PETS-5 Level

高级公共英语综合教程

Comprehensive English Learning Materials for PETS-5 Level

徐 蔚 编著

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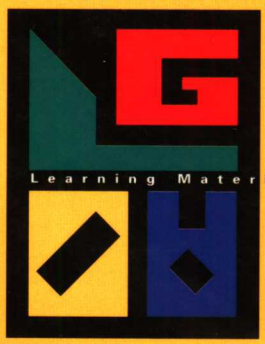

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前　言

随着我国改革开放的深入发展，国际交往日益增多，英语已成为信息交流中必不可少的工具，对我国的经济、社会、文化、科技等方面起到了非常重要的作用，并且成为全体公民工作与学习中必须掌握的一种基本技能。为了科学有效地测定国人的英语应用能力，国家教育部考试中心设计了全国公共英语等级考试系统（Public English Test System，简称 PETS）。目前，PETS 已经在全国全面展开，将会成为国内规模最大、参考人数最多、涉及面最广、影响最深远的英语水平考试，并将成为许多部门作为干部录用、职称评定、职务晋升、上岗资格和公派出国工作的英语水平鉴定的重要依据。为了适应高层次英语学习者的需要，本教程按照国家公共英语等级考试系统最高级五级（PETS Level 5）的水平标准编写，并在每个单元之后都附有根据 PETS Level 5 考试的形式编排设计的针对性练习。本教程注重突出针对性及实用性，按照国家教育部颁布的教学大纲的要求，重在全面提高英语应用能力，力求符合学习语言必须进行全方位训练的规律，故也可供各相应层次的英语学习者使用。

全书共分为 16 个单元，各单元既相互配合形成一个整体，又根据本身的特点自成体系。每单元包括精读、词汇知识运用、阅读理解、翻译、写作五个部分，并附有大量的针对性练习。精读及阅读理解的课文主要选自以科技题材为主的英语原版文章，目的是使学生通过学习规范的英语，了解在学术交流中可能会遇到的各种文字表达形式，掌握其表达方法。同时，各个单元的内容还与 PETS Level 5 的考试形式有机结合，为多方位地训练语言技能提供了有利的条件。翻译部分旨在分门别类地解决科技翻译中常见的疑难问题，使学生掌握翻译中的一般技巧及汉语和英语的习惯用法。写作部分根据学术交流的一般规律，为学生提供了可资借鉴的常用信函、论文、摘要等各种文体的应用文写作技巧及范文。词汇知识运用部分按照 PETS Level 5 的词汇范围进行训练解析。

本教程在内容选取上注重题材广泛，思想健康，语言规范，知识新颖，体裁多样，以实现科学性、知识性、趣味性、可读性的有机结合。书中还包含适量的英语文学中经典名作，以利于提高学生的文学修养。全书不仅练习量大、形式多，而且有很强的针对性和相当高的难度，因此，便于读者掌握所学的知识，全面提高各项语言运用的能力，特别是为通过国家公共英语等级考试奠定了良好的基础，为学习者提高英语应用能力和应试能力提供了一个有利的平台。

编著者

内 容 提 要

本教程按照国家公共英语等级考试五级(PETS Level 5)的水平编写,涵盖了现代知识经济和高新技术方面的内容。全书分为16个单元,各单元既相互配合形成一个整体,又根据本身的特点自成体系。本教程突出针对性及实用性,按照国家教育部颁布的教学大纲的要求,重在全面提高英语应用能力,力求符合学习语言必须进行全方位训练的规律,可供参加国家公共英语等级考试五级的人员及其他相应层次的英语学习者使用。

CONTENTS

UNIT ONE

Part A Text

Evolution by Jerks

(1) About a billion years after the earth was formed, living things appeared on it. During the next 3 billion years, those living things altered the earth (for example, by producing a hitherto unknown gas called oxygen and by building walls). They themselves also changed. Many things about the way they evolved still confuse scientists. This article is about the most important ones.

(2) The first uncertainty is where life came from. Rats are different from rocks in being able to reproduce near-faithful copies of themselves. They (and every living thing on earth) do that by carrying a recipe for making their own bodies written in code on a chemical called DNA. All creatures use virtually the same code, which implies that life evolved only once—or that all rival versions died out.

(3) It is hard to decide in favor of any one theory about the origin of life. It might have come from space, having started somewhere else. It might have begun in an entirely different form, based; perhaps, on a tendency of clay crystals to copy themselves chemically, and then transferred its replica skill to organic molecules.

(4) Or, the least complicated and therefore favorite of the hypotheses, it might have arisen in a soup of organic chemicals in the primitive oceans of the early earth. In support of this theory, scientists have found that simple molecules of RNA) a close cousin of DNA used for temporary copes of the code) will, in the presence of zinc catalysts, gradually generate copies of themselves from RNA's ingredients. So, perhaps all you need to do to make life is to simmer a soup of organic molecules on volcanic heat and add zinc for a billion years. It is not likely that anybody will find out whether that is what actually happened.

(5) Wherever it came from, life began to change. By the beginning of the Cambrian period, 600m years ago, animals and plants were leaving abundant and ever-changing fossils in

the rock. There is still only one plausible explanation of that change and it is, in essence, the one proposed by Darwin.

(6) He suggested that change was an inevitable consequence of life's capacity for near-faithful reproduction. Some creatures were better at surviving and reproducing themselves than others, so they thrived at their fellows' expense. Occasionally, slightly different versions of creatures would appear, some of which might do better still. They would now thrive at the expense of the previously successful creatures, and so on.

(7) Darwin's natural selection does occur is not controversial, except among those who, for religious reasons, prefer to believe that life has not changed at all since it was created. It is hard to imagine how life could avoid natural selection. But that does not mean that natural selection is the principle mechanism of change. There are many others that biologists still debate.

(8) Since the 1930s, when Gregor Mendel's theory of genetic inheritance and Darwinism were combined and found to support each other, natural selection has been the keystone of the "new synthesis" of evolutionary thinking. Two groups of biologists want to reduce its central importance, though neither would remove it altogether. One attack comes from those who study the mechanisms of genetics, the other from those who study fossils.

(9) Fossils, contrary to common belief, have never been crucial to Darwin's argument. As far as Darwin was concerned, they establish the fact of evolution, but have nothing to say about its mechanism.

(10) In the 1970s, two Harvard biologists, Dr Steven Gould and Dr Niles Eldredge, pointed out that fossils do have a tale to tell. They show that most creatures do not change much from generation to generation; for millions of years, descendants resemble ancestors. Then suddenly there is a period of rapid change. Evolution, said the two, goes in fits and starts.

(11) This view is known as the punctuated-equilibrium theory, because it sees evolution not in Darwinian terms as a constant succession of small changes but as a series of periods of stable equilibrium interrupted, or punctuated, by sudden dramatic changes. The importance of this observation is still much discussed. Its opponents, such as Dr Richard Dawkins of Oxford University, say it simply shows that natural selection can change pace. What both groups agree on —and both claim it as their own insight—is that most change happens not uniformly in a whole species, but in small geographically isolated sub-populations of a species, which then reinvade the territory of the parent species and replace it. That is what looks like a sudden change.

(12) Dr Gould thinks that two fundamental tenets of modern Darwinists are threatened by the theory of punctuated equilibrium. One is adaptation. During the long periods of stabili-

ty, natural selection is clearly not making fine adjustments to the design of the creatures according to the accidental changes of the environment but making do with whatever design it has. Those biologists who try to explain even the tiniest characteristic feature of animals in terms of the evolutionary advantage it provides are therefore barking up the wrong tree.

(13) Dr Gold's other point concerns the importance of catastrophe rather than gradual change in evolution. It helps to see Darwin's approach to this question in its nineteenth-century context. The geologist Charles Lyell had convinced people that they did not require catastrophic floods and earthquakes to explain how mountains were built and valleys dug. Given enough time, the forces that still act today—wind and rain and accumulating mud—could explain geology. In the same way, Darwin saw that the gradual accumulation of tiny changes could turn a fish into a man. Both these explanations are difficult to grasp, but then so are a billion years.

(14) In recent years, however, a new version of catastrophism has arisen. It is clear that occasionally—some say periodically—life is devastated in a mass extinction. In the worst such happening, 248m years ago, more than 95% of marine animal species died out. Many explanations have been put forward for this and other extinctions: the climate changed; the sea level changed; an ice age; or just bad luck. However, these explanations themselves need an explanation—for example, why did the climate change? The problem is simply put one step further back. Up till now, nobody has found a convincing way of accounting for mass extinction, though there is increasing evidence which does suggest the possibility that a comet hitting the earth was responsible in at least one case—65m years ago, when the dinosaurs disappeared.

(15) Is mass extinction random? A group of scientists at the University of Chicago has been examining mass extinctions and has come to the (disputed) conclusion that they are far from random: they affect some sections of the living world more than others. The group also claims that they are regular occurrences: there is a pattern of extinctions at intervals of 26m years or so. If their claims are shown to be true, then the role of natural selection in evolution will be greatly reduced.

(16) Whatever the facts of the matter, mankind has reason to thank catastropes: 65m years ago, mammals were feeble, frightened things, unable to challenge the superbly designed dinosaurs. Then, bang, the dinosaurs went, the mammals moved into the vacuum, and people evolved. Dr Gould wants to use evolutionary theory to tackle these new ideas. His model is hierarchical. At the lowest level, eyes and other amazing examples of design evolve by natural selection; but one level up, species live or die by other criteria. The survival of whole groups of series is determined by the pure chance of catastrophes.

(17) This notion is part of "macro-evolution". Here is another macro-evolutionary idea: if creatures get better adapted to their environments, they should—if there are no catastrophes—get better at avoiding extinction. By and large, they do not. The average lifetime of a species, in millions of years, is much the same now as it was many millions of years ago.
(18) Dr Leigh van Valen has explained this with what he calls the Red Queen hypothesis; his explanation remains controversial. Named after the Red Queen in "Alice Through the Looking Glass", who has to run to stay in the same place, the theory suggests that animals improve, but so do their rivals and enemies. The environment that tests creatures consists largely of other creatures.
(19) For example, the relative brain size of predatory mammals has grown steadily over the past 50m years; but so has that of their prey. A modern lion would, perhaps, have no trouble catching an ancient antelope, but it may be no better at catching modern antelopes than ancient lions were at catching ancient antelopes. It is by such "arms races" that evolution can give the appearance of gradually improving life's design, without actually improving the species' chances of survival.

Part B

Use of English

Ⅰ. Use the context to choose the word or phrase that is nearest in meaning to the underlined word from the text.

1. ...or that all rival versions died out.
   A. almost identical
   B. not yet evolved
   C. competing for the same thing
2. ... molecules of RNA... will, in the presence of zinc catalysts, gradually generated copies of themselves...
   A. substances that cause a chemical reaction
   B. genetic codes carried on molecules of RNA
   C. near-faithful copies of molecules
3. So, perhaps all you need to do to make life is to simmer a soup of organic molecules on volcanic heat...
   A. cook B. create C. copy
4. ...animals and plants were leaving abundant and ever-changing fossils in the rock.

A. remains of the plants eaten by animals

B. primitive oceans of the early earth

C. hardened remains of dead creatures or plants

5. He suggested that change was an inevitable consequence...

A. that can be copied

B. that cannot be avoided

C. that cannot be predicted

6. Some creatures were better at surviving and reproducing themselves than others, so they thrived...

A. lived successfully and strongly

B. gradually died out

C. produced different versions of themselves

7. Nor did Darwin say that the change was random...

A. part of an inevitable progression

B. gradual and aimless

C. happening without any plan or pattern

8. ...the fact that descendants do not resemble ancestors...

A. children, grandchildren, etc...parents

B. plants...animals

C. clay crystals, rocks, etc...organic molecules

9. ...natural selection has been the keystone of the new synthesis of evolutionary thinking.

A. most important problem

B. most important enemy

C. most important idea

10. ...natural selection has been the key stone of the new synthesis of evolutionary thinking.

A. combination of ideas

B. criticism

C. man-made cloth

Ⅱ. Explain the italicized phrases from the text in your own words in English and then suggest a suitable translation into Chinese.

1. ...fossils do ***have a tale to tell.***

2. Evolution, said the two, goes ***in fits and starts.***

3. ...it sees evolution not ***in Darwinian terms*** as a constant succession of small changes...

4. ...but ***making do with*** whatever design it has.
5. Those biologists—are therefore ***barking up the wrong tree***.
6. Then, ***bang***, ***the dinosaurs went***.
7. ***By and large***, they do not.
8. It is by such ***arms races*** that evolution can...

Ⅲ. Error Correction. Correct the ten mistakes in the passage.

Until the very latest moment of his existence, man has been bound to the planet on which he originated and developed. Now he had the capability to leave that planet 1._____ and move out into the universe to those worlds which he has known previously only directly. 2._____

Men have explored parts of the moon, put spaceships in orbit around another planet and possibly within the decade will land into another planet and explore it. 3._____

Can we be too bold as to suggest that we may be able to colonize other planet 4._____ within the not-too-distant future? Some have advocated such a procedure as a solution to the population problem: ship the excess people off to the moon. 5._____

But we must keep in head the billions of dollars we might spend in carrying out the project. 6._____

To maintain the earth's population at its present level, we would have to blast off into space 7,500 people every hour of every day of the year. Why are we spending so little money on space exploration? 7._____

Consider the great need for improving many aspects of the global environment, one is surely justified in his concern for the money and resources 8._____

that they are poured into the space exploration efforts. But perhaps we should look at both sides of the coin before arriving hasty conclusions. 9._____

Ⅳ. Choose the proper words to fill the blanks or substitute the underlined words.

1. In conversation he made much of his new exploring plan.
   A. described in detail　　B. strongly proposed
   C. mentioned many a time　　D. emphasized
2. Both husband and wife had to make ends meet.
   A. pay back the debt　　B. send the two children to school
   C. get the two roads joined　　D. earn a living
3. The secretary said that she had words with her boss yesterday.
   A. had a chat with　　B. quarreled with

C. expressed her thanks to D. had a talk with

4. _____ the custom of the factory, the workers have a holiday on May Day.
A. In line with B. In line for C. In line to D. In line along

5. Their plans for a big party _____.
A. fell out B. fell away C. fell off D. fell through

6. John boasted that he could finish the job all by himself in no time.
A. in time B. on time C. at any moments D. very rapidly

7. The soldier's great overcoats were strapped onto their packs.
A. given into B. taken off C. quipped D. fastened to

8. The factory operated _____ until the orders were filled.
A. at times B. day by night
C. to the minute D. around the clock

9. _____ the train being late, we should be back by 10:30.
A. Allowing for B. In case
C. Considering of D. Allowing of

10. The automobile accidents were attributed to careless driving.
A. ascribed to B. distributed by
C. date back to D. associated with

11. They always _____ a large supply of tinned food in winter in case they are snowed up.
A. lay out B. lay off C. lay in D. lay with

12. You mustn't eat these apples _____ they are unripe.
A. much as B. because of C. in case D. even if

13. Architects used whatever materials were at hand to build the tower.
A. useful B. easy to get C. available D. within the reach

14. She took pride in all her children but one.
A. taught proud B. taught modesty to
C. was proud of D. was not satisfied with

15. Let's try to use our intellect to _____.
A. the fullest benefit B. the best use
C. the highest profit D. the greatest advantage

16. Look at all the corruption that's going on. It's time the city was _____.
A. cleaned out B. cleaned down
C. cleaned away D. cleaned up

17. I found it hard to spell out what he said.