

PROFESSIONAL ENGLISH FOR COMPUTER SCIENCE

计算机专业英语

麦绍文 区咏莹 编著

华南理工大学出版社

· 广州 ·

内容简介

本书是计算机及其相近专业的大专、高职学生使用的专业英语教材。全书共 24 章，能有针对性地帮助学生掌握专业英语的表达方式和专业词汇，提高学生的专业英语阅读能力。书中内容深度适中，新颖全面，专业实用，可选性强，所附加的批注、译文和练习能够有效地辅助学生学习。

图书在版编目 (CIP) 数据

计算机专业英语/麦绍文，区咏莹编著. —广州：华南理工大学出版社，2008.3
ISBN 978-7-5623-2749-3

I. 计… II. ①麦…②区… III. 电子计算机-英语-高等学校：技术学校-教材
IV. H31

中国版本图书馆 CIP 数据核字 (2008) 第 022272 号

总发行：华南理工大学出版社（广州五山华南理工大学 17 号楼，邮编 510640）

营销部电话：020-87113487 87110964 87111048（传真）

E-mail: scutc13@scut.edu.cn http://www.scutpress.com.cn

责任编辑：庄严

印刷者：广州市穗彩彩印厂

开本：787mm × 1092mm 1/16 印张：18.75 字数：468 千

版次：2008 年 3 月第 1 版 2008 年 3 月第 1 次印刷

印数：1 ~ 3 000 册

定价：28.00 元

版权所有 盗版必究

前 言

一、适用范围与编辑理念

本书是供计算机专业的大专、高职学生使用的专业英语教材。其主要目的是让学生了解专业英语的表达方式和专业词汇，提高学生的专业英语阅读能力，以适应将来工作和学习的需要，本书丰富的引文也可以作为本科生的参考资料。

为了达到这个目的，需要下很大工夫扩大专业词汇量（也包括常用、一般词汇量），提高迅速、正确地分析、理解句子含义的能力。

在达到这个基本要求的基础上，要求有较强进取心的学生提高正确朗读单词、句子的能力。其实，这个要求也很基本，从很多学生的拼写错误中我们发现有些学生拼写的单词，其字母个数、种类都对，但就是排列不对，说明他并没有掌握单词的音节和读法。为此，在单词表中，我们不但列出词性，也列出了音标。

另外一个要求就是具有基本的写作能力，主要是要符合基本的语法要求和表达习惯，会套用已知的句型。还有一个要求就是具有一定的表达能力（基本的英译汉的表达能力），掌握一些最基本的翻译技巧。这是针对有些学生看到一个句子，以为自己看懂了，其实没有看懂；有的即使看懂了，但表达别扭、不通顺，甚至不知所云等现象而言的。

本书不准备对学生讲什么艰深、繁复的语法，一切从实战出发，涵盖几乎可能出现的各种文体。根据学生的实际弱点，强调在正确理解的过程中，抓住三个环节。

一是找准句子中的谓语（或系动词）。因为英语中谓语是唯一的（多个的是极少数，而且有 and、or 之类连接词相连）；抓住了它，就抓住了主句、抓住了句子的主体部分，对整个句子的理解就“虽不中而不远”了。不要以为这只不过是一件很简单、容易的事，有些同学就老搞不清。这里，要抓住两个要领：能够有资格做谓语的动词，必须是完整的（完成式，其前面必须有适当格式的“have”；被动语态，其前面必须有适当格式的“be”），它也必须是受限的（其数、时态受到主语的限制，例如 Let him go. “go”就没有受限，是补语）。此外还要认清一些容易混淆的情况：如当动词的过去时和过去分词相同时，要根据语境作具体分析。比如，已经确定“谓语另有其人”时或其前面的名词（代名词）已经确认为宾语（或表语），不可能主动地发出动作。

还要注意的，你找到的可能是谓语，但只是从句的谓语。这点也好办，追踪其主语，如果不是总的主语，那它当然就不是主句的谓语了。

二是单词和词组的选义。英语中一词多义的现象极为普遍，学生经常会犯错。例如，common 是“常见的”也是“共用的”，Common drive line 就应该是“共用的驱动线”。对于很多出错的现象，我们可以帮助学生总结一下，以免再犯。出错的原因，主要是受中文影响，机械地对应，转不过弯来，如见到“in”，就只想到“在……里面”，write in ...

language, 就成了“在……语言里写”, 同样, 对“with”, 只想到“在一起”, 没想到可能有其他意思和用法, 如 work with binary code, register with administration 中的“with”就分别是“用”和“向”的意思, 即“用二进制码来工作”和“向行政部门注册”。我们在课文注释中将会提示这种现象。当然, 由于计算机英语专业术语多, 表达方式有其特点也是很多人望而却步的原因, 例如: form 怎么就译为“窗体”了呢? context-free syntax, 有一本由一所著名大学编写的《计算机英语》文选中, 就错译为“无上下文文法”, 正确的译法是“上下文无关文法”。另外, 词汇是在不断发展的, 计算机专业新创的词汇和表达方式层出不穷, 如 laptop “大腿上”就成了“手提电脑”或“笔记本电脑”; hyper - 就成了“网上……的”; Webcam = web camera 就成了“计算机用的摄录机”, 等等, 不胜枚举。

这里引出了一个如何利用词典或“文曲星”等电子词典的问题。请看下面的几个真实故事: “像数据那样”, 有学生错把“像”当成“象”, 译为 elephant data so sample。他(她)不知道“那样”是不必译出的, 也不知道 elephant 的含义; 有的把“移动性”译为 movable sex, 他(她)不知道可以整体地译为 mobility; 更有把“语句(statement)”译为 language sentence; 更好笑的是把“作为变量(as variable)”译为 conduct action changes quantity。必须强调, 学生要努力把这种“原生态”的单词或字一一对应的习惯改过来!

三是处理好尾巴(修饰部分, 因为大部分是后置的, 所以, 不妨称之为“尾巴”), 这是一个更为容易经常出错的问题。学生碰到长句往往就不知所措, 要么乱来, 要么按顺序译下来, 结果错误百出, 译文不忍卒读。

由于我们的母语不是英语, 练习量也极为不足, 学生也已经是成年人, 所以, 扬长避短, 充分发挥其逻辑分析和理性思维能力是至关重要的。“尾巴”有两种: 从句和短语, 找对了主句, 其余的就是尾巴了。从句好办, 但要注意连接词被省略的情况。短语的品种很丰富, 有分词短语(进行式短语, 过去分词短语)、不定式短语、介词短语等。要理清特点, 正确翻译。难度比较大的是“复合型尾巴”, 一个套一个, 一种套一种, 要引导学生多练, 找出规律、明确对策, 可采用拆分为短句法、卷尾巴法(从后往前卷, 再加“的”或“地”)等译法。

下面的例子很好地说明了这三大要素的重要性。

According to the report, cyber criminals used employ various means to obtain IDs and passwords of privileged accounts.

used 和 employ 哪个是谓语? cyber 是什么意思? used 这个最短的“尾巴”翻译成什么?

如果上面讲的三个环节都运用自如, 则能大大提高专业英语的阅读、理解能力。当然, 还有别的因素也应注意, 如代词代表什么? Idiom(习惯用语)的含义等。但专业英语结合文化背景、典故应用的不多, 在这个意义上说, 它又比公共英语, 特别是文学英语容易。比喻或其他修辞的应用, 即使有也不多。如: E-mail lives in the place neighboring to the ordinary letter and telephone. 直译就是“电子邮件住在邻近平信和电话的地方”, 也可以意译为“电子邮件说起来与平信和电话也没有什么太大的差别”。

二、本书的特色

本教材的选材与编撰主旨是偏重软件，却不是计算机某门功课的教科书；在内容上不要求全面和细节，但求典型、简明、实用、新颖。

在计算机英语题材的类型上，我们认为，主要分为四大类型：概念和原理、产品版本或界面等功能或外观的说明、操作说明书和提示信息（错误提示、选择性提示等），其他的就是问题解答、新闻报道等。但综观以往的教材，几乎都是讲概念和原理，其他方面提到的不多，所以，在本教材中增多了这方面的内容，以适应学生在毕业后的实际需求。

为了提高学生对专业英语学习的兴趣和阅读理解能力，本教材还提供了一些与计算机有关的阅读材料、幽默、笑话和相关的译文。

课文正文的内容由于考虑到授课的方便，对篇幅作了适当的剪裁、重组（刚好一页），部分艰深的文字也经过了改写，以适应对大专和高职学生的要求。

本教材的内容比较丰富，涵盖了软件的大多数领域和相关的文体。由于课程的课时有限，教师可以根据需要进行取舍。除了课程中的正文外，我们提供了大量的阅读材料（78篇，还有综合练习）。教师可以根据学生实际所学的专业课程选取他们熟悉的英语专业内容来补充学习，提供学习兴趣和其所学专业的阅读能力，甚至可以从阅读材料中选取部分作为教材。

本教材还提供了一些课外作业建议的选材——附录 D 综合练习，这部分就不提供答案了。

还有两点要专门提出的是：一、在教学过程中，必须强调和教会学生充分重视如何发挥自己的专业优势，并把它认真、灵活地运用于阅读、翻译中，才能使自己写出准确、内行的译文，在专业英语上有一个“质”的突破。这一点，是非专业人员所比不了的。（有些单词、词组、表达方式，非专业辞典并不提供）。二、适当运用一些翻译技巧，尤其是英译中，起码意思要正确，中文要通顺，不要写出前后矛盾、语句不通、谁也看不懂的句子。

下面举一些例子说明。

1. Go to Control Panel, open Display ... 这是一段“操作指南”，不能译为“去到控制面板，打开显示器……”，注意到那些名词都是大写的，其实是一些“图标”，“操作按钮”，实际应该译为：“选择‘控制面板’，点击‘显示’……”

2. ... select Screensaver and choose None ... 如果译为“点击屏幕保护，并且不作选择”，岂不自相矛盾？注意到 None 是大写的，是个“选项”，因而要译为选择“‘无’”。

3. Then order your system to turn the **screen** off after, **say**, 20 minutes of **inactivity**. 这里，既有用到专业知识，也多少用到一些翻译技巧（增词）。这句话中对含义有重大影响的单词已经用黑体字标出。screen 很多同学不注意，随手就译为“显示器”，其实不对，这只是“黑屏”，显示器还是开着的。say，不能只译为“说”，而是“比如说”，最好在适当位置加上“在一段时间之后”。Inactivity，谁不活动？是计算机系统吗？有些同学这样理解，就译为“待机”，其实是错的，机器还在正常运行。是你没有做按键盘或鼠标等输入活动。所以，全句应译为：

然后，命令你的系统在没有输入活动一段时间，比如说，20 分钟后关掉屏幕。

4. In flash memory, many bytes, a block, or a page can be **electrically** erased at a time. 怎样理解 electrically 这个字眼呢? 字面上可以译为“在电学上”“从电学的意义来说”。但为什么要这样强调呢? 因为一般指删除一些内容时, 并不真正把内容从电学上清零, 只是改变一些参数、指针, 是可以恢复的。真正清零, 就是把各个 bit 都要置为“0”伏, 不可恢复。所以, 本句应译为:

对闪存来说, 一次就可以把很多字节、整块、整页的数据删除, 每个二进制位都清为 0 伏。

5. Coding language 是“程序设计语言”, 不是“编码语言”。同样, Text added to **code** by a programmer that explains how the **code** work. 是“程序员添加到程序中的用来解释程序如何工作的文本”, code 也不宜译为“代码”。有时, program 简称为 code 是“专业习惯”。

本教材具有如下特色。

1. 内容比较符合大专和职业学院学生的实际, 深度适中, 难度平稳, 短小精悍。

2. 内容广泛、新颖, 可选性强, 译文和练习都经过较严格的检验。课后的批注也为教学提供了参考。

3. 提供了“书中表达与翻译技巧汇总”, 这也是其他教材没有的。

4. 课后单词均注上音标, 增强学生朗读能力(考虑到老师选课时不可能每课都选, 有些单词可能有重复)。总词汇表分开专业和一般单词列出。

希望在授课时, 要结合课文重点扩大词汇量、提高阅读能力。克服学生中一些粗枝大叶、不求甚解, 自以为看懂了, 实际上错误百出、漏洞百出的毛病。养成善于结合专业知识、协调语境、认真细致的好作风。

在本教材中, 始终贯串着在前言中提到的理解句子“三大要素”的观点, 尽量避免讲语法讲专业术语。其目的在于集中力量, 关注英语表达的特点, 从看得懂开始, 逐渐达到看得习惯, 从而迅速、灵活地运用的目的。

注意经过课堂提问, 发现容易出问题的地方。应该相信, 多发现一个问题, 就会为以后减少错误多了一分把握。

还有一点就是, 把好的表达介绍给学生, 让他们体会和提高学习的兴趣, 也为写作积累素材和“本钱”, 使他们相信, 即使在“很短和枯燥”的课文中, 也随时能找到好东西。

由于作者水平所限, 错误和不当之处在所难免, 恳请教师和学生给予指正, 以便在再版时更正, 不胜感激。

编 者

于广东科学技术职业学院软件学院

2007 年 11 月

目 录

Chapter 1 Introductions, Concepts and Principles

Lesson 1 Introduction to the Digital Computer	(1)
Exercise	(2)
Words and Phrases	(3)
Notes to the Text	(4)
Reading Materials	(6)
1.1 ENIAC (Electronic Numerical Integration and Computer)	(6)
1.2 The Digital Computer	(6)
1.3 The Career of Information Technology Graduates	(7)
 Lesson 2 Hardware Elements of the Digital Computer	(9)
Exercise	(10)
Words and Phrases	(11)
Notes to the Text	(12)
Reading Materials	(13)
2.1 CPU	(13)
2.2 Comparison Between Two Sections of Memory	(14)
2.3 Magnetic Disks and Optical Disks, Also Flash Memory	(15)
2.4 Input/Output	(16)
2.5 CD and CD-ROM	(16)
2.6 Bus	(17)
 Lesson 3 Programming Language	(21)
Exercise	(22)
Words and Phrases	(23)
Notes to the Text	(24)
Reading Materials	(25)
3.1 Assembly Language and the Process of Instruction Execution	(25)
3.2 Visual Studio—A Suite of Object-oriented Languages	(26)
3.3 C as a Structured Language	(27)
3.4 What is Visual Basic Language?	(28)
3.5 What is JScript?	(29)

Lesson 4 Writing a Program	(34)
Exercise	(35)
Words and Phrases	(36)
Notes to the Text	(36)
Reading Materials	(38)
4.1 Difficulties of Writing Programs	(38)
4.2 Introduction of Microsoft Certification Program	(39)
Lesson 5 Image Processing and Graphic Hardware, Software	(42)
Exercise	(43)
Words and Phrases	(44)
Notes to the Text	(45)
Reading Materials	(47)
5.1 Graphics Tutoring Language Logo	(47)
5.2 Digital Image Processing	(47)
5.3 Photoshop	(48)
Lesson 6 Multimedia Technology	(52)
Exercise	(53)
Words and Phrases	(54)
Notes to the Text	(55)
Reading Materials	(57)
6.1 What Can AutoPlay Media Studio 6.0 Do?	(57)
6.2 3ds Max	(57)
6.3 Introduction to MIDI	(59)
6.4 GDI and DirectX	(60)
Lesson 7 Database System	(64)
Exercise	(65)
Words and Phrases	(66)
Notes to the Text	(67)
Reading Materials	(69)
7.1 Database Access in Microsoft Office	(69)
7.2 The Origination and Outlook of Relational Database	(70)
7.3 Visual Forpro 6.0	(70)
7.4 Oracle's New Add-on Software	(71)
Lesson 8 Data Structure and Algorithm	(74)
Exercise	(75)

Words and Phrases	(76)
Notes to the Text	(77)
Reading Materials	(79)
8.1 The Algorithm of Binary Search	(79)
8.2 Multilevel Feedback Queue	(80)
8.3 Applications of Stack	(81)
8.4 How CICS Supports Web Services (Algorithms Related to Data Structure) ...	(82)
Lesson 9 Nature of Operating System	(85)
Exercise	(86)
Words and Phrases	(87)
Notes to the Text	(87)
Reading Materials	(89)
9.1 Function of Operating System	(89)
9.2 Human-Computer Interaction	(90)
9.3 What is Linux?	(91)
Lesson 10 Windows Vista vs. Windows XP	(94)
Exercise	(95)
Words and Phrases	(96)
Notes to the Text	(96)
Reading Materials	(98)
10.1 Introduction to Windows XP	(98)
10.2 Can Linux Become an Alternative to Windows on Desktop	(99)
Lesson 11 Software Engineering	(102)
Exercise	(103)
Words and Phrases	(104)
Notes to the Text	(105)
Reading Materials	(107)
11.1 Software Design Fundamentals	(107)
11.2 Rapid Application Development (RAD)	(108)
Lesson 12 Computer Network	(111)
Exercise	(112)
Words and Phrases	(113)
Notes to the Text	(114)
Reading Materials	(116)
12.1 Network Protocols	(116)

12.2	The 7 Layers of the OSI Model	(116)
12.3	Characteristics of Clients and Servers	(117)
12.4	Definition of a Fat (or Thin) Server and Client	(118)
12.5	Bluetooth	(119)
Lesson 13	Internet	(123)
	Exercise	(124)
	Words and Phrases	(125)
	Notes to the Text	(126)
	Reading Materials	(127)
13.1	Web Switches	(127)
13.2	AJAX: A Quicker Way to Freshen Your Web Pages	(128)
13.3	What's an Internet	(129)
Lesson 14	Computer Security—about Information	(132)
	Exercise	(133)
	Words and Phrases	(134)
	Notes to the Text	(135)
	Reading Materials	(137)
14.1	Privacy Policy of ITtoolbox	(137)
14.2	Computer Security and Data Protection	(138)
14.3	Encryption	(138)
Lesson 15	Hackers and Computer Virus	(142)
	Exercise	(143)
	Words and Phrases	(144)
	Notes to the Text	(145)
	Reading Materials	(147)
15.1	Hackers Story	(147)
15.2	Hackers Attack Using Login Theft Method	(148)
15.3	Various Types of Virus	(149)
15.4	Spyware, Adware and Rascal Software	(150)
Lesson 16	Enterprise Resource Planning	(153)
	Exercise	(154)
	Words and Phrases	(155)
	Notes to the Text	(156)
	Reading Materials	(157)
16.1	Benefits and Drawbacks of ERP	(157)

16.2	SAP and SAP R/3	(158)
Lesson 17	Top Technologies and Concepts	(162)
Exercise		(163)
Words and Phrases		(164)
Notes to the Text		(164)
Reading Materials		(166)
17.1	Data Warehouse	(166)
17.2	Data Mining	(167)
17.3	Component-Based Development—A Revolution in Application Development	(168)
17.4	Intelligent Robots	(169)
17.5	Top 10 Strategic Technologies for 2008	(170)
 Chapter 2 Product, Operating Instruction and How to...		
Lesson 18	Sound Blaster Card	(177)
Exercise		(178)
Words and Phrases		(179)
Notes to the Text		(180)
Reading Materials		(181)
18.1	Operation Instruction for Laser Printer	(181)
18.2	Monitor (Technical Parameter)	(183)
18.3	Cool Edit Pro Overview	(183)
Lesson 19	Screen of Microsoft Word	(187)
Exercise		(188)
Words and Phrases		(189)
Notes to the Text		(189)
Reading Materials		(191)
19.1	Word 2007 vs. Word 2003 (1)	(191)
19.2	Word 2007 vs. Word 2003 (2)	(192)
19.3	Release Notes of Word 2007 (Excerpt)	(193)
Lesson 20	Editing Text	(196)
Exercise		(197)
Words and Phrases		(198)
Notes to the Text		(198)
Reading Materials		(200)
20.1	Using the Office Assistant	(200)
20.2	View Options in Word	(201)

20.3	How to Determine an IP Address	(202)
20.4	Installation—Notice to Users	(203)

Chapter 3 Notes and Messages

Lesson 21	Programming Errors	(206)
Exercise		(207)
Words and Phrases		(208)
Notes to the Text		(209)
Reading Materials		(211)
21.1	Language C Programming Error Messages (Excerpt)	(211)
21.2	Reporting a Warning	(212)
21.3	Important Notice about IE 7	(213)

Chapter 4 News, Questions and Answers, Jokes

Lesson 22	News about Computer	(216)
Exercise		(217)
Words and Phrases		(218)
Notes to the Text		(219)
Reading Materials		(220)
22.1	If Linux® was Hot a Year Ago, Today It's on Fire	(220)
22.2	Researchers Ping Through First Full 'Internet Census' in 25 Years	(221)
Lesson 23	Questions and Answers	(224)
Exercise		(225)
Words and Phrases		(226)
Notes to the Text		(227)
Reading Materials		(228)
23.1	EndNote 5 Added to Word 2007	(228)
23.2	Windows Vista Installation	(229)
23.3	Difference Between Desktop OS and Network OS	(230)
23.4	Concept and Effects of Data Modification or Data Damage	(230)
23.5	Why a Login be Delayed?	(230)
23.6	What is IP?	(231)
Lesson 24	Jokes and Humor Story (for Reference)	(235)
附录 A	计算机专业词汇表	(243)
附录 B	一般词汇表	(262)
附录 C	书中表达与翻译技巧汇总	(269)
附录 D	综合练习	(276)
附录 E	课后练习参考答案	(286)

Chapter 1 Introductions, Concepts and Principles

Lesson 1 Introduction to the Digital Computer

As a starting point, let us consider what a computer *on earth*① is. A computer is a digital electronic data processing system. It is now an acknowledged definition.

Why is it called “digital” computer? Because it works with whole number called “digits”. While another type of computer, analog computer, which is out of use for its inaccuracy and inflexibility, employs physical variable such as voltage to represent the actual value to be computed. ★ Now, *specifically*②, digits being computed are represented by a binary system, i. e. strings of 0s and 1s, which are presented by the voltage of 0 volts and 2.4 volts respectively. The CPU of the computer system is composed of electronic circuits and used to perform data processing task.

How does It Work?

Data are input into the computer *in one form*③, such as keyboard entering, scanner inputting etc., processed within the computer, and then the resulted information is either output or stored for later use.

Three Definitions

But the computer itself cannot think about how to process data. There must be someone to tell it exactly what to do. The procedure telling the computer how to work is called programming. The person doing this job is programmer. The program, also known as software, is the result of the work done by the programmer, which is a set of instructions *directing* the computer step by step *through*④ the data processing task.

History Overview

Theoretical Preparation

Talking about the theory of computer science, we must mention 2 famous people here. Von Neumann (1903 – 1957), who is commonly-recognized as “Father of Computer”, who built up a foundation for the computer structure which is still in use today. But he modestly *owed the title to*⑤ Alan Turing (1912 – 1954), who was “Father of Automatic Machine and Artificial Intelligence”.

Four Generations of Computer

The first generation of computer *became available*⑥ in 1940s, named ENIAC. It was built with vacuum-tube electronic circuits. In the 1950s, the second generation of computers was built. During this period, transistor electronic circuitry, instead of tubes was used. During 1960s, the integrated circuit (IC) came into electronic market, a third generation of computer appeared.

With ICs, *industry* ⑦ could manufacture more complex, higher speed, and very reliable computers. We can form a computer with just a small group of ICs, and in fact, *a single IC can be used*. ⑧ The forth generation of computer, which is built with ⑨ LSI was pinpointed at 1971 by some people. But this assert is still disputable and not widely acceptable now. A computer of new generation is faster, more compact and more reliable than that of the old one. But does hardware improvement mean the birth of a new generation? In fact, no new generation of computer was mentioned since then, except for the failed trial of Japanese for developing fifth generation of computer in 1980s.

Revolution in the Future

The computer generations' division according to CPU speed and storage capacity seemed temporarily be intermitted. So far, the computer is still program-stored and working in an ordinal way. The next generation must be a revolution in mechanics of computer working, with intelligent function. Maybe, it will be a *human-brain-like* ⑩ machine, or a gene computer or something else. Who knows? Let us wait and see.

Exercise

Choose the best answer for each of the following

1. Why is a computer call a "digital" computer?
 - (A) Because it can only handle the problems about calculation of digit.
 - (B) Because it is built with digitalized equipment.
 - (C) Because it works with whole number called "digits".
 - (D) Because it employs digitizer to process image.
2. How does the computer work?
 - (A) It accepts data input to the computer in one form.
 - (B) It processes data by executing programs.
 - (C) It output the resulted data or stores them for later use.
 - (D) It processes the data input in one form, and the resulted information are then output or stored to be used later.
3. Why do we assert that the computer generation division according to CPU speed and storage capacity seemed temporarily be intermitted.
 - (A) Because no one is interested in considering this problem.
 - (B) Because no new generation of computer was mentioned since then, except for the failed trial of Japanese for developing fifth generation of computer in 1980s.
 - (C) Because no new criteria for generation division has been found.
 - (D) Because the division of computer generation had come to an end, and we have to explore a new way to describe the current status of the computer technology.

4. Why does people must tell the computer what to do?
- (A) Because it is a commitment for the people who use the computer.
 - (B) Because the computer cannot think about how to process the input data at all.
 - (C) Because the computer cannot think about everything well.
 - (D) Because the computer can only do some simple work.
5. If the start of forth generation of computer is pinpointed at 1971, _____.
- (A) it will be refused by some computer designers as a premise leading to a ridiculous conclusion
 - (B) it will become a commonly-recognized definition
 - (C) the start of forth generation of computer had better be pinpointed more accurately at May of 1971
 - (D) everything will be OK

Write T (true) or F (false) for each sentence

- (1) According to the passage, a computer is a data processing system.
- (2) Analog computer is out of use now for its inaccuracy and inflexibility.
- (3) Von Neumann was proud of being commonly-recognized as “Father of Computer” and considered that he deserved it.
- (4) The computer generations’ division according to CPU speed and storage capacity seemed to be going on.
- (5) The mechanics of the computer operation changed greatly.

Words and Phrases

on earth	adv.		到底
data processing	n.	['deɪtə prəʊ'sesiŋ]	数据处理
acknowledge	v.	[ək'nɒlɪdʒ]	承认, 答谢, 报偿
analog computer	n.	['ænəlɒɡ]	模拟计算机
programming	n.	['prəʊgræmɪŋ]	程序设计
programmer	n.	['prəʊgræmə]	程序员
program	n.	['prəʊgræm]	程序
think about	v.	[θɪŋkə'baʊt]	思考, 考虑
inaccuracy	n.	[in'ækjʊrəsi]	不精确, 错误
inflexibility	n.	[in'fleksəbɪlɪti]	不灵活性, 不可变更性
voltage	n.	['vəʊltɪdʒ]	电压
specifically	adv.	[spe'sɪfɪkəli]	具体地说, 特定地, 明确地
binary	adj.	['bɪnəri]	二进制的
volt	n.	[vɒlt]	伏特
is composed of	v.	[kəm'pəʊzd]	由……组成, 包括
electronic	adj.	[ɪlek'trɒnɪk]	电子的

circuit	n.	['sə:kit]	电路, 线路 (个体)
circuitry	n.	['sə:kitri]	电路, 线路 (整体)
perform	v.	[pə'fɔ:m]	执行, 履行
information	n.	[ɪnfə'meɪʃən]	信息, 资讯
definition	n.	[defɪ'nɪʃən]	定义
procedure	n.	[prə'si:dʒə]	过程
modestly	adv.	['mɒdistli]	谦虚地, 谨慎地
vacuum tube	n.	['vækjuəm tju:b]	真空管
transistor	n.	[træ'zɪstə]	晶体管, 三极管
integrated circuit	n.	[ɪn'tegreɪtɪd sə:kit]	集成电路
intelligence	n.	[ɪn'telɪgəns]	智能

Notes to the Text

- ① *on earth*: 到底, 加重了问者想知道答案的迫切性和准确性, 因为这个问题的答案有很多, 如“用来计算的机器”、“电脑”、“代替脑力劳动的机器”等。
- ② *specifically*: 具体地说、确切地说, 这是一个很有用的表达, 范围收窄、层次深入, 可以多做例句加深理解。
- ③ *in one form*: 这是一个“选义”的好例子, 如果没有后面详细的说明, 你能译出“以一种方式”吗? 如果译为“在一个表格, 在一个窗体”, 在别的地方可能对, 但在这里就译错了。
- ④ *which is a set of instructions directing the computer step by step through the data processing task*. 其中 *directing through* 从头到尾地指导, 或把 *through* 看作是动词“全部完成”。
- ⑤ *owed the title to*: 把头衔让给。
- ⑥ *became available*: 出现, 相当于本文中的 *appear*。
- ⑦ *industry*: 名词可以具体化, 这里翻译为“工厂”更好。
- ⑧ *a single IC can be used*: 这里需要补充才完整, 原文省略了“to form a computer”。
- ⑨ *build with ...*: 用……建造。注意: *with* 的更广泛的用法, 不能狭隘地理解为“与……一块”, 字典上列出有 11 种以上。还要注意动宾搭配, 电脑也可以说 *build*!
- ⑩ *human-brain-like*: 英语中, 为了表示一个整体或特殊的意思, 通常有三种方法: 一是字首采用大写, 如 *A Robin is singing*, 不是“一只知更鸟在歌唱”而是“一个叫做罗宾的人在歌唱”, *open Display* 不是“打开显示器”而是“选中 (点击) 选项显示”; 二是可以用引号; 三是可以用连字符“-” (hyphen), 如: *do-it-yourself*, *how-to*, *know-how* 等等。

★ 每课一句

While another **type** of computer, analog computer, which is out of use for its inaccuracy and inflexibility, **employs** physical variable such as voltage to represent the actual value to be computed.

本句语言现象比较丰富。有两个插入语: *analog computer* 是同位语, *which is out of use* 是从句, 尾巴多, 主、谓语如黑体字所示。