

Modern English

Newspaper

一般科技类

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现代英文报刊

阅读137篇



大学英语4、6级(710分新大纲)考研、雅思、托福

等考试备考之用

世界图书出版公司

现代英文报刊阅读 137 篇

(一般科技类)

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前言

FOREWORD

在《英文报刊阅读》这套书中,我们将文章的题材分为一般科技类、生命科学类和人文社科类三部分,旨在为读者提供一个有针对性的选择阅读、欣赏英文报刊原文的机会,从而扩大知识面,提高鉴赏能力。

1. 一般科技类文章的内容特点

科技类文章主要涉及信息技术、电子、通讯、航空、天文、军事、新技术和新发明等方面。本书所选文章从不同角度向读者介绍这类学科中新的观点和发现、各种现象及某些领域的研究发展动态,使读者在语言学习的同时,也能掌握一些相关的知识,把二者有机地结合起来。我们认为,丰富的背景知识有助于阅读理解,如果读者能通过此书的阅读扩大自己的知识面,那么对以后的阅读理解则会有一定的促进作用。正是出自于这样的目的,本书选材都出自于国外的各种原版杂志,既保证了内容的丰富多彩,又保证了语言的真实,而真实语料的使用也是语言学习的关键之一,学生可以借此体会到语言在真实交际情景中的使用情况,这同从专门为语言学习而编写的教科书不同,读者从中接触到的语言形式和语料都经过一定的加工,有一定的限制。在国内,读者很少有机会接触真实的语言交际场合及所学语言的社会和文化,而要获得此方面的知识,只有通过大量的阅读,阅读提供了让读者了解世界其它国家的历史、文化、社会现状及在文学艺术科学技术和经济各方面的发展,多样的题材、新颖丰富的内容,既可激发学生的阅读兴趣,又可促进语言学习的动力。此外,文章后面都附有词汇、短语注释及难句结构和意思解释,以便于读者脱离于教师自己进行学习;而专业知识背景的注释,如学科或领域的奠基人、开拓者或做出杰出贡献的人物,不断出现的新科技,自然现象及重大科学发现和进展等的注释,都有助于拓宽读者的知识面。

2. 一般科技类文章的体裁特点

英语科技类文章多采取说明文的写作形式,其主要目的是说明某个领域的发展动态、现状及取得的成果等,文中有时体现作者的态度及看法。说明文多以事实性的说明为主,而无华丽修饰的词藻。科技类的文章多采取描写解释及说明的形式,这与文章内容有关,因为说明文是直接传播知识的一种文体,它的内容必须有很强的科学性。科学性主要表现在两个方面:(1)它所反映的应是客观事物的本质特征,真实面貌,而不是歪曲了的事实,或主观臆想;(2)它的语言应准确无误,因此说明文中常避开含糊的词语。

说明文是科技专业人员最常用的一种文体,它解释或探讨某个自然现象的起因,介绍新技术和新发明或某个问题的解决方法。在说明解释过程中,作者多采用定义、分类、比较及对照、解释或分析因果关系等方法,为使说明更加清晰,文章又多使用细节及例子,使读者能顺利理解抽象的讨论;作者在展示事实及现象时,常根据主题的特征,采取时间顺序或合乎逻辑的方式,词语及句子力求准确、清晰,说明力求思想性、科学性、条理性、完整性及通俗性

和趣味性。这类文章的语篇结构常包含如下几个方面:(1)背景;(2)问题;(3)为解决问题而推荐使用的工具或必要条件;(4)为达到预期的解决问题的效果,提供至少一个尝试性的程序建设;(5)指出用什么手段来检测问题是否已解决;(6)结束语。尽管说明文并不是必须包括所有这些因素,但其中的主要方面如问题、程序和解决方法,都应涉及到。说明类文章有其表面结构线索,因它常基于某个暗含的逻辑结构,所以常以 *thus*, *because* 和 *since* 等词语把文章组织起来,一般是先给出证据后结论或相反。

科技类文章中常穿插着空间顺序、时间顺序及逻辑顺序等。在阅读时,读者应注意以下几个因素:*what*, *why*, *how* 等。作者介绍的目的可能是为了说明事情的缘内和过程,向读者传递信息。也就是说,说明文的目的在于对所写事物进行解释,从而给人以知识。

3. 一般科技类文章的练习特点

练习采取多项选择的形式,这样可满足学生需要进行大量练习的目的,便于检测速度和核对答案,与一些国内外主要考试的阅读理解形式基本一致,使本书可适合于考试前的集中准备,学生可以从答案及注解中快速评估出自己的阅读理解水平,发现理解中的不足之处,因为文章后的选择题可分为主题大意类、细节类、推理类、词汇类、文章结构、文体及作者的态度等几类,从所错的题项中,读者可看出自己哪方面较差,需要在练习中加以注意,找出自己做选项题的特点及做题的速度等,这些都有助于考试,又使学生在不知不觉中提高了阅读速度、解题技巧及这类文章的阅读理解水平。总之,阅读理解练习题的最终目的是为了让学生在独立的语言学习中,对自己的阅读理解进行检查,因此,同扩大背景知识一样,都是围绕着提高阅读理解这一中心而设计的。

综上所述,同其它类的阅读理解一样,本书也是围绕着文章结构形式(体裁),题材(内容)类型及练习题类型这三方面来编排的。在阅读理解时,应针对科技类型的文章作出不同的分析与理解。在科学领域中,广泛使用的说明文可以说明客观事物的特点和性能,介绍某种操作程序,也可用于解释抽象概念,阐明科学道理和自然现象。相应地我们应以此决定我们把握文章的方式,从而找到问题的正确选项。多样的体裁,丰富的题材及全面的理解练习体现出本书的独特性及价值。

编者

2005年6月

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1 • 3-D TV

三维电视

Some Navy researchers think they have invented the television of the 21st century: Using 40,000 points of laser¹ light controlled by computer, the researchers have succeeded in generating real-time², three-dimensional moving images—submarines coursing the sea, a space shuttle arcing in a glide, a human heart beating. The researchers already track aircraft from San Diego to Los Angeles in three dimensions with information from Naval radar tracking systems.

For now, the images are rendered³ in red, green, and yellow light, but soon (with the addition of a blue laser) the team at the Naval Command, Control and Ocean Surveillance⁴ Center in San Diego expects to generate sharp, recognizable images of any colors. The images are projected inside a transparent cylinder, three feet in diameter and 18 inches high.

Images are created when the points of light land on a spinning, helix-shaped⁵ surface that resembles a bridge ramp or a washing machine agitator⁶. Because the helix itself is three-dimensional, the images also seem to be 3-D.

Parviz Soltan, a physicist and early pioneer of laser-optics⁷ technology, says that the key to what he calls 3-D volumetric⁸ imaging was developing a system of cubes, resembling dice, that vibrate to splinter⁹ the laser so that it can hit 40,000 different points on the helix 20 times per second.

The half-inch cubes, made of tellurium¹⁰ crystal, move continuously, vibrated by sound pulses. A

1. 激光

2. 实时的

3. 呈现,表现

4. 监视,侦察

5. 螺旋状的

6. 搅拌器

7. 激光学

8. 立体的, 3-D volumetric 三维立体的

9. 使……裂成碎片

10. 碲(化学成份)

computer translates information about an image into an electrical voltage that vibrates a membrane¹¹ to produce sound waves. The waves ripple the cube's lattices¹² of atoms so that they resemble an accordion¹³ expanding and compressing. The entering laser reflects off the lattices and is splintered into the multitude of points.

NEOS¹⁴ Technologies of Melbourne, Fla., has a license from the Navy to build such displays. It is offering a 12-inch-diameter, full-color model, which is targeted toward engineers and amusement park designers, for about \$ 100,000.

Future versions of the displays should work for television as well. Information for a 3-D image must come from different angles. A 3-D telecast of a basketball game, for example, would require cameras positioned at different angles.

11. 膜

12. 晶格

13. 手风琴

14. Naval Electronic Ocean Surveillance 海军电子海洋监视

Comprehension:

Choose the best answer according to the information in the passage.

- Which of the following is not mentioned as an example of the three dimensional images generated by computers?
 - Submarines coursing the sea.
 - A space shuttle arcing in a glide.
 - A human heart beating.
 - ☒ Researchers tracking an aircraft.
- Very soon, the images will be rendered in the light of
 - two colors.
 - three colors.
 - ☒ four colors.
 - ☒ any colors.
- Why do the images seem to be 3-D?
 - ☒ Because the helix is 3-D.
 - Because the objects are spinning.
 - Because the images are projected inside a transparent cylinder.
 - Because the images resemble a bridge ramp or washing machine agitator.
- From the passage we can conclude that the shape of a cube is
 - optical.
 - ☒ cubical.
 - like a helix.
 - vibrating and splintering.
- What is the new model of display like?
 - ☒ It is a 12-inch diameter and full-color model.
 - It is just like a television set.
 - ☒ It has many sides and angles.
 - It is designed by amusement park engineers.

2

Behold the palm pc

• Behold the Palm PC

关注掌上个人电脑

The popularity of 3 Com's Palm Pilot has been the rudder¹ steering the handheld computer market for a couple of years now. And if there was any doubt the Palm Pilot got it right, Microsoft and a host of² hardware makers will provide ample³ evidence by cloning⁴ the device many times over.

Microsoft's new Palm PC design employs its Windows CE⁵ operating system, a scaled-down⁶ version⁷ of Windows already used in many wallet-style computers with keyboards and fold-up screens. But those devices have proved less popular than the Pilot, which uses a vertically oriented screen and a pen, with only a few buttons.

Microsoft's Palm PC design looks much like the Palm Pilot⁸, and has a similar cradle⁹ for connecting the handheld device to your desktop or laptop¹⁰ PC. You can type using an onscreen keyboard and a pen, or have the machine attempt to recognize your handwriting. Several organizing applications are included, plus an Internet "mobile channel" content grabber¹¹. But no modem is built in; you have to connect via your PC. There is, however, a Compact Flash slot that will accommodate future wireless modems, according to Microsoft.

As with previous Windows CE devices, Microsoft will not be selling Palm PCs itself. Casio's Cassiopeia E-10 and Phillips' Nino 300 are among the first Palm PC models announced. LG Electronics, Samsung, and Uniden will also make Palm PCs. Most should be available in April or May, and they're expected to cost

1. 舵

2. 众多, 许多

3. 充分的

4. 克隆, 复制

5. 一种视窗操作系统

6. 缩小的, 减少的

7. 版本

8. 掌上引擎(一种掌上个人电脑品牌)

9. 插槽

10. 膝上型的

11. 内容抓取器

previous previous

\$ 299 to 499, depending on the amount of included memory.

Comprehension :

Choose the best answer according to the information in the passage.

1. What is the "Palm Pilot"?
 - a. The computerized rudder for steering a boat.
 - b. A laptop personal computer.
 - c. A desktop personal computer.
 - ☒ d. A popular handheld personal computer.
2. Which of the following about Microsoft's Palm PC is ~~not~~ true?
 - a. It ~~uses~~ Windows CE as its operating system.
 - ☒ b. It uses a keyboard.
 - c. It uses a vertical screen.
 - ☒ d. It uses a pen and a few buttons.
3. How do you type on this Palm PC?
 - a. You use a separate keyboard.
 - b. You use the keyboard of a desktop or laptop.
 - c. You type on the buttons.
 - ☒ d. You use a pen to type on the onscreen keyboard.
4. What is the disadvantage of the Palm PC?
 - a. There are no application programs.
 - b. It cannot be used to visit the Internet.
 - ☒ c. There is no built-in modem.
 - ☒ d. There is no slot for future wireless modem.

3 • Carl Sagan

卡尔·萨根

No one has ever succeeded in conveying the wonder and joy of science as widely and few as well."

That praise was bestowed on Carl Sagan when he was honored with the Public Welfare Medal, the highest award granted by the National Academy of Sciences.

On December 20, Carl Sagan died at age 62 of pneumonia¹, a complication of a rare bone marrow² disease. In my experience, he was much more than a preeminent³ popularizer⁴. He was a brilliant scientist with solid achievements, a fiery defender of legitimate science, and a fiercely partisan debunker⁵ of the bogus⁶ and irrational.

I first met Sagan at a meeting of the AAAS⁷—the American Association for the Advancement of Science—where he took part in a session on the Viking Mars Project. (When Viking landed on Mars in 1976, it was at site he had helped select.) Then I interviewed him in Washington, D. C., after Mariner 9 has sent back spectacular pictures of the Martian surface. Sagan had acted as head of one of Mariner's imaging teams. That interview, "Close-up Photos Reveal a Turbulent Mars," appeared in Popular Science in September 1972.

I had originally headlined the story "The Red Planet Isn't Dead," but Sagan pleaded with me to change it. "I'm in enough hot water with some of my colleagues as it is," he said, referring to the resentment felt in conservative scientific quarters over his growing

1. 肺炎

2. 骨髓

3. 卓越的

4. 普及者, 推广者

5. 揭露者

6. 伪造的

7. the American Association for the Advancement of Science 美国科学促进协会

fame as a popularizer. That fame reached a zenith⁸ during his 1983 133-part television series :Cosmos, "with an audience of 400 million people in 60 countries.

Along the way, he captured a Pulitzer Prize for his book The Dragons of Eden; intuited that wind storms are the real source of color changes on Mars; led or joined NASA teams on a host of planet wry explorations; helped stimulate discussion of life else where in the universe; and directed the Laboratory for Planetary Studies at New York's Cornell University, where he was David Duncan Professor of Astronomy and Space Sciences.

He was noted for the vigor of his logic and sometimes slashing⁹ style, especially when countering some piece of nonscience. I remember a 1973 AAAS meeting at which he savagely demolished¹⁰ the theories of Immanuel Velikovsky, who was maintaining that only a few thousands of years ago, Venus had repeatedly collided with Earth and Mars, events dully noted, Velikovsky said, in the Bible.

Sagan was often heard wryly¹¹ observing that drawings of flying saucers never included a door. "How did those aliens get in and out?" he once asked. In his last book, The Demon-Haunted World, he continued to lambaste¹² alien abductions¹³, channeling, creationism, magic crystals, faith healing, and other spawn of scientific illiteracy.

"Pseudoscience is embraced," Sagan wrote, "in exact proportion as real science is misunderstood."

8. 顶峰

9. 雷厉风行的

10. 推翻

11. 讽刺地

12. 严厉申斥

13. 劫持

Comprehension :

Choose the best answer according to the information in the passage.

1. In the second paragraph, what does the word "bestowed" mean?

- a. given.
- b. suggested.
- c. improper.
- d. used.

2. Carl Sagan was

- a. a public welfare officer.
- b. a defender at the law court.
- c. a debunker of social evil.
- d. a scientist.

3. Sagan pleaded the author to change the headline of the story because

- a. he was angry with his colleagues.
 - ☒ b. he was in trouble with his colleagues.
 - c. he was jealous of his colleagues.
 - d. he was on good terms with his colleagues.
4. According to Velikovsky, only a few thousands of years ago,
- a. there was no contact between Venus and the Earth.
 - ☒ b. there was constant contact between Venus and the Earth.
 - c. the collision of Venus and the Earth was recorded in the Bible.
 - d. Venus collided with the Earth once.
5. The word "pseudoscience" means
- a. peripheral science.
 - b. genuine science.
 - ☒ c. false science.
 - d. applied science.

4 • Computerized Camouflage

电脑化伪装

In *Predator*, a bloodthirsty alien¹ possesses the ability to blend into the scenery by instantly changing colors. Now, like the Hollywood movie, the Army is investigating how uniforms could visually mimic² surroundings instantly and automatically, aided by a computer.

At the Army's Natick R & D center outside Boston, scientists are studying classified "adaptive colorant" techniques. One approach would incorporate some kind of light-sensitive sensor that adjusts the light output of the fabric. Natick researchers are also reportedly experimenting with spider silk and color-changing animals like chameleons³; they hope to create synthetic⁴ silk that can imitate the little lizards' spectral⁵ abilities. Already, researchers have isolated parts of the silk gene.

Another automatic camouflage concept is based on electrophoresis⁶, a technology originally developed for computer screens. In this system, electrically charged, colored particles⁷ would be suspended in a liquid dye⁸. This mixture would be sandwiched between two plastic films, that are treated with conductive coatings. When an electric field is applied, the particles swarm to one film; when the field is switched, the particles travel through the dye to the other side. As a result, the films assume either the color of the particles or the color of the dye.

As envisioned by Jeff Thomsom, a scientist at Mission Research Corp. in Torrance, Calif., hundreds of electrophoretic⁹ cells, each just an inch or so in

1. 外人, 外来者

2. 模仿

3. 变色龙

4. 人工合成的

5. 光谱的

6. 电泳现象

7. 小颗粒

8. 染料

9. 电泳的

diameter, could be linked together to form something like a suit of polychromatic¹⁰ bubble wrap. The outfit would be equipped with a video camera to assess the color, brightness, and texture of the surroundings, with a small computer altering the electric fields accordingly. Taken a step further, the cells could be merged to form long, hollow fibers filled with the dye and pigments¹¹. These flat fibers would then be woven into a fabric.

But soldiers won't be wearing such exotic garb¹² anytime soon. Although Thomson says some form of adaptive camouflage "is probably going to happen eventually," the research has yet to progress beyond its preliminary stages.

10. 多色的,变色的

11. 天然色素

12. 服装

Comprehension :

Choose the best answer according to the information in the passage.

1. What is the Army trying to do?
 - a. To make a Hollywood movie.
 - ☒ b. To invent new uniforms that imitate surroundings.
 - c. To invent a bloodthirsty alien monster.
 - d. to protect the environment.
2. Which of the following is not mentioned as a subject of their experimentation?
 - a. Chameleons.
 - ☒ b. Silk worms.
 - c. Lizards.
 - d. Color changing animals.
3. The passage is written with the purpose to
 - ☒ a. inform readers of the new technology.
 - b. magnify the role of the army.
 - c. stimulate the military research.
 - d. describe how wars will be fought in the future.

5 • DVD

数字光盘

The Digital¹ Versatile² Disc has scarcely arrived, and already a format that would render it obsolete³ is being demonstrated.

Ready to outdo DVD is an Emeryville, California, company named Calimetrics, with co-funding from the Advanced Technology Program of the National Institute of Standards and Technology.

Why yet another format? Improvements in TV quality may require it. First-generation DVDs were designed to store a feature-length film on one side of a disc. But the emergence of high-definition⁴ television signals the need for a substantial improvement in video-storage technology. At the pixel resolution⁵ specified for HDTV, 1920 by 1,080, an optical disc capable of storing a full-length feature would need more than three times the storage capacity of current DVDs. To meet this standard, proposals for dual-layer storage on both sides of a disc have been advanced. Calimetrics approach, however, would need only a single layer.

The lasers in current disc drives read tiny pits embedded in the disc surface. The absence of a pit edge is registered as a zero, the presence of an edge is registered as a one. This binary⁶ digital method thus encodes⁷ all the audio and video material on the disc as a long stream of 0s and 1s.

Based on an advanced encoding technique called pit-depth modulation⁸, the Calimetrics solution is radically different. Pit-depth modulation uses pits of varying depth in a non binary, three-dimensional approach. A photocell⁹ senses the differing pit depths and

1. 数字化的
2. 通用的、多功能的
3. 陈旧、过时的

4. 高清晰度
5. (自)分辨率

6. 二进制的
7. 编码

8. 调节

9. 光电管、光电池