猎，一个个都变成了"小灵通"。这样一来，逼得当老师的也赶紧扫"电脑盲"。连我们这些上年纪的老学究们也不甘落后，非要赶这个"时髦"不可。

电脑本来就是从外国传进来的舶来品，使用电脑的基本指令本来也都是用英语。如上网应用，网站的域名及与其相关的指令大多也是英语的。因此，在接受这一新事物的过程中，不懂英语的人要多费一些时间和精力。而懂英语的人，在应用这一新事物的过程中，也会觉得自己的英语只能是捉襟见肘。既然英语已经成为各类高校的必修课程，把英语学习和计算机知识及应用结合起来就成为一件顺理成章的大好事了。

杨丽娜等同志编写的《IT英语阅读教程》，是一部适应当前信息时代要求的好教材，也是能够满足高校英语教育课程建设和改革需要的好教材。这部教材体现了信息技术的最新信息和有关技术的应用发展趋势，其内容涉及计算机技术的历史和发展状况，基本硬件和软件的安装和维护，计算机和网络的安全，网络技术及其应用和无线电通讯等。它的出版完全符合高校，特别是高职和高专英语教学的总体要求，也会促进相关专业的英语教学。与其他已经出版的此类教材相比，这部

教材从语言教学的观点来看,其语句、语法和词汇的起点定位比较合理,其内容和形式适应交流性、互动性和实践性等现今的教学理念。教材融知识性、趣味性和实用性为一体,特别适用于高校的教学要求和教学对象,同时又可以作为一般读者扩充知识的英语科普读物。所以,在翻阅了这部教材之后,我认为这是一部更新知识必学必读的好教材。

写了以上这些,权作本书的序言,也是我向广大读者和教材使用者的郑重推荐。

侯明君

2002 年 11 月

前　言

　　《中共中央、国务院关于深化教育改革全面推进素质教育的决定》明确指出"高等职业教育是高等教育的重要组成部分。要大力发展高等职业教育"。2001 年山东省高职高专英语教学研讨会上,山东省教委提出了高职英语教学三年不间断的总体要求。为了适合专业英语教学的要求和趋势,并且能够更多地提供信息技术行业的新知识,我们编写了《IT 英语阅读教程》。

　　《IT 英语阅读教程》是一本集知识性、趣味性和实用性为一体的新颖的信息技术英语教材。本书内容都选材广泛,语言地道;全书知识系统新颖,从基本的计算机技术应用和发展,到目前最前沿的信息技术应用和状态;内容新颖实用,选材中注重体现信息技术的最新信息和有关技术的应用和发展趋势。具体内容涉及计算机技术历史及发展状况、基本硬件和软件的安装和维护、计算机和网络安全、网络技术及应用、无线电通讯等。其形式涉及概述、产品说明、使用指南等。

　　本书由 20 个单元构成,总教学时数约为 100 学时。每单元分为精读和泛读两部分。精读部分包括课文、词汇、注释,以及针对课文的阅读理解、词汇和翻译练习。泛读部分提供了三篇短文,主题与课文一致,篇幅由小到大,程度由易到难。可针对不同的英语水平和教学课时选用。

　　本书可作为高职、高专、成人大专计算机专业、信息管理专业以及计算机培训专业英语教材,还可以作为英语和信息技术爱好者的专业英语阅读书籍。

　　由于作者水平有限,本书中难免有不足和不当之处,敬请原谅,并给予指教。

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编者

2002.6

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目　　录

Unit One

SECTION ONE

Intensive Reading

Computer

A computer is a multi-functional and programmable electronic data processing machine. These three characteristics make an electronic computer, which mean a computer is made up of electronic components and can be programmed to do a number of different tasks. The program is stored actually inside the machine, making it a stored program. A computer's function is to accept data and process them into information. Data flow into the machine as input and flow from the machine as output.

All computers, from the first room-sized mainframes, to today's powerful desktop, laptop and even hand-held PCs, perform the same general operations on information. What changes over time is the information handled, how it is handled, and how quickly and efficiently it can be done.

When you think about a computer and what it does, you of course think that "it computes". And this is indeed one part of its job. Computing is really another term for "information transformation"— changing information from one form to another.

One special form of information the computer processes is its instructions. These are the commands that programmers give the computer to tell it what to do. Every time you do anything with a computer, you are really talking to a program which is talking to the computer. The language that computers speak, which is called machine language, is very complex and hard to understand.

Computers can be generally classified by size and power as follows:

A microcomputer is generally a synonym for the more common term, personal computer or PC, which is a small single-user computer based on a microprocessor. In addition to the microprocessor, a personal computer has a keyboard for entering data, a monitor for displaying information, and a storage device for saving data.

Workstation is a powerful single-user computer. It is like a personal computer, but it has a more powerful microprocessor and a higher-quality monitor.

Minicomputer(a term no longer much used)is a multi-user computer of a size be-

tween a microcomputer and a mainframe.

Mainframe or mainframe computer is a powerful multi-user computer capable of supporting many hundreds or thousands of users simultaneously. It is now usually referred to as a "large server".

Supercomputer is an extremely fast computer that can perform hundreds of millions of instructions per second, but now refers to as a very large server and sometimes includes a system of computers using parallel processing.

New Words

multi-functional [mʌltiˌfʌŋkʃənl] *a*.多功能的

electronic [ilek'trɔnik] *a*.电子的

process ['prəuses] *v*.& *n*.处理;进程,过程

component [kəm'pəunənt] *n*.部件,元件

program['prəugræm] *v*.& *n* (Am.E)

programme (Br.E) 编程;程序,计划

programmer ['prəugræmə] *n*.程序师,程序规划员

function ['fʌŋkʃən] *n*.& *v*.功能,作用;函数;起作用

perform [pə'fɔːm] *vt*.执行;完成,处理,运用

input ['input] *v*.& *n*.输入;输入(数据,过程,设备)

output ['əutput] *v*.& *n*.输出;输出(数据,过程,设备)

flow [fləu] *v*.& *n*.流动;流程,流量

mainframe ['meinfreim] *n*.主(计算机)机,大型机

desktop ['desktɔp] *n*.& *a*.台式电脑;台式的,桌面上的

transformation [ˌtrænsfə'meiʃən] *n*.变换

instruction [in'strʌkʃn] *n*.指令;指导

command [kə'maːnd] *v*.& *n* 命令,指令

complex ['kɔmpleks]*a*.& *n*.复杂的;化合物

classify ['klæsifai] *v*.把……分类,分等级

microcomputer ['maikrəukəm'pjuːtə] *n*.微型计算机,微机

synonym ['sinənim] *n*.同义词

microprocessor ['maikrəu'prəuses] *n*.微处理器,微处理机

keyboard ['kiːbɔːd] *n*.键盘

monitor ['mɔnitə] *v*.& *n*.监视;监视器;监控程序

display [dis'plei] *v*.& *n*.显示;显示器

device [di'vais] *n*.设备,装置;器件

minicomputer ['minikəm'pjuːtə] *n*.小型计算机

workstation ['wəːksteiʃən] *n*.工作站

powerful ['pauəful] *a*.强大的;大功率的

server ['səːvə] *n*.服务器

simultaneously [siməl'teiniəsli] *ad*.同时发生地,同步地

Phrases and Expressions

be made up of   由……组成

a number of   若干,许多

in addition (to)   除……之外

base on   依赖,把……基于

(be) capable of   能,能做

refer to   称某人(某物)为

parallel processing   并行处理

Notes

1. These three …computer, which mean … different tasks.

句中关系代词 which 引导非限制性定语从句,指代整个主句的内容。

2. desktop, laptop and even hand-held PCs, …

台式电脑、膝上型电脑和手提式电脑

3. What changes over time … it can be done.

句中 handled 为过去分词做后置定语;what 引导主语从句,两个 how 引导表语从句。

4. … single-user computer based on a microprocessor.

该句中 based on a microprocessor 为过去分词短语做后置定语,修饰 com-puter。

Exercises

Comprehension

I. Tell whether the following statements are true（T）or false（F）according to the text.

1. A computer is a multi-functional electronic data processing machine and is made up of electronic components. （   ）

2. The computer spends a lot of its time performing math operations (changing numbers into other numbers), and translating information from one form to another. （   ）

3. The computer can do nothing without a program. （   ）

4. A microcomputer, also called personal computer is a computer designed for an individual. （   ）

5. According to computers' power and size, we have desktop, laptop and hand-held PCs. （   ）

6. In its more general usage, a personal computer is a computer designed for use by one person at a time. （   ）

7. Computers can be classified into microcomputer, mainframe and supercomputer by its program. （   ）

8. Workstation is a multi-user computer capable of supporting many hundreds or thousands of users simultaneously. （   ）

Vocabulary

II. Match the words or expressions in the left column with those similar in meaning in the right column.

1. input   a. happening or done at the same time

2. output   b. as an extra person, or thing

3. program   c. an electronic device that temporarily displays information in visual form

4. in addition to   d. to enter (as data) into a computer

5. handle   e. to work out a series of operations to be performed

6. simultaneously   f. the information produced by a computer

7. monitor   g. a piece of equipment designed to perform a special function

8. device   h. to deal with, manage or control

III. Fill in the blanks with suitable words or expressions from the list given below, change the form where necessary.

device	complex	information	output
electronic	component	be made up of	input

1. Computers are _____ machines that are being used more in industry, business and home situations.

2. Programmed Input/Output is a way of moving data between _____ in a computer.

3. Information can be _____ into the computer by people or other devices.

4. Data flow from the computer as _____.

5. Supercomputers are designed to process _____ scientific applications.

6. All computer systems _____ hardware components, central processing and output.

7. The computer must be given instructions, which tell it how to handle _____.

8. In a computer system, a number of relative _____ are linked together.

Translation

IV. Translate the following sentences into Chinese.

1. A computer is a multi-functional and programmable electronic data processing machine.

2. A computer's function is to accept data and process them into information.

3. Every time you do anything with a computer, you are really talking to a program.

4. The computer must be given instructions, which tell it how to handle information.

5. Computers can be instructed or programmed to do a number of different tasks.

6. In addition to the microprocessor, PC has a keyboard for entering data, a monitor for displaying information, and a storage device for saving data.

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SECTION TWO

Extensive Reading

Passage A ▶

Restart without rebooting

In most cases, restarting our computers requires us to reboot (重新启动)entirely. However, if you make some changes to your computer that require you to restart Windows, you can do so more quickly if you don't restart your computer. To restart Windows without rebooting your computer, click Start, Shut Down, and select Restart. Hold down the Shift key while you click the OK button. Windows restarts, but does not reboot the system—taking only half as much time as it would if you rebooted your PC.

Check your understanding 🔍

I. Read Passage A and learn to use, looking up your dictionary if necessary.

Passage B ▶

Micro, mini, mainframe and supercomputers

All computer systems are similar in that they contain hardware components for input, central processing, and output. They all perform basic operations under the direction of stored programs. Modern computers vary (改变) in physical size. Generally, the larger the system, the greater is its processing speed, storage capacity, and cost.

Microcomputers or personal computers are the smallest general-purposes systems. But they may perform the same operations and use the same program instructions as much larger computers. Minicomputers are more powerful and expensive than micros.

Continuing up the size scale, mainframe computers are systems that may offer faster processing speeds and greater storage capacity than a typical mini. There's quite a bit of overlap (重叠) possible in the cost , speed, and storage capacity of larger minis and smaller mainframes.

Finally come the supercomputers, designed to process complex scientific applica-

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tions(应用程序). These systems are the largest and fastest.

Check your understanding

II. Choose the best answer according to Passage B.

1. Small as it is, a personal computer can perform the same program instructions as _____.

    A. larger computers
    B. human beings
    C. typewriters
    D. printers

2. Hardware components are used for the purpose of _____.

    A. input
    B. output
    C. central processing
    D. all of the above

3. The largest and fastest computers are _____.

    A. mainframe computers
    B. supercomputers
    C. hand-held PCs
    D. workstations

4. All computers can perform basic machine operations under the control of _____.

    A. instructions
    B. commands
    C. operations
    D. programs

5. The larger the system of the computer, the greater is its _____.

    A. processing speed
    B. storage capacity
    C. both A and B
    D. neither A nor B

Passage C

Computer Generations

The first generation of computers

(1946~1959)

The first generation of computers was characterized by the most important feature(特征) of the EBIAC-vacuum tubes(真空管). Through 1950s, several other notable computer concepts were built, such as binary arithmetic(二进制算法), random access(随机存取), and stored programs. These computer concepts are still common in today's computers.

The second generation of computers

(1959~1964)

To most people, the invention of the transistor(晶体管) meant small portable radios. To those in the data processing business, it signaled the start of the second

generation of computers. The transistor meant more powerful, more reliable, and less expensive computers.

The third generation of computers

(1964~1971)

The system 360 took the lead of the third generation of computers. Integrated circuits or IC (集成电路)did for the third generation what transistors did for the second generation. The compatibility (兼容性) problems of second-generation computers were almost eliminated in third-generation computers.

The fourth generation of computers

(1971 to now)

The first three generations were characterized by technological breakthroughs (成就)in electronics — the use of vacuum tubes, then transistors, and then integrated circuits. Some people prefer to take the start of the fourth generation as 1971, with the introduction of Large Scale Integration or LSI (大规模集成电路). But others think that the most significant contribution to the fourth generation of computers is the microprocessor.

Check your understanding

III. Decide whether the following statements are true (T) or false (F).

1. The ideas of binary arithmetic, random access and stored programs are still in use in modern computers.　　　　　　　　　　　　　　(　)

2. The introduction of ENIAC-vacuum tubes meant the start of the second generation of computer.　　　　　　　　　　　　　　　(　)

3. Portable radios signaled the start of the second generation of computers.

(　)

4. The integrated circuit was an important technological breakthrough in electronics for the third generation of computers.　　　　　(　)

5. The fourth generation began with the introduction of LSI in the early 1970s.

(　)

6. The microprocessor is also considered as the most important symbol for the fourth generation.　　　　　　　　　　　　　　　(　)

Unit Two

SECTION ONE

Intensive Reading

Computer System

A computer system is made up of a number of relative components, which includes not only the computer, but also any software and peripheral devices that are necessary to make the computer work. They must all function for the system to work properly. For example, if a computer does not have a screen (or monitor) it is difficult to check the input. Every computer system, for example, requires an operating system.

A computer is made up of hardware and software. In some ways the hardware seems to be your body and the software to be your mind. If the processor is the computer's "brain" then the software is what that brain "thinks". Each and every thing that happens inside the computer is controlled by some form of software: from the high level spreadsheets, games and other applications, to the low-level device drivers that tell your hardware exactly what it has to do to make them work properly.

Hardware refers to objects that you can actually see and touch, like disks, disk drives, keyboards, chips, and so on. In contrast, software is untouchable. Software exists as ideas, concepts, and symbols.

The hardware of a computer system can be divided into internal devices or the system unit, external devices or input and output (I/O) devices, secondary storage and communications devices.

The main system devices are the processor and memory which locate inside the system. The processor carries out instructions provided by the user or the system and manipulates the data stored in the memory. The main input and output (I/O) devices include the keyboard, mouse and touch screen, display screen, scanner, printer, plotter, and so on, and they input information into a computer or receive the output form it. The secondary storage is the extension of main memory and appears in the form of floppy disks, hard disks and CD -ROMs and etc. The computer cannot execute a program until it has been loaded into main memory, nor can it process data until they

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have been copied into main memory. Modem is one of the communications devices.

Output Devices

Mass Storage
Device

CPU

Input Devices
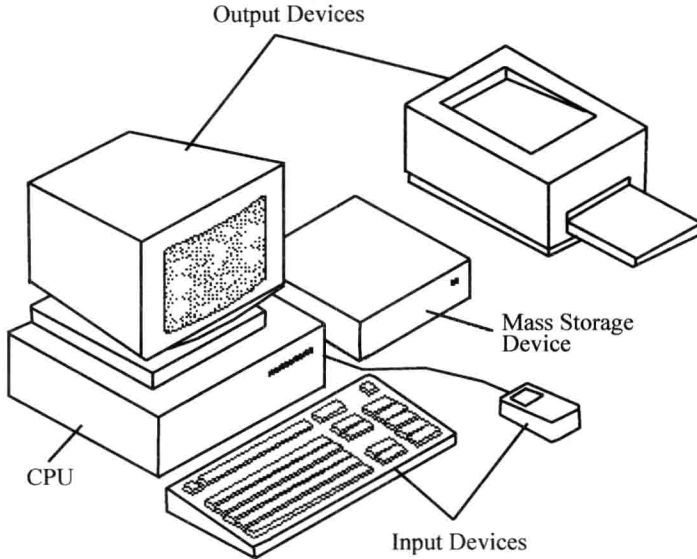
New Words

relative ['relətiv] *a.* & *n.* 相对的, 有关系的; 亲戚

software ['sɔftwɛə] *n.* 软件(设备)

peripheral [pə'rifərəl] *a.* & *n.* 外围的; 次要的; 外围设备

screen [skriːn] *n.* 屏幕

properly ['prɔpəli] *ad.* 适当地, 恰当地, 正确地

hardware ['hɑːdwɛə] *n.* 硬件(设备); 五金制品

control [kən'trəul] *v.* 控制, 管理

spreadsheet ['spredʃiːt] *n.* 电子表格

applications [æpli'keiʃənz] *n.* 应用程序; 应用

driver ['draivə] *n.* 驱动器; 驱动程序

object ['ɔbdʒikt] *n.* & *v.* 物体, 对象, 目标; 反对

chip [tʃip] *n.* 芯片

concept ['kɔnsept] *n.* 概念, 观念

symbol ['simbəl] *n.* 象征, 符号

internal [in'təːnl] *a.* 内部的; 内心的

external [iks'təːnl] *a.* 外部的, 外面的

communications [kəmjuːni'keiʃənz] *n.* 通信技术, 通信学

manipulate [mə'nipjuleit] *vt.* (熟练地)操作, 巧妙地处理

scanner ['skænə] *n.* 扫描仪; 扫描程序

plotter ['plɔtə] *n.* 绘图仪

etc [et'setrə] *ad.* 等等

extension [iks'tenʃn] *n.* 扩充; 扩展名; 电话分机

execute ['eksikjuːt] *vt.* 执行, 实现, 完成

load [ləud] *vt.* & *n.* 装载, 输入; 负荷物

modem ['məudem] *n.* 调制解调器

Phrases and Expressions

operating system　　操作系统(常缩写为 OS)

peripheral device　　外围设备

in some ways　　在某些方面

floppy disk　　软盘

and so on　　等等

in contrast　　相比, 对比

secondary storage　　辅助存储器, 二级存储器

CD-ROM　　只读光盘存储器

carry out　　执行, 完成

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Notes

1. A computer system is made up of ⋯ , which includes ⋯ to make the computer work.

   句中关系代词 which 引导非限制性定语从句,指代 the computer system, 在定语从句中做主语;关系代词 that 引导限制性定语从句,指代 peripheral devices,在定语从句中做主语。

2. Each and every thing that ⋯ from ⋯ to ⋯ that tell your hardware exactly what ⋯ to make them work properly.

   句中两个关系代词 that 都引导限制性定语从句,在定语从句中都做主语;第一个"that happens inside the computer" 定语从句修饰 Each and every thing;第二个"that tell your hardware exactly what it has to do to make them work properly" 定语从句修饰 the low-level device drivers。

Exercises

Comprehension

I. Tell whether the following statements are true (T) or false (F) according to the text.

1. The necessary components for a computer system are hardware and software.   (   )

2. Input device is the component that lets you see what the computer has processed.   (   )

3. Output device is the device through which data and instructions enter a computer.   (   )

4. Keyboard and mouse are the most widely used input devices that provide data.   (   )

5. Display screen or monitor is the output device through which you can see what the computer has processed.   (   )

6. Hardware refers to every thing that you can touch outside the computer.   (   )

7. The program that you put in the computer came to be known as software.   (   )

8. The secondary storages are used to extend the memory capacity and it can replace the main memory.   (   )

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