计算机英语

Computer English

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内容简介

本书是高等职业学校计算机应用专业系列教材之一。选材包括计算机硬件、软件、应用和网络等。全书立足实用,软硬件并重,同时兼顾发展热点,旨在切实提高学生计算机专业英语水平。书中的课文及阅读材料绝大部分源于国外的原版教育丛书,语言规范,文字流畅,可读性强。全书分为 8 个单元,每个单元包括课文、阅读、翻译、语法和练习等。

本书可作为高等职业学校计算机应用专业英语教材,也可供中等职业学校选用。

前　言

　　本书是高等职业学校计算机专业英语教材,也可供中等职业学校选用,同时也适用于自学。

　　全书共分为 8 个单元,每个单元包括 A、B 两篇课文,还提供阅读、翻译、练习、语法等内容。本教材后附缩写词表及常用的计算机屏幕英语。教材内容涉及计算机硬件、软件、应用和网络等,大部分源于国外的原版教材,形式多样,内容丰富。课文后有多种练习、计算机英语常见语法、泛读课文等,教学中的可操作性强。本教材着眼于让读者掌握常见的计算机专业词汇和术语,旨在切实提高学生计算机专业英语水平,立足实用,兼顾专业覆盖面和发展热点。

　　本教材由王文博任主编,王侠和王小刚参加编写。其中,王文博负责课文和阅读材料的选材及课文注释,阅读理解选择题,英汉段落翻译,完形填空,以及语法及其练习;王侠负责词汇,课文问答题,练习中的词语搭配,词组翻译,汉译英及 Mini-Dictionary;王小刚负责缩略语,计算机屏幕英语和 16 篇课文的翻译及课文说明的编写工作。陈一飞老师对全稿进行了认真审阅,并提出了许多宝贵的修改意见,在此表示衷心感谢。本书作者真诚感谢 Prentice-Hall, Inc. 公司允许引用其书中的段落。

　　由于编者水平有限,缺点错误在所难免,恳请使用本书的教师和学生在使用过程中批评指导,提出宝贵意见。

编者
2000 年 12 月

Contents

Unit One

There are two basic types of modern electronic computers in use today: analog computers and digital computers. While they are very unlike in their constructions, operations and uses, both determine a given amount or quantity.

Analog computers use a physical variable such as voltage or current whose value represents the actual value to be computed. They are very useful for studying physical system for which we can write an equation. Analog computers are usually cheaper than digital ones, but are not as accurate. They are often designed to deal with special problems and are not as versatile as digital computers which can generally deal with any problems .

Digital computers deal with numbers rather than quantities. They have a lot of advantages. For one, we can make the accuracy as great as we desire, simply by adding more digits. Another advantage is that digital computers can handle letters as well as numbers. Then, digital computers are also built so that they can make decisions, based on some of the data fed into it. Another large advantage of digital computers is that they can be easily programed. The program for a computer is the set of instructions that tells the machine what to do. These instructions are easily changed at any time. Changing from one type of problems to another is fast, this is why digital computers are found in industry are usually called general purpose computers. There are some computers which have a fixed program, are designed for particular tasks, and are called special purpose computers .

Digital computers are all similar in many ways. Each computer must be able to read in the instructions and data, read out the results, remember the program being performed and the data being used, calculate various mathematical results, and control its entire operation. This means that all digital computers must have at least that five parts. These five parts all work together in solving a problem.

Electronic computers are developing at a very rapid rate. They are used in almost every field, by large institutes as well as small factories. Electronic computers have brought about a technical revolution in modern science and technology.

说明：

　　电子计算机是现代信息社会最基本的工具。根据计算机工作原理的不同，主要可分为模拟计算机和数字计算机两种类型。目前，由于数字计算机固有的优点，其发展非常迅猛。自 20 世纪 70 年代开始，微型计算机以其价格低、功能强的特点得以迅速发展，已被广泛应用于社会生活的各个领域。

Text B　　The Development of Computer Technology

To illustrate , Table 1. 1 briefly lists some of the languages and technology influences that were important during each five-year period from 1950 to 1995. Of course, missing from this table are the hundreds of languages and influences that have played a lesser but still important part in this history.

Table 1. 1　Some major influences on programming languages

Years	Influences and New Technology
1951—1955	**Hardware:** Vacuum-tube computers; mercury delay line memories **Methods:** Assembly languages; foundation concepts; subprograms, data structures **Languages:** Experimental use of expression compilers
1956—1960	**Hardware:** Magnetic tape storage; core memories; transistor circuits **Methods:** Early compiler technology; BNF grammars; code optimization; interpreters; dynamic storage methods and list processing **Languages:** FORTRAN, ALGOL 58; ALGOL 60, COBOL, LISP
1961—1965	**Hardware:** families of compatible architectures; magnetic disk storage **Methods:** Multiprogramming operating systems; syntax-directed compilers **Languages:** COBOL-61, ALGOL 60 (revised), SNOBOL, JOVIAL, APL notation
1966—1970	**Hardware:** Increasing size and speed and decreasing cost; minicomputers; microprogramming; integrated circuits **Methods:** Time-sharing and interactive systems; optimizing compilers, translator writing systems **Languages:** APL FORTRAN 66, COBOL 65, ALGOL 68 , SNOBOL 4, BASIC, PL/I, SIMULA 67, ALGOL-W
1971—1975	**Hardware:** Microcomputers; Age of minicomputers; small mass storage systems; decline of core memories and rise of semiconductor memories **Methods:** program verification; structured programming; early growth of software engineering as a discipline of study **Language:** Pascal, COBOL 74 , PL/I(standard), C, Scheme , Prolog
1976—1980	**Hardware:** Commercial-quality microcomputers; large mass storage systems; distributed computing **Methods:** Data abstraction ; formal semantics; concurrent, embedded , and real-time programming techniques **Languages:** Smalltalk, Ada, FORTRAN 77, ML

续表

Years	Influences and New Technology
1981—1985	**Hardware**: Personal computers; first workstations; video games; LAN; Arpanet **Methods**: Object-oriented programming; interactive environments; syntax-directed editors **Languages**: Turbo Pascal, Smalltalk-80, growth of Prolog, Ada 83, PostScript
1986—1990	**Hardware**: Age of microcomputer; rise of engineering workstation; RISC architectures; global networks; internet **Methods**: Client/server computing **Languages**: FORTRAN 90, C++, SML (Standard ML)
1991—1995	**Hardware**: Very fast inexpensive workstations and microcomputers; massively parallel architectures; voice, video, fax, multimedia **Methods**: Open systems; environment frameworks; National information infrastructure ("information superhighway") **Languages**: Ada 95, Process languages (TCL, PERL)

说明：

计算机自 1946 年诞生至今，其硬件制造技术、软件设计方法及程序设计语言均有了飞速的发展。回顾计算机的发展史，人们常根据计算机制造技术的不同将计算机的发展过程分为四个历史阶段，通常称为四代，亦即电子管计算机，晶体管计算机，集成电路计算机，超大规模集成电路计算机。电子技术、通信技术等计算机相关技术的迅速发展，极大地推动了计算机技术的发展和应用。

New Words

1. analog	['ænələg]	*n.*	模拟；类似物
2. construction	[kən'strʌkʃn]	*n.*	way in which a thing is constructed; structure; building 结构,构造,组成；建筑
3. determine	[di'tə:min]	*v.*	fix (sth) precisely; decide; find out (sth that is not known) 确定,决定；找出
4. amount	[ə'maunt]	*n.*	total sum or value; quantity 总数,总值；数量
5. quantity	['kwɔntəti]	*n.*	number or amount, esp a large one 数目,数量,量
6. physical	['fizikl]	*a.*	of the science of physics; of matter of the body 物理(学)的；物质的；身体的
7. variable	['veəriəbl]	*n.*	changeable thing or quantity 变量,变

数

8. voltage	['vəultidʒ]	n.	electrical force measured in volts 电压,伏特数
9. current	['kʌrənt]	n. & a.	flow of electricity through sth or along a wire or cable; of the present time 电流;当前的
10. value	['væljuː]	n.	worth of sth in terms of money or other goods for which it can be exchanged; quality of being useful or worthwhile or important 价值,值;实用性
11. represent	[ˌrepri'zent]	v.	stand for or be a symbol or equivalent of (sb/sth); be an example of (sth) 表示,代表,象征
12. actual	['æktʃuəl]	a.	existing in fact; real 实际的,确实的,有效的
13. equation	[i'kweiʒn]	n.	statement that two expressions (connected by the sign =) are equal 方程式,等式
14. accurate	['ækjurət]	a.	free from error; careful and exact 精确的,精密的
15. particular	[pə'tikjulə]	a.	more than usual; special; individual 特别的,特殊的;个别的
16. versatile	['vəːsətail]	a.	(of a tool, machine, etc) having various uses; turning easily or readily from one subject, skill or occupation to another 多用途的,多功能的;多才多艺的
17. advantage	[əd'vɑːntidʒ]	n.	benefit; profit; sth likely to bring success 优点,益处,优越性
18. accuracy	['ækjurəsi]	n.	degree of carefulness and exactness 精确(度),准确
19. desire	[di'zaiə]	v. & n.	wish for (sth); want; longing 愿望,要求,渴求,热望
20. simply	['simpli]	ad.	only; merely; in a simple manner 仅仅,只;简单地
21. decision	[di'siʒn]	n.	making up one's mind; judgement 决

定,决心,判断

22. program programme	['prəugræm]	n. & v.	series of coded instructions to control the operations of a computer 编程,程序,节目
23. fixed	[fikst]	a.	already arranged or decided; not changing 固定的,不变的,坚定的
24. entire	[in'taiə]	a.	whole; complete 全部的,整个的,完全的
25. least	[li:st]	n. & a.	smallest in size, amount, extent, etc 最少(量),最小的

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26. illustrate	['iləstreit]	v.	explain or make (sth) clear by examples, diagrams, pictures, etc 说明,阐明,图解
27. briefly	['bri:fli]	ad.	in a few words; for a short time 简单地说;短暂地
28. influence	['influəns]	n. & v.	power to produce an effect; have an effect on sb/sth 影响(力),作用
29. topic	['tɔpik]	n.	subject of a discussion, talk, program, written work, etc 论题,话题,题目
30. lesser	['lesə]	a.	not so great as the other 更小的,较少的,次要的
31. vacuum-tube	['vækjuəm-tju:b]	n.	真空管,电子管
32. mercury delay line			汞延迟线
33. memory	['meməri]	n.	part of a computer where information is stored; power of the mind by which facts can be remembered 存储器;记忆(力)
34. assembly language			汇编语言
35. compiler	[kəm'pailə]	n.	person who compiles; computer program that turns instructions in a high-level language into a form that the computer can understand and act on 编辑者,汇编者;编译程序
36. magnetic	[ˌmæg'netik]	a.	with the properties of a magnet; having a powerful attraction 磁性的,磁

				铁的,吸引人的
37. storage	['stɔːridʒ]	n.		storing of goods, etc 储存,贮藏
38. core	[kɔː]	n.		very small magnetic metal ring used formerly in a computer's memory for storing one bit of data 磁心,核心
39. transistor	[træn'sistə]	n.		small electronic device used in radios, televisions, etc. to control an electrical signal as it passes along a circuit 晶体管
40. optimization	[ˌɔptimai'zeiʃən]	n.		(最)优化特性,优化
41. interpreter	[in'təːpritə]	n.		转换机,翻译(机),解释程序
42. dynamic	[dai'næmik]	a.		of power or forces that produce movement; energetic 动态的,动力的;有生气的
43. compatible	[kəm'pætəbl]	a.		(of equipment) that can be used together 兼容的,相容的
44. architecture	['ɑːkitektʃə]	n.		structure; art and science of designing and constructing buildings 构造,结构,体系;建筑(学)
45. syntax-directed	['sintæks-di'rektid]	a.		面向语法的
46. notation	[nəu'teiʃən]	n.		system of signs, symbols, etc used to represent numbers, amounts, musical notes, etc 表示法,标记法;记载
47. integrated circuit				very small electronic circuit made of a single small piece of semiconductor material (eg a silicon chip), designed to replace a conventional electric circuit of many parts 集成电路
48. interactive	[ˌintər'æktiv]	a.		allowing a continuous two-way transfer of information between a computer and the person using it 交互式的,人机对话的,互相影响的
49. mass	[mæs]	a. & n.		quantity of matter without a regular shape; large number 团,堆;大批,大量(的),大众的
50. decline	[di'klain]	n. & v.		gradual and continuous loss of

strength, power, influence, numbers, etc; become smaller, weaker, fewer, etc 衰退，下降，倾斜

51. semiconductor ['semikən'dʌktə] *n.* substance that conducts electricity in certain conditions, but not as well as metals 半导体

52. verification [,verifi'keiʃn] *n.* verifying or being verified; proof or evidence 证实，核实；证明，证据

53. discipline ['disiplin] *n.* branch of knowledge; subject of instruction 学科，学问(的领域)

54. commercial [kə'məːʃl] *a.* of or for commerce 商用的，商业的，通商(贸易)的

55. distributed [di'stribjuːtid] *a.* spread; scattered 分布式的，分散的

56. abstraction [æb'strækʃn] *n.* abstract idea; removing 抽象(概念)；抽取

57. formal semantics 形式语义(学)

58. concurrent [kən'kʌrənt] *a.* existing, happening or done at the same time 同时发生的，伴随的，并发的

59. embedded [im'bedid] *a.* deeply and firmly fixed 嵌入的

60. video ['vidiəu] *a. & n.* of sight; recording or broadcasting of moving pictures 视频(的)，录像

61. object-oriented ['obdʒikt-'ɔːriəntid] *a.* 面向对象的

62. global ['gləubl] *a.* covering or affecting the whole world; covering the whole of a group of items, etc 全球性的

63. client/server ['klaiənt/'səːvə] 客户/服务器

64. parallel ['pærəlel] *a. & n.* (of two or more lines) having the same distance between each other at every point; exactly corresponding; similar 平行的，相同的，并联的；平行线

65. multimedia [,mʌlti'miːdiə] *n. & a.* 多媒体(的)

66. framework ['freimwəːk] *n.* structure giving shape and support; social order or system 框架，结构，体

			制
67. infrastructure	[ˌinfrə'strʌktʃə]	*n.*	subordinate parts, installations, etc. that form the basis of a system, an organization or an enterprise (eg of an army) 基础设施,基础结构
68. superhighway	[ˌsuːpə'haiwei]	*n.*	expressway; freeway; motorway 高速公路
69. major	['meidʒə]	*a.*	(more) important; great(er) (较)重要的,主要的,多数的

Phrases and Expressions

deal with	处理,涉及
rather than	(与其…)宁可;而不
as well as	也,不但…而且…,与…一样好
be based on	以…为基础,以…为根据
a set of	一套,一组
bring about	导致,引起
at least	至少,最低限度
at a ... rate	以…的速度
take up	提起,处理(问题),接下去讲
play a ... part in	在…中起作用,扮演角色

Mini-Dictionary

1. computer (C, CP, CMP, COMP, CMPTR) 计算机,电脑

computer access (CA)	计算机存取,计算机访问
computer-aided design (CAD)	计算机辅助设计
computer assisted instruction (CAI)	计算机辅助教学
computer analog input/output (CAI/O)	计算机模拟输入输出
computer clock	计算机时钟
computer code	计算机代码
computer communication network	计算机通信网
computer control interface (CCI)	计算机控制接口
computer equipment	计算机设备
computer instruction set	计算机指令集
computer management	计算机管理

computer memory	计算机存储器
computer order code	计算机指令码
computer peripheral equipment (CPE)	计算机外围设备
computer programming	计算机程序设计
computer software error	计算机软件错误
computer subsystem (CSS)	计算机子系统
computer virus	计算机病毒

2. program（＝programme）程序,程式;节目,计划,方案

program access (PA)	程序存取
program authority	程序权限
program block	程序块
program bus	程序总线
program compiling	程序编译
program comment	程序注解
program database	程序数据库
program development	程序开发
program execution	程序执行
program extension	程序扩展
program interchange	程序互换
program library	程序库
program loading	程序加载,程序装入
program origin	程序起始地址
program package	程序包
program patch	程序补钉,程序修补
program portability	程序可移植性
program word (PW)	程序字

3. parallel（P）并行的,并联的,平行的

parallel adder	并行加法器
parallel algorithm	并行算法
parallel binary computer	并行二进制计算机
parallel circuit	并联电路
parallel flow	并行流
parallel logic	并行逻辑
parallel movement	平行移动
parallel port	并行端口