

目 录

一、美国宪法第十四修正案	3
二、黑人文学：紫色姐妹花	7
三、英国第一个女演员	11
四、美国人的祖先	13
五、长江水稻	14
六、海牛灭绝	16
七、蜜蜂的致命疾病	17
八、星系吞食	19
九、盖斯凯尔的小说：《玛丽·巴顿》	21
十、替代石油燃料	24
十一、法国二月革命	27
十二、日常用品的设计	30
十三、彗星的原始遗迹	33
十四、舞蹈动作中的物理原理	34
十五、鸟鸣变化的作用	35
十六、海底火山生物	39
十七、蝙蝠的回声定位	42
十八、云系对全球变暖气候模型预测的影响	44
十九、超新星（二）	46
二十、地球冷暖周期通过石头含铁量推定	48
二十一、松鼠觅食	50
二十二、评论剧作家安德鲁·洛伊·韦伯	51
二十三、蓝脱序星的两种过程形成	52
二十四、大键琴家：兰道芙丝卡	55
二十五、玛雅旱灾	57
二十六、玛雅文明	59
二十七、寂静的春天	60
二十八、超新星（一）	62
二十九、白靴兔的数量	63
三十、帝王蝶	65
三十一、胡蜂吃天牛	66
三十二、能源消耗	67



一、美国宪法第十四修正案

标题	文体类型	文章内容与解析	考试日期
美国宪法第十四修正案	叙述文	1868 年美国的 fourteenth constitution amendment 里提倡美国公民人人平等, 但这个 amendment 发行后的 80 年内, 最高法院在对待黑人权益上仍存在种族歧视。于是一批人实行了 act 以抗议这种不平等, 要求法院应按照独立宣言里的平等原则行事。到二战之后, 法院终于有了妥协。 题目: 这个修正案的支持者关心什么。	(201208) (201206) (201205) (199410)

The Fourteenth Amendment to the United States Constitution, ratified in 1868, prohibits state governments from denying citizens the “equal protection of the laws.” Although precisely what the framers of the amendment meant by this equal protection clause remains unclear, all interpreters agree that the framers’ immediate objective was to provide a constitutional warrant for the Civil Rights Act of 1866, which guaranteed the citizenship of all persons born in the United States and subject to United States jurisdiction. This declaration, which was echoed in the text of the Fourteenth Amendment, was designed primarily to counter the Supreme Court’s ruling in *Dred Scott v. Sandford* that Black people in the United States could be denied citizenship. The act was vetoed by President Andrew Johnson, who argued that the Thirteenth Amendment, which abolished slavery, did not provide Congress with the authority to extend citizenship and equal protection to the freed slaves. Although Congress promptly overrode Johnson’s veto, supporters of the act sought to ensure its constitutional foundations with the passage of the Fourteenth Amendment.

The broad language of the amendment strongly suggests that its framers were proposing to write into the Constitution not a laundry list of specific civil rights but a principle of equal citizenship that forbids organized society from treating any individual as a member of an inferior class. Yet for the first eight decades of the amendment’s existence, the Supreme Court’s interpretation of the amendment betrayed this ideal of equality. In the *Civil Rights Cases* of 1883, for example, the Court invented the “state action” limitation, which asserts that “private” decisions by owners of public accommodations and other commercial businesses to segregate their facilities are insulated from the reach of the Fourteenth Amendment’s guarantee of equal protection under the law.

After the Second World War, a judicial climate more hospitable to equal protection claims culminated in the Supreme Court’s ruling in *Brown v. Board of Education* that racially segregated schools violated the equal protection clause of the Fourteenth Amendment. Two doctrines embraced by the Supreme Court during this period extended the amendment’s reach. First, the Court required especially strict scrutiny of legislation that employed a “suspect classification,” meaning discrimination against a group on grounds that could be construed as racial. This doctrine has broadened the application of the Fourteenth Amendment to other, nonracial forms of discrimination, for while some justices have refused to find any legislative classification other than race to be constitutionally disfavored, most have been receptive to arguments that at least some nonracial discriminations, sexual discrimination in particular, are “suspect” and deserve this heightened scrutiny by the courts. Second, the Court relaxed the state action limitation on the Fourteenth Amendment, bringing new forms of private conduct within the amendment’s reach.



1. Which of the following best expresses the author's attitude with regard to the Supreme Court's interpretations of the Fourteenth Amendment prior to the Second World War? (新 G 題)
 - (A) Contempt for the Court's cold rationality
 - (B) Disapproval of the Court's subversion of the amendment
 - (C) Skepticism concerning the appropriateness of the Court's close reading of the amendment
 - (D) Satisfaction that the Court acted with appropriate intentions with regard to the amendment
 - (E) Bitterness about the irreparable harm done to civil rights by the Court

2. The author implies that the Fourteenth Amendment might not have been enacted if (新 G 題)
 - (A) Congress' authority with regard to legislating civil rights had not been challenged
 - (B) the framers had anticipated the Supreme Court's ruling in *Brown v. Board of Education*
 - (C) the framers had believed that it would be used in deciding cases of discrimination involving non-racial groups
 - (D) most state governments had been willing to protect citizens' civil rights
 - (E) its essential elements had not been implicit in the Thirteenth Amendment

3. The author implies that the actions of the Supreme Court in the years immediately following the passage of the Fourteenth Amendment demonstrate that the Court at that time
 - (A) was frustrated by the lack of detail in the amendment
 - (B) intentionally rejected the broad possibilities for advancements in civil rights that the amendment offered
 - (C) applied the amendment in areas that the framers would have considered inappropriate
 - (D) disagreed with President Andrew Johnson about the need for the amendment
 - (E) provided the foundation on which subsequent Supreme Courts were able to expand civil rights

4. According to the passage, which of the following specifically provided for the citizenship of persons born in the United States?
 - (A) The Civil Rights Act of 1866
 - (B) The Thirteenth Amendment
 - (C) *Dred Scott v. Sandford*
 - (D) *Brown v. Board of Education*
 - (E) The *Civil Rights Cases* of 1883



5. Which of the following best describes the main idea of the passage?
- (A) By presenting a list of specific rights, framers of the Fourteenth Amendment were attempting to provide a constitutional basis for broad judicial protection of the principle of equal citizenship.
 - (B) Only after the Supreme Court adopted the suspect classification approach to reviewing potentially discriminatory legislation was the applicability of the Fourteenth Amendment extended to include sexual discrimination.
 - (C) Not until after the Second World War did the Supreme Court begin to interpret the Fourteenth Amendment in a manner consistent with the principle of equal citizenship that it expresses.
 - (D) Interpreters of the Fourteenth Amendment have yet to reach consensus with regard to what its framers meant by the equal protection clause.
 - (E) Although the reluctance of judges to extend the reach of the Fourteenth Amendment to nonracial discrimination has betrayed the principle of equal citizenship, the Supreme Court's use of the state action limitation to insulate private activity from the amendment's reach has been more harmful.
6. The passage suggests that the principal effect of the state action limitation was to
- (A) allow some discriminatory practices to continue unimpeded by the Fourteenth Amendment
 - (B) influence the Supreme Court's ruling in *Brown v. Board of Education*
 - (C) provide expanded guidelines describing prohibited actions
 - (D) prohibit states from enacting laws that violated the intent of the Civil Rights Act of 1866
 - (E) shift to state governments the responsibility for enforcement of laws prohibiting discriminatory practices
7. The author's position regarding the intent of the framers of the Fourteenth Amendment would be most seriously undermined if which of the following were true?
- (A) The framers had anticipated state action limitations as they are described in the passage.
 - (B) The framers had merely sought to prevent discriminatory acts by federal officials.
 - (C) The framers were concerned that the Civil Rights Act of 1866 would be overturned by the Supreme Court.
 - (D) The framers were aware that the phrase "equal protection of the laws" had broad implications.
 - (E) The framers believed that racial as well as non-racial forms of discrimination were unacceptable.
8. According to the passage, the original proponents of the Fourteenth Amendment were primarily concerned with (新 G 題)
- (A) detailing the rights afforded by the principle of equal citizenship
 - (B) providing support in the Constitution for equal protection for all citizens of the United States
 - (C) closing a loophole that could be used to deny individuals the right to sue for enforcement of their civil rights
 - (D) asserting that the civil rights protected by the Constitution included nonracial discrimination as well as racial discrimination
 - (E) granting state governments broader discretion in interpreting the Civil Rights Act of 1866



9. According to the passage, which of the following most accurately indicates the sequence of the events listed below?
- I. Civil Rights Act of 1866
 - II. Dred Scott v. Sandford
 - III. Fourteenth Amendment
 - IV. Veto by President Johnson
- (A) I, II, III, IV
(B) I, IV, II, III
(C) I, IV, III, II
(D) II, I, IV, III
(E) III, II, I, IV
10. Which of the following can be inferred about the second of the two doctrines referred to in the passage?
- (A) It caused some justices to rule that all types of discrimination are prohibited by the Constitution. (B) It shifted the focus of the Supreme Court from racial to nonracial discrimination.
- (C) It narrowed the concern of the Supreme Court to legislation that employed a suspect classification.
- (D) It caused legislators who were writing new legislation to reject language that could be construed as permitting racial discrimination.
- (E) It made it more difficult for commercial businesses to practice racial discrimination.

答案: BABACABBDE



二、黑人文学：紫色姐妹花

标题	文体类型	文章内容与解析	考试日期
黑人文学： 紫色姐妹花	长阅读 评论文 2	<p>文艺作品： Alice walkers: <i>The Color Purple</i> 紫色姐妹花 (1982)</p> <p>第一段评论 A：</p> <p>妹妹 Nettie 写给他姐姐 Celie 的一封信(第一个题)说这个信很写实 相比这个 Celie 写给 God 的信而言，有些学者认为这个文章很写实，然后有些人认为是虚构的。即书中对上帝 God 的通信不属于原来的 realism 流派(other than Anglo-American nineteenth-century realism) 而属于 Afro-American literature. 但他对 voice 的 focus 没有帮助他分析小说的 structure，而这个 structure 是作者关注的重点。第二段评论 B 对 A 进行评论：大量叙述这个黑人小说是虚构的(第二个题二段作用)新观点中提到的 critic 评论家 (Henry Louis Gates, Jr.)通过分析 voice (对话)得到一些有用结论，认为这部小说 不能用 19th 的 stereotype 去解释。JM 并认为这部小说如何与它所 acknowledged 受到影响的 19th 的两部小说(她们眼望苍天 Their Eyes Were Watching God)的 voice 一脉相承。这反映了用 19th stereotype 去解释这部小说的不可靠。第三段评论 B 的叙述：</p> <p>叙述这个黑人小说。。。大概就是也许写实吧</p> <p>第四段：Meager 认为这个小说，是虚构的。最后一个题是问你这个 Meager 的观点对应于第一段中哪一个学者的观点。</p> <p>题目：问了这个 critic(Henry Louis Gates, Jr.)和旧观点中的 critic 有什么相同，我选的是他没有分析小说的 structure。</p> <p>题目：问的作者认为 Nettie 的 letter to Celie 有什么特点，我选了 mark a shift to geologically and culturally removed surroundings。</p>	<p>(201208)</p> <p>(201207)</p> <p>(201204)</p> <p>(201201)</p> <p>(201112)</p> <p>(201109)</p>

GRE 文学阅读有时重点会放在：STRUCTURE 结构派 VS. FEELING 感情派

结构派：主张文学仅有感情是不够的，需要有连贯一致的写作结构。常见字 ration, laws, method, composition, plotting, form

感情派：主张文学作品应重情感内涵：常见字 intuition, imagination, emotion。

Alice walkers: *The Color Purple* 紫色姐妹花 (1982)

Zora Neale Hurston's: *Their Eyes Were Watching God* 她们眼望苍天 (1937)

艾丽斯·沃克 (Alice Walker)：

1944 年出生于南方佐治亚州的一个佃农家庭，父母的祖先是奴隶和印度安人，艾丽斯是家里八个孩子中最小的一个。艾丽斯 8 岁时，在和哥哥们玩“牛仔与印度安人”的游戏时被玩具枪射瞎了右眼。1961 年艾丽斯获奖学金入亚特兰大的斯帕尔曼大学学习，正赶上美国民权运动的高涨时期，她即投身于这场争取种族平等的政治运动。1962 年，艾丽斯·沃克被邀请到马丁·路德·金的家里做客。1963 年艾丽斯到华盛顿参加了那次著名的游行，与千万黑人一同聆听马丁·路德·金“我有一个梦想”的讲演。艾丽斯大学毕业前在东非旅行时怀孕，当时流产仍属非法，她经历了一段想要自杀的痛苦时期，同时也写下了一些诗歌。1965 年艾丽斯大学毕业回到了当时是民权运动中心的南方老家继续参加争取黑人选举权的运动。在活动中艾丽斯遇上了犹太人列文斯尔，俩人



克服跨种族婚姻的重重困难结为“革命伴侣”，艾丽斯再一次怀孕，但不幸的是在参加马丁·路德·金的葬礼时因悲伤而痛失孩子。1972 年艾丽斯到韦尔斯利大学任教，开设了“妇女文学”课程，这是美国大学最早开设的女性研究课程。艾丽斯给学生介绍了大量黑人女作家，尤其是在此过程中发掘并整理了黑人女性文学先行者佐拉·尼尔·赫斯顿（Zora Neale Hurston, 1891—1960）的材料。赫斯顿是 30 年代哈莱姆文艺复兴时期的黑人女作家，其代表作为《*Their Eyes Were Watching God* 她们眼望苍天》（1937），但因其作品中所体现出对黑人生活及传统的积极、乐观态度而在抗议文学风靡的时代备受冷落。佐拉·尼尔·赫斯顿和艾丽斯·沃克是 20 世纪非裔美国文学中两位重要的女性作家。佐拉·尼尔·赫斯顿堪称美国黑人女性文学史上最重要的先驱。她是第一位以黑人妇女为主人公，并以表现黑人妇女追求自我、争取解放为主题的黑人女作家。她对 20 世纪许多著名黑人女作家如格洛丽亚·内勒、托尼·莫里森、艾丽斯·沃克等等都产生过深远的影响。特别是其中的艾丽斯·沃克，她将赫斯顿视为自己的“文学母亲”。她寻找和发掘了在文学史中几乎被埋没的赫斯顿，并积极地继承和发展了赫斯顿留下的黑人女性文学遗产。1982 年是艾丽斯·沃克的事业巅峰期，她发表了小说《紫色姐妹花》（*The Color Purple*）。《紫色》1983 年一举拿下代表美国文学最高荣誉的三大奖：普利策奖、美国国家图书奖、全国书评家协会奖。1985 年著名导演斯皮尔伯格将其拍成电影，当电影在艾丽斯的家乡上演时，艾丽斯受到了家乡人的盛大欢迎。《紫色》从此成为美国大学中黑人文学与妇女文学的必读作品。

紫色姐妹花 *The Color Purple*:

大约在 20 世纪初到第二次世界大战前夕，背景是美国南方佐治亚乡村。十四岁的黑人女孩 **Celie** 西丽被后父奸污，生下两个孩子。多病的母亲不了解真相活活气死了。她的孩子被后父抢走失踪，她本人又被迫嫁给已有四个孩子的鳏夫。丈夫另有所爱，对她百般虐待，而她受旧思想旧习俗的影响只是自叹命苦，从不反抗，只在给上帝写的信里倾诉内心的痛苦。她对丈夫毫无感情，甚至不愿意叫他的名字，只称他为某某先生。善良的西丽发现后父和丈夫都对妹妹耐蒂 **Nettie** 不怀好心，便帮助她离家出走。另一方面，她任劳任怨地把丈夫前妻的儿女抚养成人。大儿子哈波结婚以后，想象父亲那样使唤打骂老婆，但儿媳妇索非亚生性倔强，不肯对丈夫俯首帖耳唯命是从，在生了好几个孩子以后还是离开了哈波。西丽丈夫以前的情人，歌唱家莎格 **Shug** 患重病流落街头。某某先生把她接到家里，她在西丽的精心护理下恢复了健康，两人成了知心朋友。莎格开导西丽要充分认识自己的聪明才智，要跟大男子主义思想作斗争，主动争取女人应有的权利。莎格的启发开阔了西丽的眼界，她开始用新的眼光观察世界、考虑问题。后来，莎格发现西丽的丈夫一直把耐蒂从非洲写来的信件秘密收藏起来不让她知道。西丽在愤怒之余决定脱离某某先生，跟莎格去孟菲斯。她走出家庭学习缝纫，成为手艺精湛的裁缝，开起裁缝铺，过上了独立自主的生活。某某先生经过痛苦的思想斗争，认识到过去大男子主义思想的错误，向西丽作了诚恳的检讨，获得了西丽的原谅。他们不再是夫妻，但成了知心朋友。西丽的妹妹耐蒂出走后到黑人牧师塞缪尔家干活，又随他们去非洲做传教士。她发现牧师的一儿一女就是西丽失去的孩子。撒母耳一家在非洲生活得很艰难，他妻子染上非洲疟疾不治身亡。英国殖民者为种植橡胶肆意破坏当地奥林卡人民的土地和村落。撒母耳和耐蒂赶到英国向教会求救，但遭到冷落和侮辱。他们返回非洲时当地人民对他们大为失望，纷纷投奔住在森林深处反抗白人的母布雷人。耐蒂此时已经跟塞缪尔结成夫妻，决心带着儿子亚当、女儿奥莉维亚及儿媳塔希回国。小说结尾处，西丽跟妹妹和儿子、女儿重新团聚，过上快乐的生活。

全书由 90 封书信构成。主人公西丽亚写给上帝的信、西丽亚写给妹妹耐蒂的信（被退回）、耐蒂写给西丽亚的信、西丽亚所爱的女人莎格给西丽亚的信。故事的背景是艾丽斯·沃克所熟悉的美国南方佐治亚乡村，故事大约发生在二十世纪初。14 岁的黑女孩西丽亚被继父强奸，生下的两个孩子也被继父送走，后来西丽亚的妈妈死了，继父再婚。西丽亚被嫁给一个已有四个孩子的鳏夫 X 先生，妹妹耐蒂被迫逃走，辗转去非洲。西丽亚受到 X 先生的百般虐待，但后来在 X 先生的情人莎格的爱与帮助下，逐渐转变为一个有独立个性的人。在艺术手法上，《紫色》采用的是传统的书信体小说的形式。但艾丽斯·沃克突破了以往书信体的基本构思和创作原则，并不注重细节、不注重真实，而是着力夸张、变形的手法，具有强烈的超现实性和诗意。



The Color Purple 紫色姐妹花 英文簡介

Introduction: *The Color Purple* is an epistolary novel. It consists of 90 letters, of which over two thirds (61 in number) Celie wrote to God, 14 to her sister Nettie, and 15 Nettie wrote to Celie.

The Color Purple is a 1982 epistolary novel 书信小说 written by American author Alice Walker that won the 1983 Pulitzer Prize for Fiction and the National Book Award for Fiction. Taking place mostly in rural Georgia, the story focuses on female black life in the 1930s in the southern United States, addressing numerous issues including their exceedingly low position in American social culture.

The Color Purple spans the years 1909 to 1949, relating the life of Celie, a Southern black woman virtually sold into a life of servitude to her brutal husband, sharecropper Albert. Celie, the protagonist and narrator of *The Color Purple*, is a poor, uneducated, fourteen-year-old black girl living in rural Georgia. Celie starts writing letters to God because her stepfather, Alphonso, beats and rapes her. Celie pours out her innermost thoughts in letter form to her sister Nettie, but Albert has been hiding the letters Nettie writes back, allowing Celie to assume that Nettie is dead.

Letters: Alice Walker highlights the power of communication through the characters letter writing form. The letters that Celie writes to God, and later to her sister Nettie, symbolize a certain voice that only Celie has and one that she is only able to express in her letters. She is able to express her true desires only in her letter. These letters allow her to display any emotion, and they are very personal to her as well. In the beginning, when she was writing letters only to God, the letters were very private and Celie would not have wanted anyone to see them. The letters are the only way she can represent her true feelings and despair as she is abused. Later, the letters she gets from Nettie give her hope that she will be reunited with her sister again. Celie writes to God for a lack of someone else to write to. She writes to her sister because she gets mad at God because of her past and the people who have been hurt because of it. She asks God "Why?" which is a question that cannot be answered. The last letter she writes is to everyone, including God showing that she has forgiven Him, and that her story has gone through a full circle of maturation.

Symbol: The title of the book is an important symbol. Celie goes through life having a hard time noticing the beautiful aspects and appreciating them. She had a difficult life and was abused as an adolescent. "The color purple is continually equated with suffering and pain. Sofia's swollen, beaten face is described as the color of 'eggplant'. Purple is the color of Celie's private parts, the site of her sexual violation. However, later Shug points out to her that life must be enjoyed. When they are in a field of purple flowers, Shug tells Celie to look at the flowers and embrace their beauty. "You must look at all the good and acknowledge them because God placed them all on earth". After learning this, Celie has a better respect for life and everything it has to offer. When Nettie arrives from Africa she is seen wearing a purple dress.



The publication of *The Color Purple* transformed Alice Walker from an indubitably serious black writer whose fiction belonged to a tradition of gritty, if occasionally "magical," realism into a popular novelist, with all the perquisites and drawbacks attendant on that position. Unlike either *The Third Life of Grange Copland* (1970) or *Meridian* (1976), *The Color Purple* gained immediate and widespread public acceptance, winning both the Pulitzer Prize and the American Book Award for 1982-83. At the same time, however, it generated immediate and widespread critical unease over what appeared to be manifest flaws in its composition. Robert Towers, writing in the *New York Review of Books*, concluded that on the evidence of *The Color Purple* "Alice Walker still has a lot to learn about plotting and structuring what is clearly intended to be a realistic novel." His opinion was shared by many reviewers, who pointed out variously that in the last third of the book the narrator-protagonist Celie and her friends are propelled toward a fairytale happy ending with more velocity than credibility; that the letters from Nettie, with their disconcertingly literate depictions of life in an African village, intrude into the middle of the main action with little apparent motivation or warrant; and that the device of the **letters to God is especially unrealistic** inasmuch as it foregoes the concretizing details that traditionally have given the epistolary form its peculiar verisimilitude: the secret writing-place, the cache, the ruses to enable posting letters, and especially the letters received in return.

Indeed, Walker's violations of realist convention are so flagrant that they might well call into question whether *The Color Purple* "is clearly intended to be a realistic novel," especially as there are indications that at least some of those aspects of the novel discounted by reviewers as flaws may constitute its links to modes of writing other than Anglo-American nineteenth-century realism. For example, Henry Louis Gates, Jr., has recently located the letters to God within an Afro-American tradition deriving from slave narrative, a tradition in which the act of writing is linked to a powerful deity who "speaks" through Scripture and bestows literacy as an act of grace. For Gates, concern with finding a voice, which he sees as the defining feature of Afro-American literature, becomes the context for the allusive affinities between Celie's letters and the "free indirect 'narrative of division'" that characterizes the acknowledged predecessor of *The Color Purple*, Zora Neale Hurston's 1937 novel *Their Eyes Were Watching God*.

Gates's paradigm suggests how misleading it may be to assume that mainstream realist criteria are appropriate for evaluating *The Color Purple*. But the Afro-American preoccupation with voice as a primary element unifying both the speaking subject and the text as a whole does not deal with many of the more disquieting structural features of Walker's novel. For instance, while the letters from Nettie clearly illustrate her parallel acquisition of her own voice, a process that enables her to arrive at conclusions very like Celie's under very different circumstances, the Afro-American tradition sheds little light on the central place that these letters occupy in the narrative or on why the plot takes this sudden jump into geographically and culturally removed surroundings. And Gates's subtle explication of the ramifications of "voice," once Walker has reconstrued the term to designate a written discourse, does not attempt to address the problematic ending, in which the disparate members of Celie's extended family come together as if drawn by a cosmic magnet-and as if in defiance of the most minimal demands of narrative probability.



三、英国第一个女演员

标题	文体类型	文章内容与解析	考试日期
英国第一个女演员	长阅读 总结文一	<p>第一段提出现象： English Actresses were accepted by the audiences 逐渐被接纳。原因是 17 世纪初和 17 世纪末英国政治权利的变化。17 世纪初，theater 分成 court 和 commercial 两种，court 的那种是只有男演员的，而且只供贵族等观看，平民商人是无法进入的（court 的那种 theater 反对 actress 的原因有几个：其中一是男演员比较专业，从莎士比亚的喜剧开始，所有的角色包括女性角色都是由男演员担任。）commercial 的在当时就已经可以接纳 actress 了，但 actress 能演的角色也不多。讲几种解释，然后一一否定掉 第二段：给出了作者支持的解释。 第三段：Charles II 通过影响 aristocrats 从而影响了 audiences 对 Actresses 的态度。到 17 世纪末，英皇 Charles II 掌政，为了稳固地位，就接受了新的 attitude，就是 actress 也能演戏，而且国王还会亲自去 commercial 的 theater 看戏，许多贵族也就跟风一起来了，actress 从而渐渐被接受。</p> <p>4 道题目：1 个主旨 3 个细节 题目：第 三段提及 Charles II 有什么作用 题目：意 大利剧院的比较</p>	(201201) (201208) (201112) (201111)

In the past, only men could become actors in some societies. In the ancient Greece and Rome and the medieval world, it was considered disgraceful for a woman to go on the stage, and this belief persisted until the 17th century, when in Venice it was broken. In the time of William Shakespeare, women's roles were generally played by men or boys.

When an eighteen-year Puritan prohibition of drama was lifted after the English Restoration of 1660, women began to appear on stage in England. Margaret Hughes is credited by some as the first professional actress on the English stage. This prohibition ended during the reign of Charles II in part due to the fact that he enjoyed watching actresses on stage.

Some time during the last months of 1660, a professional English actress appeared in a play on the English public stage for the first time - a historic moment for English theatre. While Englishwomen may occasionally have performed in public entertainments such as mystery plays as early as the fifteenth century, they were never regularly employed in the commercial theatre in any capacity until the Restoration. The exact date of the actress's debut is not known, but is usually assumed to be 8 December 1660, when it is known that a woman played Desdemona in a production of Othello by Thomas Killigrew's King's Company. A special prologue was written by the poet Thomas Jordan 'to introduce the first Woman that came to act on the stage in the tragedy called the Moor of Venice': 'The Woman playes today, mistake me not, / No Man in Gown, or Page in Petty-Coat. A week later one Andrew Newport wrote to Sir Richard Len-sen that 'upon our stages we have women actors, as beyond seas'. On 3 January 1661 Pepys recorded his visit to The Beggar's Bush by the King's Company that day was 'the first time that ever I saw Women conic upon the stage.

The possible reasons for the advent and public acceptance of actresses at this particular time continue to preoccupy scholars. It was certainly not the case, as some have assumed, of women being automatically superior to boys in the performance of female roles. English theatre finally relinquished a ludicrous convention many years after France, Italy and Spain (women were



acting in these countries by the latter half of the sixteenth century).'

Before the Restoration of Charles II there were no professional actresses on the English stage, and female roles had almost always been played by men. This book describes how and why women were permitted to act on the public stage after 1660, and the consequences of their arrival. Elizabeth Howe opens up a fascinating subject to nonspecialists. Beginning with a general account of the workings of Restoration theater, she explains the treatment received by the actresses and how their sexuality was exploited. The book addresses questions that are relevant to women's issues in every period: how far did the advent of women players alter dramatic portrayals of women? Did this encourage more or less equality between the sexes? Although in one sense merely playthings for a small male elite, the pioneering actresses also represent a new female voice in society and a new place in discourse.

The First English Actresses contains much of value. The aim of the book is to chart the consequences of the huge shift in the English theatre that took place between 1660 and 1662, the replacement of boy actors by women. It is a detailed, meticulous study, which will be of interest to the specialist as well as the general reader. The book seeks to understand both the larger repercussions on drama of the change in actors' sex, and to offer a history of the individual actresses who appeared on the Restoration stage. Especially notable is Elizabeth Howe's exhaustive cataloguing of the actresses and the Restoration plays in which they acted, and her consideration of the way female roles changed to accommodate women in general and individual actresses in particular. Her sense of what constitutes change is relatively narrowly focused on the playwright-actress interaction however, and there are only intermittent glimpses of how public taste, audience response, and larger cultural conditions helped to shape the depiction of heroines, female desire, or marriage. The most thought-provoking parts of the book are the first two chapters, since in them Howe raises (and answers) the theoretical and historical questions that motivate the book. Her chapter on the relationship between Jacobean and Restoration theatre is particularly interesting, and while she elects to answer the question of why professional actresses were permitted in fairly absolute historical terms (the closer affiliation between the court and the public theatre after 1660; changing attitudes to women, female sexuality, and theatre), her analysis of the changing nature of the theatre and its audience is illuminating. Howe's discussion of the cultural shifts is somewhat less satisfying, and she tends to rely on generalizations about women and the family rather than exploring them. This tendency is especially notable in the final chapters of the book, where female roles become stereotypes (faithful wife, prostitute, victim), and Howe tends to summarize plots rather than analyze their dynamics.

Howe is careful to acknowledge both the radical and the conservative nature of women on the stage: they were allowed a limited opportunity to present themselves to the public in a new way, yet their possibility for expression was always circumscribed by the social circumstances of their culture (they never, for instance, received the same monetary reward as their male counterparts). Although their presence gave dramatists new scope in their depiction of women, those representations were always determined partly by culture and certainly by audience response. The sexuality of the Restoration actress was exploited; indeed, Howe asserts that it was the central feature of the actress's professional identity (34). The public's fascination with the private lives of actresses, the way their theatrical desirability was translated into sexual availability, and conversely, the way their reputations for amorous liaisons infiltrated the drama, seemed to erode the boundaries between life and theatricality in ways that were to have lasting effects on the drama. By the 1670s, the public personae of the actresses had intervened to the extent that the "women had become more important than the roles they played" (106). This link between the actresses and the drama is Howe's real subject, and her treatment of it is richly suggestive.



四、美国人的祖先

标题	文体类型	文章内容与解析	考试日期
美国人的祖先	短阅读 总结文 2	<p>旧观点：美国大陆上开始有人大概是什么时间。一开始是说有旧观点认为可以推到 40000-25000 年前。</p> <p>新观点： 作者认为不可信，而认为 American 的移民可能在 20000 年就已经出现，并用了澳大利亚 Australia 来左证。因为美洲没有找到很多 rite，而澳大利亚有很多 rite。澳大利亚的干旱、密度低、后冰川时期海平面上升、美国的内流河。三道题也不都太懂。没读出来后面的海平面上升跟前面的 rite 有什么联系</p>	<p>(201208)</p> <p>(201202)</p> <p>(201112)</p>

**本篇仅供背景知识加强，和原文差距较大

Recent discoveries in New World archaeology along with new scientific methods for analyzing data have led to new ideas regarding the origin of the first peoples of the Americas and their time of arrival.

The **traditional theory** held that the first Americans crossed the land bridge from Siberia to Alaska around 11,500 years ago and followed an "ice-free corridor" between two large Canadian ice sheets (the Laurentide and Cordilleran) to reach unglaciated lands to the south.

These first inhabitants, whose archaeological sites are scattered across North and South America, were called the Clovis people, named after the town in New Mexico where their fluted spear points used for hunting mammoth were first found in 1932.



There is **now** convincing evidence of human habitation sites that date earlier than the Clovis culture including sites located in South America. Monte Verde, a well-studied site located along a river near southern central Chile, dates 12,500 years ago. This site contains the buried remnants of dwellings, stone tools including large bifacial projectile points, and preserved medicinal and edible plants. How did people manage to settle this far south at such an early date? A coastal migration route is now gaining more acceptance, rather than the older view of small bands moving on foot across the middle of the land bridge between Siberia and Alaska and into the continents. Emerging evidence suggests that people with boats moved along the Pacific coast into Alaska and northwestern Canada and eventually south to Peru and Chile by 12,500 years ago—and perhaps much earlier. Archaeological evidence in Australia, Melanesia, and Japan indicate boats were in use as far back as 25,000 to 40,000 years ago. Sea routes would have provided abundant food resources and easier and faster movement than land routes. Many coastal areas were unglaciated at this time, providing opportunities for landfall along the way. Several early sites along the coast of Canada, California, Peru, Ecuador, and Chile date between 10,000 and 12,000 years ago. Many potential coastal sites are now submerged, making investigation difficult.



五、长江水稻

标题	文体类型	文章内容与解析	考试日期
长江水稻	短阅读 总结文 2	<p>V1. 背景介绍: 在南亚发现了 domesticated Rice,然后推测南亚是 Rice 的发源地,然后 1985 年在中国的长江流域发现了很多 wilder rice 的遗址,推测生活在中国的先民有可能更早的驯化了 rice。</p> <p>提出旧理论: rice-farming 最早在长江以南出现</p> <p>提出新理论: 认为长江流域的 rice-farming 可以往前推几百年。最后一段讲, 1940 年 (?) 调查的 wild-rice 其实主要确实是分布在南方,但是长江流域也有 1、2 种,所以还是有可能 farming 在北方也开始很早滴。然后我觉得这篇文章需要把握的就是 wilder rice 和 domesticated rice。搞清楚谁是野生的,谁是驯化的就可以了。</p> <p>【问题】 三个题考得都是逻辑相关,比如加强削弱什么的。</p> <p>【问题】: 最能 undermine 长江流域水稻是水稻祖宗的?</p> <p>【问题】 作者是怎样利用 geological graph 还是什么 graph 来证明它的观点的。应该是从文章最后一段找,但我感觉文中没有直说,要自己推理。选项里好几个都很接近。</p> <p>V2. 全文主旨是在证明长江附近有 rice 被 cultivation 的合理性。</p> <p>第一段: 说 rice 其实起源于 north 而不是 south, 后面有南北对比。可能的原因是这个 rice 更有 productivity, 在这个 rice-farming society 就被 cultivation 下来了。第二段: 比较了气候的因素,说长江附近 north 的冬天好像是 2-4 度,又说了 10000 年前好像 south 和 north 更冷,但是这个 rice 在 north 更有竞争力,所以被 cultivation 下来了。</p> <p>题目: 什么支持了气候学说(长江附近的冬季气温比南部要高 2-4 度)。</p>	(201208) (201112) (201109)

Since the 1970s, archaeological sites in China's Yangtze River region have yielded evidence of sophisticated rice-farming societies that predate signs of rice cultivation elsewhere in East Asia by a thousand years. Before this evidence was discovered, it had generally been assumed that rice farming began farther to the south. This scenario was based both on the geographic range of wild or free-living rice, which was not thought to extend as far north as the Yangtze, and on archaeological records of very early domestic rice from Southeast Asia and India (now known to be not so old as first reported). Proponents of the southern-origin theory point out that early rice-farming societies along the Yangtze were already highly developed and that evidence for the first stage of rice cultivation is missing. They argue that the first hunter-gatherers to develop rice agriculture must have done so in this southern zone, within the apparent present-day geographic range of wild rice.

Yet while most stands of wild rice reported in a 1984 survey were concentrated to the south of the Yangtze drainage, two northern outlier populations were also discovered in provinces along the middle and lower Yangtze, evidence that the Yangtze wetlands may fall within both the present-day and the historical geographic ranges of rice's wild ancestor.



1. Which of the following, if true, would most clearly undermine the conclusion that the author makes based on the 1984 survey?
- (A) Areas south of the Yangtze basin currently have less wild-rice habitat than they once did.
 - (B) Surveys since 1984 have shown wild rice populations along the upper Yangtze as well as along the middle and lower Yangtze.
 - (C) The populations of wild rice along the Yangtze represent strains of wild rice that migrated to the north relatively recently.
 - (D) Early rice-farming societies along the Yangtze were not as highly developed as archaeologists once thought.
 - (E) In East Asia, the historical geographic range of wild rice was more extensive than the present-day geographic range is.
2. Based on the passage, skeptics of the idea that rice cultivation began in the Yangtze River region can point to which of the following for support?
- (A) Lack of evidence supporting the existence of rice-farming societies along the Yangtze at an early date
 - (B) Lack of evidence regarding the initial stages of rice cultivation in the Yangtze region
 - (C) Recent discoveries pertaining to the historical geographic range of rice's wild ancestor
 - (D) New information regarding the dates of very early domestic rice from Southeast Asia
 - (E) New theories pertaining to how hunter-gatherers first developed rice agriculture in East Asia
3. Which of the following can be inferred from the passage about the "southern-origin theory"?
- (A) The theory is based on an unconventional understanding of how hunter-gatherers first developed rice agriculture.
 - (B) The theory fails to take into account the apparent fact that evidence for the first stage of rice cultivation in the north is missing.
 - (C) The theory was developed primarily in response to a 1984 survey of wild rice's geographic range.
 - (D) Reassessment of the dates of some archaeological evidence has undermined support for the theory.
 - (E) Evidence of sophisticated rice-farming societies in the Yangtze region provides support for the theory.

答案: CBD



六、海牛灭绝

标题	文体类型	文章内容与解析	考试日期
海牛灭绝	总结文 2	<p>现象：某岛上的 sea cow 在短短十来年间灭绝了</p> <p>旧理论：人类的捕猎</p> <p>新理论：猎人过度 hunt otter 最后造成海牛食物不足。</p> <p>新理论叙述：因为 otter 下降，所以被 otter 吃的 urchin 数量猛增，而 urchin 数量猛增导致被他吃的 Kelp，数量下降，而 Kelp 是海牛的主食，因为主食没了，所以灭绝。</p> <p>【题目】有一句话说 sea cow has way too many in numbers 的作用是什么？</p> <p>【答案】驳斥老观点 disprove a previously mentioned statement，提供了 information: urchin 数量猛增！</p>	(201011) (201012)

The disappearance of Steller's sea cow from the Bering and Copper islands by 1768 has long been blamed on intensive hunting. But its disappearance took only 28 years from the time Steller first described the species, a remarkably short time for hunting alone to depopulate the islands, especially given the large populations initially reported. However, by 1750, hunters had also targeted nearby sea otter populations. Fewer otters would have allowed sea urchin populations on which the otters preyed to expand and the urchins' grazing pressure on kelp forests to increase. Sea cows were totally dependent on kelp for food, and within a decade of the onset of otter hunting Steller noted that the islands' sea cows appeared malnourished.

- Which of the following can be inferred from the passage about kelp forests in the Bering and Copper islands between 1750 and 1768?
 - (A) They were reduced significantly.
 - (B) They disappeared entirely from the region.
 - (C) They were the primary food source for sea otters. (D) They were harvested in record numbers by humans (E) They increased pressure on sea urchin populations.
- According to the passage, it is likely that during the mid-1700s, sea urchin populations near the Bering and Copper islands
 - (A) were diminished by sea cow predation
 - (B) experienced substantial increases
 - (C) migrated to waters with more plentiful food supplies
 - (D) were reduced by the pressures of hunting
 - (E) appeared to be malnourished

答案：AB



七、蜜蜂的致命疾病

标题	文体类型	文章内容与解析	考试日期
蜜蜂的致命疾病	说明文	一种病原体,简称 A 病原体.蜜蜂幼虫吃了含有 A 的食物之后,体内会长一种致命的菌简称 CB.但是 CB 要在低于幼虫正常体温的情况下才会发作,所以 CB 主要是在春天侵害小规模蜜蜂群.最近一个研究发现.在蜂群感染了 A 之后,那些负责维持蜂房温度的蜜蜂会有意识地提高蜂房温度.而这个"发烧现象",或者说温度的提升是在没有一个幼虫(因病)死亡之前发生的.(这个现象)可能说明蜜蜂的这一反应(提高温度)是一个保护性措施.而且(还说明)要么是那些蜜蜂在感染症状出现之前就发现了它们,要么就是幼虫把感染信息告诉了蜜蜂.实验结束的时候,(蜂房的温度)又恢复正常了,说明升高的温度并不是蜂群的最佳温度,也说明这个"发烧现象"不仅仅是蜂群数量增大的结果.	(201111) (201108) (200710)

Ingestion of food containing spores of the pathogen *Ascosphaera apis* causes a fatal fungal disease known as chalk brood in honeybee larvae. However, larvae must be chilled to about 30°C (normal brood-comb temperature is 33-36°C) for the disease to develop. Accordingly, chalk brood is most common in spring and in small colonies. A recent study revealed that honeybees responsible for hive-temperature maintenance purposely raised the hives' temperature when colonies were inoculated with *A. apis* this "fever," or up-regulation of temperature, occurred before any larvae died, suggesting that the response is preventative and that either honeybee workers detect the infection before symptoms are visible or larvae communicate the ingestion of the pathogen.

Temperature returned to normal by the end of the study, suggesting that increased temperature is not optimal when broods are not infected, as well as that the fever does not result merely from normal colony growth (i.e., an increase in the number of workers available for temperature maintenance).

- The primary purpose of the passage is to
 - discuss the findings and implications of a particular study
 - illustrate a process that formerly had been misunderstood
 - outline the methods used to investigate a problem
 - provide evidence to support a controversial theory
 - contrast alternative interpretations of certain data
- According to the passage, researchers concluded that fever in honeybee colonies is preventative because their study showed that such fever
 - does not occur when hive temperatures are within normal range
 - protects adult bees from contracting chalk brood infection
 - occurs prior to the death of any larvae
 - is more likely to occur in spring than in summer
 - does not have an effect on uninfected broods



3. The passage implies that if hive temperature had not returned to normal by the end of the study in question, a probable conclusion of the researchers would have been that
- (A) up-regulation of temperature is a preventative measure against chalk brood
 - (B) honeybees are incapable of purposely raising hive temperatures
 - (C) *A. apis* cannot be completely eradicated through up-regulation of temperature alone
 - (D) honeybee larvae have a mechanism to alert adult honeybees to the presence of *A. apis*
 - (E) honeybee larvae may benefit from increased hive temperature even when there is no *A. apis* present
4. According to the passage, which of the following is true of chalk brood infection among honeybee larvae?
- (A) Larvae in small colonies are more likely to pass the infection to adult honeybees than are larvae in large ones.
 - (B) Infection with chalk brood induces larvae to raise their hive's temperature.
 - (C) The infection is more likely to affect larvae in winter than in spring.
 - (D) Larvae fail to develop symptoms of the disease when their brood –comb temperature remains within the normal range.
 - (E) Infected larvae exhibit visible symptoms of disease for a significant time before death.

答案: ACBD



八、星系吞食

标题	文体类型	文章内容与解析	考试日期
星系吞食	短阅读	<p>V1. 星球之间的 cannibalism, 文章排除了几种貌似 cannibalism 但实际上不是的情况。后面又说了 double-nuclear。</p> <p>【问题】什么是真正的 cannibalism。</p> <p>【问题】什么是 true double-nuclear</p> <p>V2. 旧理论: 两个 galaxy 碰在一起好像 fairly common, 然后描述了一个大的 galaxy 吞掉一个 dwarf 的 galaxy 的时候, 会因为某种 gravity 有巨大的 tidal force 并 produce 什么东西的, 然后描述了一下 double-nuclear。新理论: 然后 (转折), 我们观察到这种东西挺平常的, 有可能只是因为隔着遥远的 两个这样的东西, 在我们的同一条视线上, 于是他们正好迭在了一起, 其实他们并不是由于 galaxy 吞并而产生的。</p> <p>【问题】作者认为, 真正的 two nucleus 是由什么产生的?</p> <p>答案: 大 galaxy 吞 dwarf galaxy</p>	<p>(201208)</p> <p>(201207)</p> <p>(201112)</p> <p>(201111)</p>

Galactic Cannibalism: When Galaxies Collide

Galactic cannibalism refers to the process by which a large galaxy, through tidal gravitational interactions with a companion, merges with that companion, resulting in a larger, often irregular galaxy. The most common result of the gravitational merger of two or more galaxies is an irregular galaxy of one form or another, although elliptical galaxies may also result.

It has been suggested that galactic cannibalism is currently occurring between the Milky Way and the Large and Small Magellanic Clouds. Streams of gravitationally-attracted hydrogen arcing from these dwarf galaxies to the Milky Way is taken as evidence for this theory.

A long time ago, in a galaxy far, far away, the real battle of "star wars" was wreaking havoc on two galaxies. These two galaxies, known as the "Antennae Galaxies," were locked in a cosmic battle of tug-of-war. This process of galactic destruction is more common than once thought, and may even contribute to the growth of some galaxies.

Figure 1: The Antennae Galaxies¹ Each galaxy contains billions and billions of stars. This makes galaxies extraordinarily heavy, or massive, and massive objects can exert very strong gravitational forces in space. Just as Earth can "feel" the pull of the Sun from millions of miles away, so too can a galaxy "feel" the gravitational tug of another galaxy. This gravitational tug is much stronger for massive objects like galaxies than it is for our Sun, so galaxies that are millions of light-years away from each other can still feel the pull of another massive galaxy, even though they are so far apart. Like the Antennae Galaxies (Figure 1), two galaxies that feel the tug of each other will race towards each other at incredible speeds, eventually colliding in a galactic display of fireworks.



Figure 1: The Antennae Galaxies¹

So how do we know if two galaxies are in the process of merging? We cannot simply say that two galaxies that look close together are going to collide; we often see images containing two or more galaxies lying on top of each other and that are millions of light years away from each other! Astronomers can use various tools to find the distances between galaxies, which can tell us if the galaxies are close enough to be merging; however, a much



Figure 2: The Mice²



easier method is to look for distorted galaxies. The first signs of war are streams of stars that are pulled out from each galaxy². In Figure 2 below, we can see a large stream of stars, dust, and gas that is being plucked out from the galaxy on the left by its neighboring galaxy. The explanation for this stream is relatively straightforward, but wordy. First, let's label the galaxy on the left "Galaxy A" and the galaxy on the right "Galaxy B". As the two galaxies approach each other, the stars in Galaxy A will all feel the gravitational pull of Galaxy B. However, because the stars on the right side of Galaxy A are closer to Galaxy B, they will feel a stronger pull. This is due to the fact that the force of gravity is inversely proportional to distance (i.e., objects close to a massive object will feel a stronger force, or tug, than objects far away). Eventually the two galaxies will get so close that Galaxy A will not be able to hold on to its stars closest to Galaxy B. The gravitational pull of Galaxy B will be strong enough that it can begin to pull out material from Galaxy A, creating a stream of stars, dust, and gas. This scenario is not unique to Galaxy A, however. Just as Galaxy B will exert a force on Galaxy A, so will Galaxy A exert a force on Galaxy B. Typically, both merging galaxies will have these streams. This is only the first stage in a galactic collision, however. The end results are much more interesting. The final scenario for this galactic battle is one of two cases. If the galaxies are moving fast enough, then all that may remain is a misshapen clump of stars, the remnant of a destroyed galaxy. Faster moving galaxies may even punch a hole in another galaxy, leaving its victim with a gaping hole surrounded by a ring of stars. The other scenario is a galactic merger. In this case, bigger is always better. The larger, more massive galaxy will swallow up the smaller, less massive galaxy, resulting in galactic cannibalism. There is evidence that our own galaxy, the Milky Way, has participated in this uncouth ceremony. You might think it impossible for astronomers to know if the Milky Way has devoured its neighboring brethren. If our galaxy really did absorb another galaxy, then all of the victim's stars would now be part of the Milky Way, and there would be no way to tell if any single star is our own or came from the victim. To solve this riddle, we must return to the topic of streams. As a small, dwarf galaxy collides and passes through our large, massive galaxy, it will pull some of the Milky Way's own stars with it. Galaxies may collide several times over millions of years before they merge, so there is a good chance we can catch these streams of stars.



九、盖斯凯尔的小说：《玛丽·巴顿》

标题	文体类型	文章内容与解析	考试日期
盖斯凯尔的小说：《玛丽·巴顿》（Mary Barton）	评论文一	<p>女作家盖斯凯尔(Gaskell)的小说：《玛丽·巴顿》（Mary Barton）。</p> <p>注：伊丽莎白·盖斯凯尔。英国小说家。周岁丧母，寄养在纳茨福德姨母家里，这座偏僻小城的风俗人情成为她日后创作的素材。14 岁时她到附近的斯特雷特福德镇一家女子学校学习。她自幼受到父亲文学修养的熏陶，也受到父亲和姨母虔诚的宗教信仰的影响。22 岁时，她与曼彻斯特唯一神教会的副主持威廉·盖斯凯尔结婚。她的作品都是在丈夫鼓励下写成的。作为下级牧师的妻子，她往往配合丈夫做些慈善工作，或护理穷苦的病人，因而有机会接触生活困难、有一定阶级觉悟的产业工人，了解他们的生活与思想。这一切都形象地体现在她的优秀的现实主义小说《玛丽·巴顿》之中。</p> <p>盖斯凯尔夫人共发表过 6 部长篇小说，《玛丽·巴顿》（1848）是第一部，它真实地反映了工人阶级的生活和争斗，在 19 世纪英国小说的发展中占着十分重要的地位。《玛丽·巴顿》揭露 19 世纪中叶大英帝国“黄金时代”的背面广大工人群众的悲惨命运。小说所描写的故事发生在 40 年代经济萧条时期，在阶级对立十分尖锐的曼彻斯特。玛丽·巴顿的父亲约翰·巴顿原来是个奉公守法的老工人，由于逐渐认识到工人阶级处于被剥削的地位，社会贫富悬殊，因而对资本家产生了仇恨，积极参加了工人运动。宪章运动失败后，资本家拒绝了罢工工人的要求，决定开工。约翰·巴顿等人杀死了工厂老板的儿子。这部小说反映了宪章运动时期的劳资斗争，获得了很大的成功。但小说的结尾写约翰·巴顿向老板自首，得到宽恕，表明作者受宗教信仰的影响，想用博爱与宽恕来调和阶级矛盾。这不仅损害了主人公的形象，也降低了作品的积极意义。但这部作品关于工人阶级的悲惨状况和工人斗争的描写仍是全书最生动感人的部分，有力地打破了关于资本主义制度的永恒性的幻想。</p>	<p>(199604)</p> <p>(201109)</p> <p>(201202)</p> <p>(201210)</p> <p>(201302)</p> <p>吴中东 p.145</p>

Mary Barton, particularly in its early chapters, is a moving response to the suffering of the industrial worker in the England of the 1840's. What is most impressive about the book is the intense and painstaking effort made by the author, Elizabeth Gaskell, to convey the experience of everyday life in working-class homes. Her method is partly documentary in nature: the novel includes such features as a carefully annotated reproduction of dialect, the exact details of food prices in an account of a tea party, an itemized description of the furniture of the Bartons' living room, and a transcription (again annotated) of the ballad "The Oldham Weaver." The interest of this record is considerable, even though the method has a slightly distancing effect.

As a member of the middle class, Gaskell could hardly help approaching working-class life as an outside observer and a reporter, and the reader of the novel is always conscious of this fact. But there is genuine imaginative re-creation in her accounts of the walk in Green Heys Fields, of tea at the Bartons' house, and of John Barton and his friend's discovery of the starving family in the cellar in the chapter "Poverty and Death." Indeed, for a similarly convincing re-creation of such families' emotions and responses (which are more crucial than the material details on which the mere reporter is apt to concentrate), the English novel had to wait 60 years for the early writing of D. H. Lawrence. If Gaskell never quite conveys the sense of full participation that would completely authenticate this aspect of *Mary Barton*, she still brings to these scenes an intuitive recognition of feelings that has its own sufficient conviction.

The chapter "Old Alice's History" brilliantly dramatizes the situation of that early generation of workers brought from the



villages and the countryside to the urban industrial centers. The account of Job Legh, the weaver and naturalist who is devoted to the study of biology, vividly embodies one kind of response to an urban industrial environment: an affinity for living things that hardens, by its very contrast with its environment, into a kind of crankiness. The early chapters—about factory workers walking out in spring into Green Heys Fields; about Alice Wilson, remembering in her cellar the twig-gathering for brooms in the native village that she will never again see; about Job Legh, intent on his impaled insects—capture the characteristic responses of a generation to the new and crushing experience of industrialism. The other early chapters eloquently portray the development of the instinctive cooperation with each other that was already becoming an important tradition among workers.

1. Which of the following best describes the author's attitude toward Gaskell's use of the method of documentary record in *Mary Barton*?
 - (A) Uncritical enthusiasm
 - (B) Unresolved ambivalence
 - (C) Qualified approval
 - (D) Resigned acceptance
 - (E) Mild irritation
2. According to the passage, *Mary Barton* and the early novels of D. H. Lawrence share which of the following?
 - (A) Depiction of the feelings of working-class families
 - (B) Documentary objectivity about working-class circumstances
 - (C) Richly detailed description of working-class adjustment to urban life
 - (D) Imaginatively structured plots about working-class characters
 - (E) Experimental prose style based on working-class dialect
3. Which of the following is most closely analogous to Job Legh in *Mary Barton*, as that character is described in the passage?
 - (A) An entomologist who collected butterflies as a child
 - (B) A small-town attorney whose hobby is nature photography
 - (C) A young man who leaves his family's dairy farm to start his own business
 - (D) A city dweller who raises exotic plants on the roof of his apartment building
 - (E) A union organizer who works in a textile mill under dangerous conditions
4. It can be inferred from examples given in the last paragraph of the passage that which of the following was part of "the new and crushing experience of industrialism" for many members of the English working class in the nineteenth century?
 - (A) Extortionate food prices
 - (B) Geographical displacement
 - (C) Hazardous working conditions
 - (D) Alienation from fellow workers
 - (E) Dissolution of family ties



5. It can be inferred that the author of the passage believes that *Mary Barton* might have been an even better novel if Gaskell had
- (A) concentrated on the emotions of a single character
 - (B) made no attempt to re-create experiences of which she had no firsthand knowledge
 - (C) made no attempt to reproduce working-class dialects
 - (D) grown up in an industrial city
 - (E) managed to transcend her position as an outsider
6. Which of the following phrases could best be substituted for the phrase “this aspect of *Mary Barton*” in line 29 without changing the meaning of the passage as a whole?
- (A) the material details in an urban working-class environment
 - (B) the influence of *Mary Barton* on Lawrence’s early work
 - (C) the place of *Mary Barton* in the development of the English novel
 - (D) the extent of the poverty and physical suffering among England’s industrial workers in the 1840’s
 - (E) the portrayal of the particular feelings and responses of working-class characters
7. The author of the passage describes *Mary Barton* as each of the following EXCEPT:
- (A) insightful
 - (B) meticulous
 - (C) vivid
 - (D) poignant
 - (E) lyrical

答案: CADBE EE



十、替代石油燃料

标题	文体类型	文章内容与解析	考试日期
替代石油燃料	总结文一	关于 methanol 甲醇, Ethanol 乙醇作为传统汽油燃料替代品, 对汽车废气排放的影响。 gasoline 还有新型能源, gasoline 是因为他的化学结构复杂而且会产生 byproducts, 但是同体积 methanol 作为新型能源产生的能量较少。	(201208) (201109) (199304) 吴中东 p632

Although, recent years have seen substantial reductions in noxious pollutants from individual motor vehicles, the number of such vehicles has been steadily increasing consequently, more than 100 cities in the United States still have levels of carbon monoxide, particulate matter, and ozone (generated by photochemical reactions with hydrocarbons from vehicle exhaust) that exceed legally established limits. There is a growing realization that the only effective way to achieve further reductions in vehicle emissions—short of a massive shift away from the private automobile—is to replace conventional diesel fuel and gasoline with cleaner-burning fuels such as compressed natural gas, liquefied petroleum gas, ethanol, or methanol.

All of these alternatives are carbon-based fuels whose molecules are smaller and simpler than those of gasoline. These molecules burn more cleanly than gasoline, in part because they have fewer, if any, carbon-carbon bonds, and the hydrocarbons they do emit are less likely to generate ozone. The combustion of larger molecules, which have multiple carbon-carbon bonds, involves a more complex series of reactions. These reactions increase the probability of incomplete combustion and are more likely to release uncombusted and photochemically active hydrocarbon compounds into the atmosphere. On the other hand, alternative fuels do have drawbacks. Compressed natural gas would require that vehicles have a set of heavy fuel tanks—a serious liability in terms of performance and fuel efficiency—and liquefied petroleum gas faces fundamental limits on supply.

Ethanol and methanol, on the other hand, have important advantages over other carbon-based alternative fuels: they have a higher energy content per volume and would require minimal changes in the existing network for distributing motor fuel. Ethanol is commonly used as a gasoline supplement, but it is currently about twice as expensive as methanol, the low cost of which is one of its attractive features. Methanol's most attractive feature, however, is that it can reduce by about 90 percent the vehicle emissions that form ozone, the most serious urban air pollutant.

Like any alternative fuel, methanol has its critics. Yet much of the criticism is based on the use of "gasoline clone" vehicles that do not incorporate even the simplest design improvements that are made possible with the use of methanol. It is true, for example, that a given volume of methanol provides only about one-half of the energy that gasoline and diesel fuel do; other things being equal, the fuel tank would have to be somewhat larger and heavier. However, since methanol-fueled vehicles could be designed to be much more efficient than "gasoline clone" vehicles fueled with methanol, they would need comparatively less fuel. Vehicles incorporating only the simplest of the engine improvements that methanol makes feasible would still contribute to an immediate lessening of urban air pollution.



1. The author of the passage is primarily concerned with
 - (A) countering a flawed argument that dismisses a possible solution to a problem
 - (B) reconciling contradictory points of view about the nature of a problem
 - (C) identifying the strengths of possible solutions to a problem
 - (D) discussing a problem and arguing in favor of one solution to it
 - (E) outlining a plan of action to solve a problem and discussing the obstacles blocking that plan
2. According to the passage, incomplete combustion is more likely to occur with gasoline than with an alternative fuel because
 - (A) the combustion of gasoline releases photochemically active hydrocarbons
 - (B) the combustion of gasoline involves an intricate series of reactions
 - (C) gasoline molecules have a simple molecular structure
 - (D) gasoline is composed of small molecules
 - (E) gasoline is a carbon-based fuel
3. The passage suggests which of the following about air pollution?
 - (A) Further attempts to reduce emissions from gasoline-fueled vehicles will not help lower urban air-pollution levels.
 - (B) Attempts to reduce the pollutants that an individual gasoline-fueled vehicle emits have been largely unsuccessful.
 - (C) Few serious attempts have been made to reduce the amount of pollutants emitted by gasoline-fueled vehicles.
 - (D) Pollutants emitted by gasoline-fueled vehicles are not the most critical source of urban air pollution
 - (E) Reductions in pollutants emitted by individual vehicles have been offset by increases in pollution from sources other than gasoline-fueled vehicles.
4. which of the following most closely parallels the situation described in the first sentence of the passage?
 - (A) Although a town reduces its public services in order to avoid a tax increase, the town's tax rate exceeds that of other towns in the surrounding area.
 - (B) Although a state passes strict laws to limit the type of toxic material that can be disposed of in public landfills, illegal dumping continues to increase.
 - (C) Although a town's citizens reduce their individual use of water, the town's water supplies continue to dwindle because of a steady increase in the total population of the town.
 - (D) Although a country attempts to increase the sale of domestic goods by adding a tax to the price of imported goods, the sale of imported goods within the country continues to increase
 - (E) Although a country reduces the speed limit on its national highways, the number of fatalities caused by automobile accidents continues to increase.



5. The author describes which of the following as the most appealing feature of methanol?
- (A) It is substantially less expensive than ethanol.
 - (B) It could be provided to consumers through the existing motor fuel distribution system.
 - (C) It has a higher energy content than other alternative fuels.
 - (D) Its use would make design improvements in individual vehicles feasible
 - (E) Its use would substantially reduce ozone levels.
6. It can be inferred from the passage that a vehicle specifically designed to use methanol for fuel would
- (A) be somewhat lighter in total body weight than a conventional vehicle fueled with gasoline
 - (B) be more expensive to operate than a conventional vehicle fueled with gasoline
 - (C) have a larger and more powerful engine than a conventional vehicle fueled with gasoline
 - (D) have a larger and heavier fuel tank than a "gasoline clone" vehicle fueled with methanol
 - (E) average more miles per gallon than a "gasoline clone" vehicle fueled with methanol
7. It can be inferred that the author of the passage most likely regards the criticism of methanol in the last paragraph as
- (A) flawed because of the assumptions on which it is based
 - (B) inapplicable because of an inconsistency in the critics' arguments
 - (C) misguided because of its exclusively technological focus
 - (D) inaccurate because it ignores consumers' concerns
 - (E) invalid because it reflects the personal bias of the critics

答案: DBACEEA



十一、法国二月革命

标题	文体类型	文章内容与解析	考试日期
法国 二月革命	说明文	February 18XX 年，还有其他几个战争 法国二月革命之所以不若其他革命有名的原因是因为其戏剧张力较低且没有留下太多纪录。	(201208) (201207) (201202) (199304) 吴中东 p313

In February 1848 the people of Paris rose in revolt against the constitutional monarchy of Louis-Philippe. Despite the existence of excellent narrative accounts, the February Days, as this revolt is called, have been largely ignored by social historians of the past two decades. For each of the three other major insurrections in nineteenth-century Paris—July 1830, June 1848, and May 1871—there exists at least a sketch of participants' backgrounds and an analysis, more or less rigorous, of the reasons for the occurrence of the uprisings. Only in the case of the February Revolution do we lack a useful description of participants that might characterize it in the light of what social history has taught us about the process of revolutionary mobilization.

Two reasons for this relative neglect seem obvious. First, the insurrection of February has been overshadowed by that of June. The February Revolution overthrew a regime, to be sure, but met with so little resistance that it failed to generate any real sense of historical drama. Its successor, on the other hand, appeared to pit key socioeconomic groups in a life-or-death struggle and was widely seen by contemporary observers as marking a historical departure. Through their interpretations, which exert a continuing influence on our understanding of the revolutionary process, the impact of the events of June has been magnified, while, as an unintended consequence, the significance of the February insurrection has been diminished. Second, like other "successful" insurrections, the events of February failed to generate the most desirable kinds of historical records. Although the June insurrection of 1848 and the Paris Commune of 1871 would be considered watersheds of nineteenth-century French history by any standard, they also present the social historian with a signal advantage: these failed insurrections created a mass of invaluable documentation as a by-product of authorities' efforts to search out and punish the rebels.

Quite different is the outcome of successful insurrections like those of July 1830 and February 1848. Experiences are retold, but participants typically resume their daily routines without ever recording their activities. Those who played salient roles may become the objects of highly embellished verbal accounts or in rare cases, of celebratory articles in contemporary periodicals. And it is true that the publicly acknowledged leaders of an uprising frequently write memoirs. However, such documents are likely to be highly unreliable, unrepresentative, and unsystematically preserved, especially when compared to the detailed judicial dossiers prepared for everyone arrested following a failed insurrection. As a consequence, it may prove difficult or impossible to establish for a successful revolution a comprehensive and trustworthy picture of those who participated, or to answer even the most basic questions one might pose concerning the social origins of the insurgents.



1. According to the passage, "a useful description of participants" exists for which of the following insurrections of nineteenth-century France?
- I. The July Insurrection of 1830
 - II. The February Revolution of 1848
 - III. The June insurrection of 1848
 - IV. The May insurrection of 1871
- (A) I and III only
(B) II and IV only (C)
I, II, and III only (D) I,
III, and IV only (E) II,
III, and IV only
2. It can be inferred from the passage that support for the objectives of the February Revolution was
- (A) negligible
(B) misguided
(C) fanatical
(D) spontaneous
(E) widespread
3. Which of the following, best describes the organization of the second paragraph?
- (A) The thesis of the passage is stated and supporting evidence systematically presented.
(B) Two views regarding the thesis presented in the first paragraph are compared and contrasted.
(C) Evidence refuting the thesis presented in the first paragraph is systematically presented.
(D) The thesis presented in the first paragraph is systematically supported.
(E) The thesis presented in the first paragraph is further defined and a conclusion drawn.
4. It can be inferred from the passage that the author considers which of the following essential for understanding a revolutionary mobilization?
- (A) A comprehensive theory of revolution that can be applied to the major insurrections of the nineteenth century
(B) Awareness of the events necessary for a revolution to be successful
(C) Access to narratives and memoirs written by eyewitnesses of a given revolution
(D) The historical perspective provided by the passage of a considerable amount of time
(E) Knowledge of the socioeconomic backgrounds of a revolution's participants
5. Which of the following can be inferred about the "detailed judicial dossiers" referred to?
- (A) Information contained in the dossiers sheds light on the social origins of a revolution's participants.
(B) The dossiers closely resemble the narratives written by the revolution's leaders in their personal memoirs.
(C) The information that such dossiers contain is untrustworthy and unrepresentative of a revolution's participants.
(D) Social historians prefer to avoid such dossiers whenever possible because they are excessively detailed
(E) The February Revolution of 1848 produced more of these dossiers than did the June insurrection.



6. Which of the following is the most logical objection to the claim made in the first sentence of the third paragraph?
- (A) The February Revolution of 1848 is much less significant than the July insurrection of 1830.
 - (B) The backgrounds and motivations of participants in the July insurrection of 1830 have been identified, however cursorily.
 - (C) Even less is known about the July insurrection of 1830 than about the February Revolution of 1848.
 - (D) Historical records made during the July insurrection of 1830 are less reliable than those made during the May insurrection of 1871.
 - (E) The importance of the July insurrection of 1830 has been magnified at the expense of the significance of the February Revolution of 1848.
7. With which of the following statements regarding revolution would the author most likely agree?
- (A) Revolutionary mobilization requires a great deal of planning by people representing disaffected groups.
 - (B) The objectives of the February Revolution were more radical than those of the June insurrection.
 - (C) The process of revolutionary mobilization varies greatly from one revolution to the next.
 - (D) Revolutions vary greatly in the usefulness of the historical records that they produce.
 - (E) As knowledge of the February Revolution increases, chances are good that its importance will eventually eclipse that of the June insurrection.

答案: DBDEABD



十二、日常用品的设计

标题	文体类型	文章内容与解析	考试日期
日常用品的设计	说明文	西方技术发展史：论非语言思维与设计在技术发展中的重要性。 谈 Design 和 Engineering 的。	(201202) (199504) 吴中东 p673

Many objects in daily use have clearly been influenced by science, but their form and function, their dimensions and appearance, were determined by technologists, artisans, designers, inventors, and engineers—using non-scientific modes of thought. Many features and qualities of the objects that a technologist thinks about cannot be reduced to unambiguous verbal descriptions; they are dealt with in the mind by a visual, nonverbal process. In the development of Western technology, it has been non-verbal thinking, by and large, that has fixed the outlines and filled in the details of our material surroundings. Pyramids, cathedrals, and rockets exist not because of geometry or thermodynamics, but because they were first a picture in the minds of those who built them.

The creative shaping process of a technologist's mind can be seen in nearly every artifact that exists. For example, in designing a diesel engine, a technologist might impress individual ways of nonverbal thinking on the machine by continually using an intuitive sense of rightness and fitness. What would be the shape of the combustion chamber? Where should the valves be placed? Should it have a long or short piston? Such questions have a range of answers that are supplied by experience, by physical requirements, by limitations of available space, and not least by a sense of form. Some decisions, such as wall thickness and pin diameter, may depend on scientific calculations, but the nonscientific component of design remains primary.

Design courses, then, should be an essential element in engineering curricula. Nonverbal thinking, a central mechanism in engineering design, involves perceptions, the stock-in-trade of the artist, not the scientist. Because perceptive processes are not assumed to entail "hard thinking," nonverbal thought is sometimes seen as a primitive stage in the development of cognitive processes and inferior to verbal or mathematical thought. But it is paradoxical that when the staff of the *Historic American Engineering Record* wished to have drawings made of machines and isometric views of industrial processes for its historical record of American engineering, the only college students with the requisite abilities were not engineering students, but rather students attending architectural schools.

If courses in design, which in a strongly analytical engineering curriculum provide the background required for practical problem-solving, are not provided, we can expect to encounter silly but costly errors occurring in advanced engineering systems. For example, early models of high-speed railroad cars loaded with sophisticated controls were unable to operate in a snowstorm because a fan sucked snow into the electrical system. Absurd random failures that plague automatic control systems are not merely trivial aberrations; they are a reflection of the chaos that results when design is assumed to be primarily a problem in mathematics.



1. In the passage, the author is primarily concerned with
 - (A) identifying the kinds of thinking that are used by technologists
 - (B) stressing the importance of nonverbal thinking in engineering design
 - (C) proposing a new role for nonscientific thinking in the development of technology
 - (D) contrasting the goals of engineers with those of technologists
 - (E) criticizing engineering schools for emphasizing science in engineering curricula

2. It can be inferred that the author thinks engineering curricula are
 - (A) strengthened when they include courses in design
 - (B) weakened by the substitution of physical science courses for courses designed to develop mathematical skills
 - (C) strong because nonverbal thinking is still emphasized by most of the courses
 - (D) strong despite the errors that graduates of such curricula have made in the development of automatic control systems
 - (E) strong despite the absence of nonscientific modes of thinking

3. Which of the following statements best illustrates the main point of the first two paragraphs of the passage?
 - (A) When a machine like a rotary engine malfunctions, it is the technologist who is best equipped to repair it.
 - (B) Each component of an automobile—for example, the engine or the fuel tank—has a shape that has been scientifically determined to be best suited to that component's function.
 - (C) A telephone is a complex instrument designed by technologists using only nonverbal thought.
 - (D) The designer of a new refrigerator should consider the designs of other refrigerators before deciding on its final form.
 - (E) The distinctive features of a suspension bridge reflect its designer's conceptualization as well as the physical requirements of its site.

4. Which of the following statements would best serve as an introduction to the passage?
 - (A) The assumption that the knowledge incorporated in technological developments must be derived from science ignores the many non-scientific decisions made by technologists.
 - (B) Analytical thought is no longer a vital component in the success of technological development.
 - (C) As knowledge of technology has increased, the tendency has been to lose sight of the important role played by scientific thought in making decisions about form, arrangement, and texture.
 - (D) A movement in engineering colleges toward a technician's degree reflects a demand for graduates who have the nonverbal reasoning ability that was once common among engineers
 - (E) A technologist thinking about a machine, reasoning through the successive steps in a dynamic process, can actually turn the machine over mentally.



5. The author calls the predicament faced by the *Historic American Engineering Record* "paradoxical" most probably because
- (A) the publication needed drawings that its own staff could not make
 - (B) architectural schools offered but did not require engineering design courses for their students
 - (C) college students were qualified to make the drawings while practicing engineers were not
 - (D) the drawings needed were so complicated that even students in architectural schools had difficulty making them
 - (E) engineering students were not trained to make the type of drawings needed to record the development of their own discipline
6. According to the passage, random failures in automatic control systems are "not merely trivial aberrations" (lines 53) because
- (A) automatic control systems are designed by engineers who have little practical experience in the field
 - (B) the failures are characteristic of systems designed by engineers relying too heavily on concepts in mathematics
 - (C) the failures occur too often to be taken lightly
 - (D) designers of automatic control systems have too little training in the analysis of mechanical difficulties
 - (E) designers of automatic control systems need more help from scientists who have a better understanding of the analytical problems to be solved before such systems can work efficiently
7. The author uses the example of the early models of high-speed railroad cars primarily to
- (A) weaken the argument that modern engineering systems have major defects because of an absence of design courses in engineering curricula
 - (B) support the thesis that the number of errors in modern engineering systems is likely to increase
 - (C) illustrate the idea that courses in design are the most effective means for reducing the cost of designing engineering systems
 - (D) support the contention that a lack of attention to the nonscientific aspects of design results in poor conceptualization by engineers
 - (E) weaken the proposition that mathematics is a necessary part of the study of design

答案: BAEABD



十三、彗星的原始遗迹

标题	文体类型	文章内容与解析	考试日期
彗星的原始遗迹	总结文 2	<p>宇宙早期物质的重要证据</p> <p>提出旧理论：某个远离 XX 的星体表面上的物质由于低温的缘故，以为他们很 pristine，被认为是保留了宇宙早期物质的重要证据。宇宙里一些彗星 comet 的构成，是不是 pristine relics，有人说是。</p> <p>提出证据 1，反驳旧理论：有三个因素可以导致物质改变。有人说 radioactive 的环境导致 comet 变质，来自宇宙的射线（array）会改变表面 chemical compound 的变化；</p> <p>提出证据 2，反驳旧理论：又有人说 comet 接近太阳时，太阳风把外面变质的都吹掉了；但是另外又有人说即使吹掉了，但因为太阳温度太高，里面的物质因为加温还是变质了，因此里面的 relics 很难测定。最后（以 though 开始）说内部的 isotope evolve 怎么了（有题）。</p> <p>题目：（多选题）。科学家认为哪些可以导致彗星成分改变？ 参考答案：其中有一个选项是 radiative decaying—改变彗星的内部成分；另外两个 都是改变彗星的外观（三个选项都选了）</p> <p>题目：说“内部的 isotope evolve。”这句话是什么意思</p> <p>选项：反驳了主题</p> <p>选项：反驳了科学家 is able to 通过这个方法研究</p>	<p>(201201)</p> <p>(201208)</p> <p>(201209)</p> <p>(201210)</p> <p>(201211)</p>

The long-held perspective that comets are pristine remnants from the formation of the solar system has evolved from the prevailing views of 30 years ago, finds planetary scientist Dr. S. Alan Stern in a paper published in the journal Nature.

"It's fair to say that a sea change has taken place," says Stern, director of the Space Studies Department in the SwRI Space Science and Engineering Division. "We used to consider comets as wholly unchanged relics that had been stored ever since the era of solar system formation in a distant, cold, timeless deep freeze called the Oort cloud. We now appreciate that a variety of processes slowly modify comets during their storage there," he says. "As a result, it's become clear that the Oort cloud and its cousin the Kuiper Belt are not such perfect deep freezes."

The first evolutionary process to be recognized as affecting comets during their long storage was radiation damage, followed by the discovery that sandblasting from dust grains in the interstellar medium plays an important role. Next, researchers theorized that comets in the Oort cloud are heated to scientifically significant temperatures by passing stars and supernovae, says Stern. More recently, researchers are finding that comets in the Kuiper Belt are heavily damaged by collisions.

"It also now seems inevitable that most comets from the Kuiper Belt, though constructed of ancient material, cannot themselves be ancient -- instead they must be 'recently' created chips off larger Kuiper Belt Objects, formed as a result of violent impacts," says Stern. "This is truly a paradigm shift. Many of the short-period comets we see aren't even ancient!"

The classical view that comets do not evolve while they are stored far from the sun in the Oort cloud and Kuiper Belt began to change as far back as the 1970s, but the pace of discoveries about the way comets evolve picked up considerably in the 1980s and 1990s.



As a result of these findings, astronomers now better appreciate that comets, though still the most pristine bodies known, have been modified in several important ways since their birth, says Stern.

The realization that comets evolve during their long storage in the Oort cloud and Kuiper Belt provides insight and context to more confidently evaluate the results of astronomical and space mission observations of comets. So, too, it suggests that cometary sample return missions now on the drawing board for NASA should employ relatively deep subsurface sampling if truly pristine, ancient material is to be collected.

十四、舞蹈动作中的物理原理

标题	文体类型	文章内容与解析	考试日期
舞蹈动作中的物理原理	说明文	舞蹈动作的物理特性分析	(201205) (199402) 吴中东 P. 672

Analyzing the physics of dance can add fundamentally to a dancer's skill. Although dancers seldom see themselves totally in physical terms—as body mass moving through space under the influence of well-known forces and obeying physical laws—neither can they afford to ignore the physics of movement. For example, no matter how much a dancer wishes to leap off the floor and then start turning, the law of conservation of angular momentum absolutely prevents such a movement. Some movements involving primarily vertical or horizontal motions of the body as a whole, in which rotations can be ignored, can be studied using simple equations of linear motion in three dimensions. However, rotational motions require more complex approaches that involve analyses of the way the body's mass is distributed, the axes of rotation involved in different types of movement, and the sources of the forces that produce the rotational movement.

1. The primary purpose of the passage is to

- (A) initiate a debate over two approaches to analyzing a field of study (B) describe how one field of knowledge can be applied to another field (C) point out the contradictions between two distinct theories
- (D) define and elaborate on an accepted scientific principle
- (E) discuss the application of a new theory within a new setting

2. The author mentions all of the following as contributing to an understanding of the physics of dance EXCEPT:

- (A) the law of conservation of angular momentum
- (B) analyses of the way in which the body's mass is distributed
- (C) equations of linear motion in three dimensions
- (D) analyses of the sources that produce rotational motions
- (E) the technical terms for movements such as leaps and turns



3. The author implies that dancers can become more skilled by doing which of the following?
- (A) Ignoring rotational movements
- (B) Understanding the forces that permit various movements
- (C) Solving simple linear equations
- (D) Learning the technical terms utilized by choreographers
- (E) Circumventing the law of conservation of angular momentum
4. Analysis of which of the following would require the kind of complex approach described in the last sentence?
- (A) A long leap across space
- (B) A short jump upward with a return to the same place
- (C) A sustained and controlled turn in place
- (D) Short, rapid steps forward and then backward without turning
- (E) Quick sidesteps in a diagonal line

答案: BEBC

十五、鸟鸣变化的作用

标题	文体类型	文章内容与解析	考试日期
鸟鸣变化的作用	总结文 2	<p>提出旧理论: 一种鸟, 鸟叫声变化 (switch song, song-match。。。) 作用不仅是求偶, 也可以是防止其他 male bird 入侵 (aggress) 的。 提出新理论: 现在发现还有其他情况也会使得鸟叫发生变化, 然后。。。, 说有时候鸟叫声一样 common, 有时候不一样 (没读懂), 最后说 neighbor 的鸟通常与对方的叫声要不完全一样。</p> <p>【题目】 有细节, 还有某句话作用。</p>	(201205) (199604)

Over the years, biologists have suggested two main pathways by which sexual selection may have shaped the evolution of male bird-song. In the first, male competition and intrasexual selection produce relatively short, simple songs used mainly in territorial behavior. In the second, female choice and intersexual selection produce longer, more complicated songs used mainly in mate attraction; (like such visual ornamentation as the peacock's tail, elaborate vocal characteristics increase the male's chances of being chosen as a mate, and he thus enjoys more reproductive success than his less ostentatious rivals). The two pathways are not mutually exclusive, and we can expect to find examples that reflect their interaction. Teasing them apart has been an important challenge to evolutionary biologists.

Early research confirmed the role of intrasexual selection. In a variety of experiments in the field, males responded aggressively to recorded songs by exhibiting territorial behavior near the speakers. The breakthrough for research into intersexual selection came in the development of a new technique for investigating female response in the laboratory. When female cowbirds raised in isolation in sound-proof chambers were exposed to recordings of male song, they responded by exhibiting mating behavior. By quantifying the responses, researchers were able to determine what particular features of the song were most important. (In further experiments on song sparrows, researchers found that when exposed to a single song type repeated several times or to a repertoire of different song types, females responded more to the latter. The beauty of the experimental design is that it effectively rules out confounding variables; acoustic isolation assures that the female can respond only to the song structure itself).

If intersexual selection operates as theorized, males with more complicated songs should not only attract females more



readily but should also enjoy greater reproductive success. At first, however, researchers doing fieldwork with song sparrows found no correlation between larger repertoires and early mating, which has been shown to be one indicator of reproductive success; further, common measures of male quality used to predict reproductive success, such as weight, size, age, and territory, also failed to correlate with song complexity.

The confirmation researchers had been seeking was finally achieved in studies involving two varieties of warblers. Unlike the song sparrow, which repeats one of its several song types in bouts before switching to another, the warbler continuously composes much longer and more variable songs without repetition. For the first time, researchers found a significant correlation between repertoire size and early mating, and they discovered further that repertoire size had a more significant effect than any other measure of male quality on the number of young produced. The evidence suggests that warblers use their extremely elaborate songs primarily to attract females, clearly confirming the effect of intersexual selection on the evolution of birdsong.

1. The passage is primarily concerned with

- (A) showing that intrasexual selection has a greater effect on birdsong than does intersexual selection
- (B) contrasting the role of song complexity in several species of birds
- (C) describing research confirming the suspected relationship between intersexual selection and the complexity of birdsong
- (D) demonstrating the superiority of laboratory work over field studies in evolutionary biology
- (E) illustrating the effectiveness of a particular approach to experimental design in evolutionary biology

2. The author mentions the peacock's tail in line 8 most probably in order to

- (A) cite an exception to the theory of the relationship between intrasexual selection and male competition
- (B) illustrate the importance of both of the pathways that shaped the evolution of birdsong
- (C) draw a distinction between competing theories of intersexual selection
- (D) give an example of a feature that may have evolved through intersexual selection by female choice
- (E) refute a commonly held assumption about the role of song in mate attraction

3. According to the passage, which of the following is specifically related to intrasexual selection?

- (A) Female choice
- (B) Territorial behavior (C)
- Complex song types (D)
- Large song repertoires (E)
- Visual ornamentation

4. Which of the following, if true, would most clearly demonstrate the interaction mentioned in lines 6-7?

- (A) Female larks respond similarly both to short, simple songs and to longer, more complicated songs.
- (B) Male canaries use visual ornamentation as well as elaborate song repertoires for mate attraction.
- (C) Both male and female blackbirds develop elaborate visual and vocal characteristics.
- (D) Male jays use songs to compete among themselves and to attract females.
- (E) Male robins with elaborate visual ornamentation have as much reproductive success as rivals with elaborate vocal



characteristics.

5. The passage indicates that researchers raised female cowbirds in acoustic isolation in order to

(A) eliminate confounding variables

(B) approximate field conditions (C)

measure reproductive success (D)

quantify repertoire complexity (E)

prevent early mating



6. According to the passage, the song sparrow is unlike the warbler in that the song sparrow
- (A) uses songs mainly in territorial behavior
 - (B) continuously composes long and complex songs
 - (C) has a much larger song repertoire
 - (D) repeats one song type before switching to another
 - (E) responds aggressively to recorded songs
7. The passage suggests that the song sparrow experiments mentioned in lines 37-43 failed to confirm the role of intersexual selection because
- (A) females were allowed to respond only to the song structure
 - (B) song sparrows are unlike other species of birds
 - (C) the experiments provided no evidence that elaborate songs increased male reproductive success
 - (D) the experiments included the songs of only a small number of different song sparrows
 - (E) the experiments duplicated some of the limitations of previous field studies

Ans: CDBDA DC



十六、海底火山生物

标题	文体类型	文章内容与解析	考试日期
海底火山生物		第一句是: The deep sea typically has a sparse fauna dominated by tiny worms and crustaceans, with an even sparser distribution of larger animals.	(201208) No. 8-3

(This passage is excerpted from an article that was published in 1981.)

The deep sea typically has a sparse fauna dominated by tiny worms and crustaceans, with an even sparser distribution of larger animals. However, near **hydrothermal** vents, areas of the ocean where warm water emerges from subterranean sources, live remarkable densities of huge clams, blind crabs, and fish.

Most deep-sea faunas rely for food on **particulate matter**, ultimately derived from photosynthesis, falling from above. The food supplies necessary to sustain the large vent communities, however, must be many times the ordinary fallout. The first reports describing vent faunas proposed two possible sources of nutrition: bacterial chemosynthesis, production of food by bacteria using energy derived from chemical changes, and advection, the drifting of food materials from surrounding regions. Later, evidence in support of the idea of intense local chemosynthesis was accumulated: hydrogen sulfide was found in vent water; many vent-site bacteria were found to be capable of chemosynthesis; and extremely large concentrations of bacteria were found in samples of vent water thought to be pure. This final observation seemed decisive. If such astonishing concentrations of bacteria were typical of vent outflow, then food within the vent would dwarf any contribution from advection. Hence, the widely quoted conclusion was reached that bacterial chemosynthesis provides the foundation for hydrothermal-vent food chains—an exciting prospect because no other communities on Earth are independent of photosynthesis.

There are, however, certain difficulties with this interpretation. For example, some of the large sedentary organisms associated with vents are also found at ordinary deep-sea temperatures many meters from the nearest hydrothermal sources. This suggests that bacterial chemosynthesis is not a sufficient source of nutrition for these creatures. Another difficulty is that similarly dense populations of large deep-sea animals have been found in the proximity of “smokers”—vents where water emerges at temperatures up to 350°C. No bacteria can survive such heat, and no bacteria were found there. Unless smokers are consistently located near more hospitable warm-water vents, chemosynthesis can account for only a fraction of the vent faunas. It is conceivable, however, that these large, sedentary organisms do in fact feed on bacteria that grow in warm-water vents, rise in the vent water, and then **rain in** peripheral areas to nourish animals living some distance from the warm-water vents.

Nonetheless advection is a more likely alternative food source. Research has demonstrated that advective flow, which originates near the surface of the ocean where suspended particulate matter accumulates, transports some of that matter and water to the vents. Estimates suggest that for every cubic meter of vent discharge, 350 milligrams of particulate organic material would be advected into the vent area. Thus, for an average-sized vent, advection could provide more than 30 kilograms of potential food per day. In addition, it is likely that small live animals in the advected water might be killed or stunned by thermal and/or chemical shock, thereby contributing to the food supply of vents.



1. The passage provides information for answering which of the following questions?
 - (A) What causes warm-water vents to form?
 - (B) Do vent faunas consume more than do deep-sea faunas of similar size?
 - (C) Do bacteria live in the vent water of smokers?
 - (D) What role does hydrogen sulfide play in chemosynthesis?
 - (E) What accounts for the locations of deep-sea smokers?

2. The information in the passage suggests that the majority of deep-sea faunas that live in nonvent habitats have which of the following characteristics?
 - (A) They do not normally feed on particles of food in the water.
 - (B) They are smaller than many vent faunas.
 - (C) They are predators.
 - (D) They derive nutrition from a chemosynthetic food source.
 - (E) They congregate around a single main food source.

3. The primary purpose of the passage is to
 - (A) describe a previously unknown natural phenomenon
 - (B) reconstruct the evolution of a natural phenomenon
 - (C) establish unequivocally the accuracy of a hypothesis
 - (D) survey explanations for a natural phenomenon and determine which is best supported by evidence
 - (E) entertain (to receive and take into consideration "refused to entertain our plea") criticism of the author's research and provide an effective response

4. Which of the following does the author cite as a weakness in the argument that bacterial chemosynthesis provides the foundation for the food chains at deep-sea vents?
 - (A) Vents are colonized by some of the same animals found in other areas of the ocean floor.
 - (B) Vent water does not contain sufficient quantities of hydrogen sulfide.
 - (C) Bacteria cannot produce large quantities of food quickly enough.
 - (D) Large concentrations of minerals are found in vent water.
 - (E) Some bacteria found in the vents are incapable of chemosynthesis.



5. Which of the following is information supplied in the passage that would support the statement that the food supplies necessary to sustain vent communities must be many times that of ordinary fallout?
- I. Large vent faunas move from vent to vent in search of food.
 - II. Vent faunas are not able to consume food produced by photosynthesis.
 - III. Vents are more densely populated than are other deep-sea areas.
- (A) I only
(B) III only
(C) I and II only
(D) II and III only
(E) I, II, and III
6. The author refers to “smokers” (line 38) most probably in order to
- (A) show how thermal shock can provide food for some vent faunas by stunning small animals
(B) prove that the habitat of most deep-sea animals is limited to warm-water vents
(C) explain how bacteria carry out chemosynthesis
(D) demonstrate how advection compensates for the lack of food sources on the seafloor
(E) present evidence that bacterial chemosynthesis may be an inadequate source of food for some vent faunas
7. Which of the following can be inferred from the passage about the particulate matter that is carried down from the surface of the ocean?
- (A) It is the basis of bacterial chemosynthesis in the vents.
(B) It may provide an important source of nutrition for vent faunas.
(C) It may cause the internal temperature of the vents to change significantly.
(D) It is transported as large aggregates of particles.
(E) It contains hydrogen sulfide.

Ans: CBDAB EB



十七、蝙蝠的回声定位

标题	文体类型	文章内容与解析	考试日期
蝙蝠的回声定位		蝙蝠的捕食技巧（有关长短声波）	(201208) No. 8-2

Echolocating bats emit sounds in patterns—characteristic of each species—that contain both frequency-modulated (FM) and constant-frequency (CF) signals. The broadband FM signals and the narrowband CF signals travel out to a target, reflect from it, and return to the hunting bat. In this process of transmission and reflection, the sounds are changed, and the changes in the echoes enable the bat to perceive features of the target.

The FM signals report information about target characteristics that modify the timing and the fine frequency structure, or spectrum, of echoes—for example, the target's size, shape, texture, surface structure, and direction in space. Because of their narrow bandwidth, CF signals portray only the target's presence and, in the case of some bat species, its motion relative to the bat's. Responding to changes in the CF echo's frequency, bats of some species correct in flight for the direction and velocity of their moving prey.

1. According to the passage, the information provided to the bat by CF echoes differs from that provided by FM echoes in which of the following ways?
 - (A) Only CF echoes alert the bat to moving targets.
 - (B) Only CF echoes identify the range of widely spaced targets.
 - (C) Only CF echoes report the target's presence to the bat.
 - (D) In some species, CF echoes enable the bat to judge whether it is closing in on its target.
 - (E) In some species, CF echoes enable the bat to discriminate the size of its target and the direction in which the target is moving.
2. According to the passage, the configuration of the target is reported to the echolocating bat by changes in the
 - (A) echo spectrum of CF signals
 - (B) echo spectrum of FM signals
 - (C) direction and velocity of the FM echoes
 - (D) delay between transmission and reflection of the CF signals
 - (E) relative frequencies of the FM and the CF echoes
3. The author presents the information concerning bat sonar in a manner that could be best described as
 - (A) argumentative
 - (B) commendatory
 - (C) critical
 - (D) disbelieving
 - (E) objective



4. Which of the following best describes the organization of the passage?
- (A) A fact is stated a process is outlined and specific details of the process are described
 - (B) A fact is stated and examples suggesting that a distinction needs correction are considered
 - (C) A fact is stated a theory is presented to explain that fact and additional facts are introduced to validate the theory
 - (D) A fact is stated and two theories are compared in light of their explanations of this fact
 - (E) A fact is stated a process is described and examples of still another process are illustrated in detail

Ans: OBEA



十八、云系对全球变暖气候模型预测的影响

标题	文体类型	文章内容与解析	考试日期
云系对全球变暖气候模型预测的影响		<p>Cloud system's impact on the prediction of global warming using climate models</p> <p>P1, cloud hinders these models to accurately predict the impact on global warming. A kind of "S cloud" can compensate global warming, while a kind of cirrus cloud will exacerbate it.</p> <p>P2, when comparing these models excluding clouds, all such models returns compatible results. but if clouds are included, results become diversified, making it difficult to predict.</p> <p>【问题】to accurately predict global warming, what does these scientist have to answer?</p> <p>A. what kind of cloud system will form on earth?</p> <p>D. what fraction of the cloud is cirrus cloud?</p>	<p>(201207)</p> <p>(201210)</p> <p>*1996 年 04 月北美</p>

As of the late 1980's, neither theorists nor large-scale computer climate models could accurately predict whether cloud systems would help or hurt a warming globe. Some studies suggested that a four percent increase in stratocumulus clouds over the ocean could compensate for a doubling in atmospheric carbon dioxide, preventing a potentially disastrous planetwide temperature increase. On the other hand, an increase in cirrus clouds could increase global warming.

That clouds represented the weakest element in climate models was illustrated by a study of fourteen such models. Comparing climate forecasts for a world with double the current amount of carbon dioxide, researchers found that the models agreed quite well if clouds were not included. But when clouds were incorporated, a wide range of forecasts was produced. With such discrepancies plaguing the models, scientists could not easily predict how quickly the world's climate would change, nor could they tell which regions would face dustier droughts or deadlier monsoons.

1. The author of the passage is primarily concerned with

- (A) confirming a theory
- (B) supporting a statement
- (C) presenting new information (D)
- predicting future discoveries (E)
- reconciling discrepant findings

2. It can be inferred that one reason the fourteen models described in the passage failed to agree was that

- (A) they failed to incorporate the most up-to-date information about the effect of clouds on climate
- (B) they were based on faulty information about factors other than clouds that affect climate
- (C) they were based on different assumptions about the overall effects of clouds on climate
- (D) their originators disagreed about the kinds of forecasts the models should provide
- (E) their originators disagreed about the factors other than clouds that should be included in the models



3. It can be inferred that the primary purpose of the models included in the study discussed in the second paragraph of the passage was to
- (A) predict future changes in the world's climate
 - (B) predict the effects of cloud systems on the world's climate
 - (C) find a way to prevent a disastrous planetwide temperature increase
 - (D) assess the percentage of the Earth's surface covered by cloud systems
 - (E) estimate by how much the amount of carbon dioxide in the Earth's atmosphere will increase
4. The information in the passage suggests that scientists would have to answer which of the following questions in order to predict the effect of clouds on the warming of the globe?
- (A) What kinds of cloud systems will form over the Earth?
 - (B) How can cloud systems be encouraged to form over the ocean?
 - (C) What are the causes of the projected planetwide temperature increase?
 - (D) What proportion of cloud systems are currently composed of cirrus of clouds?
 - (E) What proportion of the clouds in the atmosphere form over land masses?

Ans: BCAA



十九、超新星（二）

标题	文体类型	文章内容与解析	考试日期
超新星			No. 7-3

If a supernova (the explosion of a massive star) triggered star formation from dense clouds of gas and dust, and if the most massive star to be formed from the cloud evolved into a supernova and triggered a new round of star formation, and so on, then a chain of star-forming regions would result. If many such chains were created in a differentially rotating galaxy, the distribution of stars would resemble the observed distribution in a spiral galaxy.

This line of reasoning underlies an exciting new theory of spiral-galaxy structure. A computer simulation based on this theory has reproduced the appearance of many spiral galaxies without assuming an underlying density wave, the hallmark of the most widely accepted theory of the large-scale structure of spiral galaxies. That theory maintains that a density wave of spiral form sweeps through the central plane of a galaxy, compressing clouds of gas and dust, which collapse into stars that form a spiral pattern.

*spiral galaxy: = spiral nebula n. 螺旋星云, 旋涡星云

*hallmark: a distinguishing characteristic, trait, or feature "the dramatic flourishes which are the hallmark of the trial lawyer Marion K. Sanders"

1. The primary purpose of the passage is to

- (A) describe what results when a supernova triggers the creation of chains of star-forming regions
- (B) propose a modification in the most widely accepted theory of spiral-galaxy structure
- (C) compare and contrast the roles of clouds of gas and dust in two theories of spiral-galaxy structure
- (D) describe a new theory of spiral-galaxy structure and contrast it with the most widely accepted theory
- (E) describe a new theory of spiral-galaxy structure and discuss a reason why it is inferior to the most widely accepted theory

2. The passage implies that, according to the new theory of spiral-galaxy structure, a spiral galaxy can be created by supernovas when the supernovas are

- (A) producing an underlying density wave (B) affected by a density wave of spiral form (C) distributed in a spiral pattern
- (D) located in the central plane of a galaxy
- (E) located in a differentially rotating galaxy



3. Which of the following, if true, would most discredit the new theory as described in the passage?
- (A) The exact mechanism by which a star becomes a supernova is not yet completely known and may even differ for different stars.
 - (B) Chains of star-forming regions like those postulated in the new theory have been observed in the vicinity of dense clouds of gas and dust.
 - (C) The most massive stars formed from supernova explosions are unlikely to evolve into supernovas.
 - (D) Computer simulations of supernovas provide a poor picture of what occurs just before a supernova explosion.
 - (E) A density wave cannot compress clouds of gas and dust to a density high enough to create a star.
4. The author's attitude toward the new theory of spiral-galaxy structure can best be described as
- (A) euphoric
 - (B) enthusiastic
 - (C) concerned
 - (D) critical
 - (E) disputatious

【中文翻译】倘若一颗超新星（supernova，即一颗质量庞大的星星的爆炸）触发星星从稠密的气体 and 尘埃云中形成，且倘若从云层中形成的质量最庞大的星星演变成一颗超新星并触发新一轮星星形成过程，如此循环下去的话，那么，一系列能形成星星的区域便告产生。倘若许多这样的系列在一个以不同的方式旋转着的星系中得以形成的话，那么，星星的分布将类似于所观察到的螺旋形星系

（spiral galaxy）内的星星分布。这一推理思路构成了一种激动人心的有关螺旋形星系结构的新理论的基础。建立在这一理论基础上的计算机模拟研究再现了许多螺旋形星系的外观，在此过程中并不假设一基本密度波（density wave）的存在，而所谓的密度波则是那种最广为人们接受的有关大规模螺旋形星结构理论的标志特征。那种理论坚持认为，螺旋形状的密度波贯穿星系的中央层面，将气体和尘埃的云层压缩，这些云层则坍缩为一颗颗星星，形成一螺旋状结构。

Ans: DECB



二十、地球冷暖周期通过石头含铁量推定

标题	文体类型	文章内容与解析	考试日期
地球冷暖周期通过石头含铁量推定	长阅读	地球的冷暖周期据某个海峡海底石头的含铁量来推测的话应该是 1500 年, 因为含铁的石头是被冰载着来到南部的这个海峡的。只有暖的时候冰才能飘过来。而矿石铁的含量是 1500 年一个周期, 所以地球的冷暖也是。	(201208) New PP2 Test01

Recent studies of sediment in the North Atlantic's deep waters reveal possible cyclical patterns in the history of Earth's climate. The rock fragments in these sediments are too large to have been transported there by ocean currents; they must have reached their present locations by traveling in large icebergs that floated long distances from their point of origin before melting. Geologist Gerard Bond noticed that some of the sediment grains were stained with iron oxide, evidence that they originated in locales where glaciers had overrun outcrops of red sandstone. Bond's detailed analysis of deep-water sediment cores showed changes in the mix of sediment sources over time: the proportion of these red-stained grains fluctuated back and forth from lows of 5 percent to highs of about 17 percent, and these fluctuations occurred in a nearly regular 1,500-year cycle.

Bond hypothesized that the alternating cycles might be evidence of changes in ocean-water circulation and therefore in Earth's climate. He knew that the sources of the red-stained grains were generally closer to the North Pole than were the places yielding a high proportion of "clean" grains. At certain times, apparently, more icebergs from the Arctic Ocean in the far north were traveling south well into the North Atlantic before melting and shedding their sediment.

Ocean waters are constantly moving, and water temperature is both a cause and an effect of this movement. As water cools, it becomes denser and sinks to the ocean's bottom. During some periods, the bottom layer of the world's oceans comes from cold, dense water sinking in the far North Atlantic. This causes the warm surface waters of the Gulf Stream to be pulled northward. Bond realized that during such periods, the influx of these warm surface waters into northern regions could cause a large proportion of the icebergs that bear red grains to melt before traveling very far into the North Atlantic. But sometimes the ocean's dynamic changes, and waters from the Gulf Stream do not travel northward in this way. During these periods, surface waters in the North Atlantic would generally be colder, permitting icebergs bearing red-stained grains to travel farther south in the North Atlantic before melting and depositing their sediment.

The onset of the so-called Little Ice Age (1300-1860), which followed the Medieval Warm Period of the eighth through tenth centuries, may represent the most recent time that the ocean's dynamic changed in this way. If ongoing climate-history studies support Bond's hypothesis of 1,500-year cycles, scientists may establish a major natural rhythm in Earth's temperatures that could then be extrapolated into the future. Because the midpoint of the Medieval Warm Period was about A.D. 850, an extension of Bond's cycles would place the midpoint of the next warm interval in the twenty-fourth century.

1. According to the passage, which of the following is true of the rock fragments contained in the sediments studied by Bond?
 - A. The majority of them are composed of red sandstone.
 - B. They must have reached their present location over 1,500 years ago.
 - C. They were carried by icebergs to their present location.
 - D. Most of them were carried to their present location during a warm period in Earth's climatic history.
 - E. They are unlikely to have been carried to their present location during the Little Ice Age.



2. In the final paragraph of the passage (lines 27-33), the author is concerned primarily with
- A. answering a question about Earth's climatic history
 - B. pointing out a potential flaw in Bond's hypothesis
 - C. suggesting a new focus for the study of ocean sediments
 - D. tracing the general history of Earth's climate
 - E. discussing possible implications of Bond's hypothesis
3. According to the passage, Bond hypothesized that which of the following circumstances would allow red-stained sediment grains to reach more southerly latitudes?
- A. Warm waters being pulled northward from the Gulfstream
 - B. Climatic conditions causing icebergs to melt relatively quickly
 - C. Icebergs containing a higher proportion of iron oxide than usual
 - D. The formation of more icebergs than usual in the far north
 - E. The presence of cold surface waters in the North Atlantic
4. It can be inferred from the passage that in sediment cores from the North Atlantic's deep waters, the portions that correspond to the Little Ice Age
- A. differ very little in composition from the portions that correspond to the Medieval Warm Period
 - B. fluctuate significantly in composition between the portions corresponding to the 1300s and the portions corresponding to the 1700s
 - C. would be likely to contain a proportion of red-stained grains closer to 17 percent than to 5 percent
 - D. show a much higher proportion of red-stained grains in cores extracted from the far north of the North Atlantic than in cores extracted from further south
 - E. were formed in part as

Ans: CEEC



二十一、松鼠觅食

标题	文体类型	文章内容与解析	考试日期
松鼠觅食	总结文 1	<p>V1. 松鼠找吃的，说嗅觉起很关键作用，但是研究表明他们的视觉也是有作用的 旧理论：科学家做个 study，看这些松鼠 squirrel 是怎样找食物，一开始大家认为视觉探测是小松鼠的主要搜寻机制。</p> <p>实验 1：一开始的实验是一堆腐木，很容易发现吃的。</p> <p>实验 2：后来又做了实验是只有一根木头（有趣，问这个实验的目的是为了什么）。</p> <p>旧理论的缺失：但是把那些藏有食物（fungi）的 wood 树枝有些能看到，但是没有被小松鼠挖出来，说明有可能是嗅觉 olfaction 的作用</p> <p>最后一句话说 however，这个小松鼠经常把挖出来的树枝又埋进去，或者是每次回来都先去上次挖过的地方，这样也是很好的（有趣）。</p> <p>V2.（短文章）对 North XX 地区松鼠的研究，牠们的食物是一种 fungi。研究人员发现它们找吃的主要靠嗅觉，把 fungi 埋在不同的地方，比如埋在地下的大多数被找到了；视觉也有用，只有 17/30 的地上的被找到。又说到腐木（长 fungi 的地方吧），研究发现仅有腐木，松鼠不会去附近找吃的，但是如果有这种东西再把 fungi 埋在地下，且比单独埋 fungi 更容易找到。最后还发现这种松鼠每年都会到同样的地方，说明这种东西能刺激它们找到。</p> <p>(V1) 【问题】1、哪个是正确的？（我选了视觉也有用。）</p> <p>【问题】2、为何要做单独埋腐木的实验？</p> <p>（我选的答案大概意思是：因为后面有个实验“腐木和 fungi 埋一起时，证明腐木能刺激松鼠更容易找到”，所以要排除单独腐木的影响。）(V2)其中一个问题的答案：“有的松鼠只靠嗅觉是吃不到 xxxx 的”</p> <p>只有木头没有 fungi 的实验有什么作用的</p> <p>提醒下大家：A 选项里面说嗅觉是一个更重要的因素 in 找食物的尝试中 than in others，不要忽略那个 in，它不是说嗅觉比视觉更重要，所以不对！这题我选“视觉对于松鼠觅食来说不是决定性因素”。</p>	(201207) (201208)

The objective of this study was to evaluate how northern flying squirrels (*Glaucomys sabrinus*) locate truffles (*Gautieria monticola*), a subterranean and ephemeral but primary food source. Thus, we evaluated the importance of three factors to the foraging behavior of northern flying squirrels: (i) olfactory chemicals that emanate from truffles; (ii) the presence of coarse woody debris (decaying logs), which are often associated with fungi; and (iii) we explored the potential role animal memory could play in truffle detection as well. In a foraging arena, squirrels successfully retrieved buried truffles that lacked aboveground cues in 19 of 30 trials and failed to search near treatments that lacked truffles altogether, confirming the importance of olfaction to squirrel foraging. However, squirrels also retrieved truffles that were associated most frequently with surface logs (27 of 30). In addition, the initial detection rate of the truffle + log treatment was significantly greater than the truffle-only treatment. Thus, although squirrels search for truffles primarily using olfaction, they may also benefit by searching near coarse woody debris on the forest floor as an aboveground cue to truffle locations. In addition, because 82% of Sierra Nevada truffle-fruited locations that were marked in 1996 yielded truffles again the following 2 years, mycophagous animals like northern flying squirrels may benefit by memorizing fruiting locations and foraging at these same locations from year to year.



二十二、评论剧作家安德鲁·洛伊·韦伯

标题	文体类型	文章内容与解析	考试日期
评论剧作家安德鲁·洛伊·韦伯	总结文 2	<p>V1. Webber 提到了他对普契尼的模仿，以及一个几乎看不出普契尼影响的特例，即 cats 里的 Growltiger's Last Stand</p> <p>V2. 提出旧理论： Drama critics 认为 Baron Lloyd-Webber, the composer of musical 的作品是 derivative 普契尼的。</p> <p>提出新理论： 作者对这个观点是否定的，说了 drama critics 们相比于真正的音乐评论家的短处，然后说乐评家认为，Webber 的作品 aside from Growltiger's Last Stand 是 exceptional，其他都应该属于 original 的，没有普契尼的成分。</p> <p>【问题】原文举了 aside from 的这个作品的用处，暗示了这个东西有什么。</p> <p>【答案】含有普契尼的元素。</p>	(201207)

A standard criticism of Lloyd Webber, especially from drama critics, is that his music is derivative—a gloss on his betters when it is not an outright theft. Since most drama critics are, to put it charitably, nonmusical, this is an odd criticism, and one that smacks of received opinion: "Puccini-esque" is a term one encounters often in criticism of Lloyd Webber's music, but aside from "Growltiger's Last Stand," which parodies the first-act love duet from *Madama Butterfly*, there is precious little Puccini in *Cats*.

Indeed, Lloyd Webber has always been more highly regarded by music critics, who not only know the repertoire he is alleged to be pilfering, but also can place him correctly in a dramatic-operatic context. Far from being the love child of Puccini and Barry Manilow, as some would have it, Lloyd Webber is more correctly seen as a kind of latter-day Giacomo Meyerbeer, the king of the Paris Opera in the mid-19th century, whose name was synonymous with spectacle. But a little ignorance goes a long way, and with "Memory" the notion that Lloyd Webber is a secondhand pastiche artist—if not an outright plagiarist—got its start. This is partly Lloyd Webber's own fault. His melodies sometimes skirt perilously close to earlier classical and Broadway sources, and while the showbiz axiom that "good writers borrow, great writers steal" may well apply, it is also true that some of his tunes, both large and small, evoke earlier sources. As drama critic John Simon wrote after the première of *Phantom*: "It's not so much that Lloyd Webber lacks an ear for melody as that he has too much of a one for other people's melodies.... I predict that Gershwin and Rodgers, let alone Puccini and Ravel (another of his magnets), have nothing to fear from him." Other critics have been less subtle: "Webber's music isn't so painful to hear, if you don't mind its being so soiled from previous use," wrote Michael Feingold of the *Village Voice*.



二十三、蓝脱序星的两种过程形成

标题	文体类型	文章内容与解析	考试日期
蓝脱序星的两种过程形成		蓝脱序星 (blue straggler) 形成的原因: 两个 low-mass 星碰撞的观点 vs globular 星系里多个星相互吸引的观点。相互环绕的双星对于其他星球来说目标更大, 而且在某些星系里, low-mass 星的数量不足以解释 blue straggler 的数量。	(201210)

Vampires and collisions rejuvenate stars

Using the NASA/ESA Hubble Space Telescope, astronomers have uncovered two distinct kinds of "rejuvenated" stars in the globular cluster Messier 30. A new study shows that both stellar collisions and a process sometimes called vampirism are behind this cosmic "face lift". The scientists also uncover evidence that both sorts of blue stragglers were produced during a critical dynamical event (known as "core collapse") that occurred in Messier 30 a few billion years ago.

Stars in globular clusters [1] are generally extremely old, with ages of 12-13 billion years. However, a small fraction of them appear to be significantly younger than the average population and, because they seem to have been left behind by the stars that followed the normal path of stellar evolution and became red giants, have been dubbed blue stragglers [2]. Blue stragglers appear to regress from "old age" back to a hotter and brighter "youth", gaining a new lease on life in the process. A team of astronomers used Hubble to study the blue straggler star content in Messier 30, which formed 13 billion years ago and was discovered in 1764 by Charles Messier. Located about 28 000 light-years away from Earth, this globular cluster — a swarm of several hundred thousand stars — is about 90 light-years across.

Although blue stragglers have been known since the early 1950s, their formation process is still an unsolved puzzle in astrophysics. "It's like seeing a few kids in the group picture of a rest-home for retired people. It is natural to wonder why they are there," says Francesco Ferraro from the University of Bologna in Italy, lead author of the study that will be published this week in Nature [3]. Researchers have been studying these stars for many years and knew that blue stragglers are indeed old. They were thought to have arisen in a tight binary system [4]. In such a pair, the less massive star acts as a "vampire", siphoning fresh hydrogen from its more massive companion star. The new fuel supply allows the smaller star to heat up, growing bluer and hotter — behaving like a star at an earlier stage in its evolution.

The new study shows that some of the blue stragglers have instead been rejuvenated by a sort of "cosmic facelift", courtesy of cosmic collisions. These stellar encounters are nearly head-on collisions in which the stars might actually merge, mixing their nuclear fuel and re-stoking the fires of nuclear fusion. Merged stars and binary systems would both be about twice the typical mass of individual stars in the cluster.

"Our observations demonstrate that blue stragglers formed by collisions have slightly different properties from those formed by vampirism. This provides a direct demonstration that the two formation scenarios are valid and that they are both operating simultaneously in this cluster," says team member Giacomo Beccari from ESA.

Using data from the now-retired Wide Field Planetary Camera 2 (WFPC2) aboard Hubble, astronomers found that these "stragglings" stars are much more concentrated towards the centre of the cluster than the average star. "This indicates that blue



stragglers are more massive than the average star in this cluster," says Ferraro. "More massive stars tend to sink deep into the cluster the way a billiard ball would sink in a bucket of honey."

The central regions of high density globular clusters are crowded neighbourhoods where interactions between stars are nearly inevitable. Researchers conjecture that one or two billion years ago, Messier 30 underwent a major "core collapse" that started to throw stars towards the centre of the cluster, leading to a rapid increase in the density of stars. This event significantly increased the number of collisions among stars, and favoured the formation of one of the families of blue stragglers. On the other hand, the increase of stellar crowding due to the collapse of the core also perturbed the twin systems, encouraging the vampirism phenomenon and thus forming the other family of blue stragglers. "Almost ten percent of galactic globular clusters have experienced core collapse, but this is the first time that we see the effect of the core collapse imprinted on a stellar population," says Barbara Lanzoni, University of Bologna.

"The two distinct populations of blue stragglers discovered in Messier 30 are the relics of the collapse of the core that occurred two billion years ago. In a broad context our discovery is direct evidence of the impact of star cluster dynamics on stellar evolution. We should now try to see if other globular clusters present this double population of blue stragglers," concludes Ferraro.

Notes

[1] Globular clusters are dense agglomerations of several hundred thousand stars. Present among the earliest inhabitants of our Milky Way, they formed in the vast halo of our galaxy before it flattened to form a pancake-shaped spiral disc. Star formation essentially stopped in globular clusters 13 billion years ago, so astronomers expect to find only old stars and they use globular cluster ages as a benchmark for estimating the age of the Universe.

[2] In 1953, astronomer Allan Sandage found a puzzling new population of stars that seemed to go against the rules of stellar evolution in globular clusters. Sandage detected hot young blue stars in the globular cluster Messier 3, and subsequently in other globular clusters. He dubbed them stragglers because they looked like they were trailing or left behind by other blue stars in the cluster that had long ago evolved to the red giant stage.

[3] This research was presented in a paper that appears in the 24 December 2009 issue of Nature, "Two distinct sequences of blue straggler stars in the globular cluster M30", by F. R. Ferraro et al.

[4] In 1964 astronomers Fred Hoyle and W.H. McCrea independently suggested that blue stragglers result when two stars capture each other and form a tight binary system.



蓝脱序星可经由两种过程形成

意大利波隆纳大学（University of Bologna）天文学家 Francesco Ferraro 等人，利用哈柏太空望远镜（Hubble Space Telescope）在年老的球状星团 M30 中，发现了 2 种截然不同的「蓝脱序星（blue stragglers）」。他们发现蓝脱序星这种年轻恒星可经由 2 种途径形成：一种是经由恒星碰撞形成（stellar collisions），另一种则是像个吸血鬼般、经由榨取其他恒星的物质而形成（vampirism）。此外，这些天文学家还发现 M30 中这 2 种蓝脱序星都是在约数十亿年前一场「核区塌缩（core collapse）」的关键力学事件中形成。

M30 位在摩羯座，距离地球约 28,000 光年，数十万颗恒星挤在约 90 光年的范围内，可见其拥挤的程度。球状星团中的恒星通常都非常古老，年龄高达 120-130 亿年。不过，偶尔会有一些相对来说比较年轻的恒星藏身其中；这些年轻恒星与绝大多数已经经过长时间正常演化成红巨星的成员星不同，由于年纪似乎返老还童，或者说是重获新生，表面温度偏高而呈现蓝色，因而称为「蓝脱序星」。

早在 1950 年代，天文学家就已发现蓝脱序星的存在，但对于其形成原因一直有所争议。经过多年研究，他们了解这些蓝脱序星其实仍是年老恒星，可能是原本为紧密双星系统的成员，质量较小的子星如同吸血鬼般，从质量较大的子星处榨取质量，使较小的恒星成长、加热，变的愈来愈热、愈来愈蓝，像是一颗处在刚诞生阶段的新恒星一样。

Francesco Ferraro 等人的新研究则显示：某些蓝脱序星不是经由上述这样的榨取过程形成，而是经由碰撞过程形成。这些恒星几乎正面冲撞而合并，所有恒星物质混合，然后再重新点燃新恒星的核融合反应。如此一来，不论是双星系统或是碰撞合并所产生的蓝脱序星，其质量应该都会是星团中一般典型恒星的 2 倍左右。Francesco Ferraro 等人的观测数据还显示：愈靠近星团较中心的地方，蓝脱序星愈多，显示蓝脱序星的质量的确比星团其他典型恒星还大，才会「沈」到星团中心。但是经碰撞合并的蓝脱序星，性质会与榨取过程形成的稍有不同。

此外，从观测数据分析的结果，显示 M30 大约在 20 亿年前经历核区塌缩的过程，大量恒星被抛往星团中心区域，使星团中心的恒星密度快速增加，更容易因碰撞引起的合并而形成碰撞型蓝脱序星。另一方面，星团中心密度增加也使得双星系统备受扰动，增加榨取型蓝脱序星的形成机会。将近有 10% 的球状星团曾经历这样的核区塌缩过程，但这是首次天文学家发现核区塌缩与蓝脱序星有关的直接证据。



二十四、大键琴家：兰道芙丝卡

标题	文体类型	文章内容与解析	考试日期
兰道芙丝卡	长阅读 叙述文	<p>V1. 有一段时间专家认为只有弹琴能表现出作曲者的风格的才能算钢琴家。Wanda Landowska 出生在 romantic 流行的时代但是她弹琴风格确很好的能表现 Baroque 曲风。她不被认为是 classist。她弹 Bach, Scarlatti 的作品很好。Baroque 音乐是淡定的不带 emotion 的。Wanda Landowska 弹琴呢技巧手法都很厉害。最后一节说 Bach 一开始写的作品都不是为了 piano 写的是为 harpsichord。然后说后来大家都不用 piano 弹 Bach, Scarlatti 也不弹了。</p> <p>【问题】作者提及 L 的目的 答案： 为了证明传统观点被否定了</p> <p>【问题】Landowska 偏向弹以下哪种类别的 Scarlatti 的音乐。</p> <p>【问题】为什么她不被认为是 classist。</p> <p>【问题】有考其中一个音乐家的创作特点</p> <p>V2. Romantic interpretation of baroque and classic music</p> <p>第一段：A Romantic female musician called X. unlike other musicians who likes to add their own interpretation and emotion into the play, she faithfully keeps the original idea of the composers. She reconstructed what the composers wanted the piece to be.</p> <p>第二段：But she is not absolutely lack of emotion. while staying faithfully with the composer, she still take all kinds of liberties to express her own interpretation. So she is not a classicist, but a romantic performer.</p> <p>第三段：In Baroque and Classic time, piano not yet invented. Bach (Baroque)'s pieces are mostly on harpsichord. Thanks to X, people no longer play Bach's pieces on piano, but on harpsichord, even if the transcription was made by Liszt. (transcription from harpsichord to piano)</p> <p>【问题】General attitude to X—> unrestrained praising!</p>	(201207) (201208) (201211)

When, in the early twentieth century, the concept of the virtuoso - as - hero was retired, as a replacement came the scholar - pianist, the musician - pianist, the recreator of the composers' thoughts. With this change came the abdication of technique as technique. Virtuosity in and of itself, indeed, became something of a dirty word.

One of the important new figures, though she was a harpsichordist and not a pianist, was Wanda Landowska, she was the one who demonstrated how Bach, Handel, Scarlatti and Couperin sounded on the instrument for which their music was originally conceived. It would be a mistake to consider Landowska a classicist, however. She had been born in an age of romantic playing, an age dominated by the figures of Liszt, Leschetizky and their pupils. Thus she grew up with certain romantic traditions of performance and whatever the stringency of her musical scholarship, for Landowska knew how to hold an audience breathless and when she gave a recital, it was to the accompaniment that all great artists receive deathlike silence and rapt attention.

Her playing was romantic, but who is to say that it was not closer to Bach than the dry munching of some later harpsichordists? She had a miraculous equality of touch, with a left hand that seemed to say the least, colorful. But no artist in this generation



(and, one is confident, in any generation) could clarify with such deftness the polyphonic writing of the baroque masters. And none could make the music so spring to life.

Her secret was a lifetime of scholarship, plus perfect technical equipment and resilient rhythm, all combined with knowledge of just when not to hold the printed note sacrosanct. Of course, that alone demands a lifetime of knowledge. She was a genius at underlining the dramatic and did have meaning and emotional significance. She took liberties, all kinds of liberties, but like all great artists she could get away with them. In short, her entire musical approach was romantic: intensely personal, full of light and shade, never pedantic.

Thanks to Landowska, Bach began to sound thick when played on the piano. One by one, pianists stopped playing Bach as adapted by Liszt, Bach as adapted by Tausig. Then they began to think twice before performing any kind of baroque music, including even Scarlatti. The piano repertoire, it began to be felt, was extensive enough without reverting to transcriptions and Bach and Scarlatti on the piano were in a way, transcriptions no matter how faithfully the original notes were played.

In line with this kind of purity came the emphasis on the back to nature study of the composers' manuscripts that has continued to the present, will continue and is something new in the scheme of things.

背景知识：女性大键琴家兰道芙丝卡是二十世纪第一位将大键琴这种乐器，重新带进音乐厅，提醒人这种音乐和其乐曲之美的演奏家。她来自波兰，在二十世纪初那个人类进入工业革命时代的潮流中，她和一群在巴黎的音乐家，共同提倡新古典主义运动，也因此给了大键琴近两百年来低落地位的重新提振。生于一八七九年的她，十四岁就从华沙音乐院毕业，之后投入巴黎的古歌唱学院，二十三岁开始投身大键琴演奏和研究的工作。一开始，她所演奏的琴都要特别委托制琴商制作，因为古琴都已不堪使用，她的大键琴是和古代大键琴不同的巨型大键琴，能发出巨大的音响，以符合在现代大型演奏厅中演出。凭着这架琴，兰道芙丝卡逐渐说服人们，有许多巴洛克乐曲，在大键琴上演奏有着比在钢琴上演奏更优美的效果。她在一九二三年开始灌录大键琴唱片，对巴哈音乐更有着奇大无比的热情。一九三三年她第一次灌录巴哈的郭德堡变奏曲，这是她耗费四十年心力研究巴哈手稿后的心得展现，之后便陆续灌录巴哈键盘作品。兰道芙丝卡对大键琴的热情，也激励了许多近代钢琴家像是法雅、普朗克等人为他创作大键琴协奏曲。



二十五、玛雅旱灾

标题	文体类型	文章内容与解析	考试日期
玛雅旱灾	说明文	<p>玛雅人南边的房子好像是被遗弃了，有两种还是三种猜想 但是后来说好像是因为地下水还有干旱的问题 导致他们遗弃房子了。。。干旱时期造成缺水，但南部最严重，中部次之，北部最厉害，原因大概是南部人民 对降雨的依靠更为严重。</p> <p>题目：下列哪个是南部受灾更严重的原因</p> <p>答案：对降雨依赖更多</p> <p>题目：dependent on 的同义词转换</p> <p>答案：reliant</p>	(201206)

TPO 类似背景考题

To understand the ancient Mayan people who lived in the area that is today southern Mexico and Central America and the ecological difficulties they faced, one must first consider their environment, which we think of as "jungle" or 'tropical rainforest.' This view is inaccurate, and the reason proves to be important. Properly speaking, tropical rainforests grow in high-rainfall equatorial areas that remain wet or humid all year round. But the Maya homeland lies more than sixteen hundred kilometers from the equator, at latitudes 17 to 22 degrees north, in a habitat termed a "seasonal tropical forest." That is, while there does tend to be a rainy season from May to October, there is also a dry season from January through April. If one focuses on the wet months, one calls the Maya homeland a "seasonal tropical forest"; if one focuses on the dry months, one could instead describe it as a "seasonal desert."

From north to south in the Yucatan Peninsula, where the Maya lived, rainfall ranges from 18 to 100 inches (457 to 2,540 millimeters) per year, and the soils become thicker, so that the southern peninsula was agriculturally more productive and supported denser populations. But rainfall in the Maya homeland is unpredictably variable between years; some recent years have had three or four times more rain than other years. As a result, modern farmers attempting to grow corn in the ancient Maya homelands have faced frequent crop failures, especially in the north. The ancient Maya were presumably more experienced and did better, but nevertheless they too must have faced risks of crop failures from droughts and hurricanes.

Although southern Maya areas received more rainfall than northern areas, problems of water were paradoxically more severe in the wet south. While that made things hard for ancient Maya living in the south, it has also made things hard for modern archaeologists who have difficulty understanding why ancient droughts caused bigger problems in the wet south than in the dry north. The likely explanation is that an area of underground freshwater underlies the Yucatan Peninsula, but surface elevation increases from north to south, so that as one moves south the land surface lies increasingly higher above the water table. In the northern peninsula the elevation is sufficiently low that the ancient Maya were able to reach the water table at deep sinkholes called cenotes, or at deep caves. In low-elevation north coastal areas without sinkholes, the Maya would have been able to get down to the water table by digging wells up to 75 feet (22 meters) deep. But much of the south lies too high above the water table for cenotes or wells to reach down to it. Making matters worse, most of the Yucatan Peninsula consists of karst, a porous sponge-like limestone terrain where rain runs straight into the ground and where little or no surface water remains available.



How did those dense southern Maya populations deal with the resulting water problem? It initially surprises us that many of their cities were not built next to the rivers but instead on high terrain in rolling uplands. The explanation is that the Maya excavated depressions, or modified natural depressions, and then plugged up leaks in the karst by plastering the bottoms of the depressions in order to create reservoirs, which collected rain from large plastered catchment basins and stored it for use in the dry season. For example, reservoirs at the Maya city of Tikal held enough water to meet the drinking water needs of about 10,000 people for a period of 18 months. At the city of Coba the Maya built dikes around a lake in order to raise its level and make their water supply more reliable. But the inhabitants of Tikal and other cities dependent on reservoirs for drinking water would still have been in deep trouble if 18 months passed without rain in a prolonged drought. A shorter drought in which they exhausted their stored food supplies might already have gotten them in deep trouble, because growing crops required rain rather than reservoirs.



二十六、玛雅文明

标题	文体类型	文章内容与解析	考试日期
玛雅文明	总结文 2	<p>V1. Maya, 有两种对 environment 的看法。提出旧理论: 某名专家又出来对 Maya 文明评估了一下。提出新理论: 别的专家又出来了, 来反对之前的那位女专家。</p> <p>V2. 提出旧理论: 某种 B 果树在玛雅废墟那块长得很好, 这个是玛雅文明的证明 提出新理论: 但是有人反对, 说是因为蝙蝠吃了果子排出种子, 才造成了这片果树林和玛雅没有关系。新理论的缺失: 但是后面又有证明说这片果林的产量是其他地方的果林的产量的 2 倍, 说明还是玛雅文明的影响。</p> <p>另外提出一个 support idea, 并说明这个 support 是关于 B 树 genetic 的研究, 且说明此 support 对第一段推论而言是更重要的证明: Maya 的 B 树, 比另外 V 地的 B 树要长的好。</p> <p>题目: 为什么说第二段关于 genetic 的研究是对第一段更进一步的证明, 作者用此暗示?</p> <p>选项: V 地的果实可能比较 inferior</p> <p>选项: M 跟 V 的果实基因差很多</p>	<p>(201112)</p> <p>(201202)</p> <p>(201204)</p> <p>(201206)</p> <p>(201209)</p> <p>(201210)</p>

英文文章出处: [Observations on Maya subsistence and the ecology of a tropical tree](#)

考过同学总结: 论文文章很长, 估计 ETS 节选了后面作者谈到 frugivorous bats eat the fruit and later drop the seed intact...bat-dispersed seed...总而言之, Maya ruins 旁边有很多 B. alicastrum is a result of normal ecological process does not in itself negate the possibility that the tree was used by the Maya. 因为 B. alicastrum 很有 nutrition, 是 Maya 人的 staple food.

Most of the animals which feed on the fruit of B. alicastrum eat the seed as well, and, therefore, function more as seed predators than as dispersal agents. Frugivorous bats, however, display the interesting behavior of collecting the fruit, flying to their roosts, and later eating only the fleshy pericarp and dropping the seed intact. Bats of the genus Artibeus have been shown to disperse large quantities of B. alicastrum seed in this manner, the fruit comprising the major part of their diet when available (Vazquez-Yanes et al. 1975). Puleston (1968:56-57) reviewed the dispersal of ramon seeds by Artibeus bats but later rejected the possibility at they were an important seed vector to the ruins. This is surprising in light of his observations that "large numbers of bats occupy the inner chambers and vaults of the larger palaces and temples," that "their nests are littered with whole ramon seeds" and that "the seeds can apparently be carried great distances if the bats have young." I have seen similar accumulations of seeds and seedlings around the ruins of Palenque and Bonampak in Chiapas, and under bat roosts in mango plantations in Veracruz where the nearest ramon tree was more than 5 km away. A more reasonable explanation for the commonly observed aggregations of B. alicastrum near ruins, therefore, is the competitive advantage this species possesses on limestone soils coupled with the continual input of bat-dispersed seed.



二十七、寂静的春天

标题	文体类型	文章内容与解析	考试日期
寂静的春天	总结文 2	<p>提出旧理论: Rachel Carson 写的《寂静的春天》(silent spring), 主要是反对使用 DDT, 提出了许多所有生物, 环境都会受到化学物质影响的例子。 对旧理论提出反驳: 有一个人提出反面的意见, 说其他的生物实际上没有被影响。 对反驳的理由提出反对意见: 最后又说这种评论是不对的, 并叙述不对的原因。最后, 这本书还是很重要, 甚至影响了其他的作者, 如: (举了几个人名) 题目: 文章架构</p> <p>题目: 作者态度 题目: 为什么那个人反对)</p>	(201211)

英文背景知识:

WASHINGTON, D.C. — Fifty years ago, Rachel Carson wrote and published Silent Spring. Carson was ahead of her time. She said pesticides like DDT were damaging the environment and human health. Although the book became an inspiration for the environmental movement, the battle for the environment continues.

In the 1950s, the U.S. Department of Agriculture was spraying more than a quarter-million kilograms of pesticides each year. Silent Spring, by Rachel Carson, revealed that pesticides like DDT were lethal not only for insects but for all living things.

"Silent Spring essentially told the reading public that human beings could alter the natural world in ways that were quite deadly and that it could be potentially lethal to human beings as well as to other parts of the natural world," said Linda Lear, the author of a biography on Carson.

More than six million copies of the book have been sold in the U.S. It's been translated into some 30 languages. In the Washington suburbs, the house where Carson wrote Silent Spring is now a National Historic Landmark. Carson was a pathbreaker.

"In Silent Spring, she is writing in a voice that I call apocalyptic writing," added Linda Lear. "She is trying to sound an alarm to get our attention."

Thirty years after Silent Spring was published, public television, in its program The American Experience, called the book one of the most important of our time.

But there were dissenters. Norman Borlaug, the 1970 Nobel Peace Prize winner, led the defense of pesticides.

"We're having troubles now feeding this hungry world," said Borlaug. "If you remove DDT with the hysteria that is present in the USA, the U.S. will be importing food, only there won't be any place from where to import it."

By 1972, DDT was banned for agricultural use in the U.S. But thousands of new chemicals were being developed. For years, the U.S. Senate's Committee on the Environment has been trying to ban or control hundreds of chemicals from agricultural products and consumer goods.

"This committee heard from CDC [Centers for Disease Control] officials who told us their scientists found 212 industrial chemicals, including six carcinogens, coursing through Americans' bodies," said Democratic Senator Frank Lautenberg.

In 2006, the World Health Organization announced plans to use DDT again - indoors - in its campaign against malaria.

Syngenta is a major producer of agricultural chemicals. Like others in the industry, it says its chemicals are safe if



used properly

"We try to do every single study that is necessary to support the safety characteristics of the product," said Tim Pastoor, the company's principal scientist.

Fifty years after Silent Spring, millions of kilograms of new pesticides and other chemicals are being sprayed across US farmlands. And the environmental movement is still fighting back.



二十八、超新星（一）

标题	文体类型	文章内容与解析	考试日期
超新星	总结文 1	<p>提出现象：超新星爆发的颜色，有时候看起来比本来要暗（dimmer）。</p> <p>现象解释 1，但提出证据反驳：星际尘埃的影响。有个解释是因为尘埃 dust 遮蔽（吸收）了很多蓝光，使得我们看到的更多是红光（redder）。而且如果 dust 不是均匀分布的造成的结果也很难讲（有题）。但又说不应该是尘埃的影响，因为不同位置尘埃密度不同会导致不同时期观察到颜色有 variation（注：因为望远镜是移动的，所以多次观察到的光的形近路线不同）。</p> <p>现象解释 2，但提出证据反驳：另外一个解释是因为重力的影响（lensing），但是重力对光线使光线偏离的影响，在两星球隔得比较远时才会发生。经计算，在超新星到地球这个观测距离上比较小，distance 不足以导致颜色的改变。</p>	<p>(201210)</p> <p>(201211)</p> <p>(201212)</p> <p>(201302)</p>

Supernovae & Obscuration by dust

Recently, significant progress has been made by using Type Ia supernovae as "standardizable candles".

Supernovae are rare - perhaps a few per century in a Milky-Way-sized galaxy - but modern telescopes allow observers to probe very deeply into small regions of the sky, covering a very large number of galaxies in a single observing run. Supernovae are also bright, and Type Ia's in particular all seem to be of nearly uniform intrinsic luminosity (absolute magnitude, typically comparable to the brightness of the entire host galaxy in which they appear). They can therefore be detected at high redshifts, allowing in principle a good handle on cosmological effects.

Obscuration by dust is the leading concern about the reliability of the supernova results. Ordinary astrophysical dust does not obscure equally at all wavelengths, but scatters blue light preferentially, leading to the well-known phenomenon of "reddening". Spectral measurements by the two supernova teams reveal a negligible amount of reddening, implying that any hypothetical dust must be a novel "grey" variety. This possibility has been investigated by a number of authors. These studies have found that even grey dust is highly constrained by observations: first, it is likely to be intergalactic rather than within galaxies, or it would lead to additional dispersion in the magnitudes of the supernovae; and second, intergalactic dust would absorb ultraviolet/optical radiation and re-emit it at far infrared wavelengths, leading to stringent constraints from observations of the cosmological far-infrared background. Thus, while the possibility of obscuration has not been entirely eliminated, it requires a novel kind of dust which is already highly constrained (and may be convincingly ruled out by further observations).



二十九、白靴兔的数量

标题	文体类型	文章内容与解析	考试日期
白靴兔的数量	说明文	<p>提出一种现象: snowshoe hare (白靴兔), 说这种动物的数量跟普通的动物不同, 它们的 population 循环很 regular, 有明确的高峰期, 以及不同地域的这种动物的数量变化周期都很相似。而且可以很快减少和增加, 换言之波动比较大。</p> <p>现象解释 1: 然后科学家就想解释这一现象, 说是新生的兔子比较容易受到影响, 因为当兔子数量 (population) 增加时就营养不良了: 兔子越多粮食越少, 然后兔子就开始减少了。</p> <p>现象解释 2: 另外还有一个原因是它们的捕食者, 因为他的捕食者 (predator) 有很强的移动性, 导致他们到不同的地方捕食这种动物, 使不同地区的增减变化差不多 (The high mobility of predator render the synchrony of different area possible)。</p> <p>**逻辑链: 兔子多——食物少——兔子少——捕食者可以捕捉到的兔子更加少——兔子更加少——食物多了——兔子多了。</p> <p>题目: 其他动物和这种动物的区别 答案: 不好预测他们的变化周期。(因为波动比较大) 题目: 为什么这种动物的变化在不同地域之间是相似的 答案: 他的捕食者很强的移动性。</p>	<p>(201207)</p> <p>(201210)</p> <p>(201211)</p>

Snowshoe hare population

The snowshoe hare is one of the northern mammals that go through periodic cycles of changes in their populations. Over a period of years, their population will increase in numbers and then suddenly crash to very low numbers, only to rise again. Snowshoe hare tend to cycle about once every ten years. The snowshoe hare cycle is one of the best known and fur trappers and traders working in northern Canada first described it. In 1865, traders with the Hudson's Bay Company were flooded by hare pelts brought in by trappers. But, by 1870, only a few hare pelts trickled in. This pattern of high and low abundance of hare pelts repeated itself over and over, roughly every ten years.

Snowshoe hares are a dominant herbivore in northern forest ecosystems. In Alaska and western Canada, their populations cycle over 8 to 11 years. The difference in densities and abundance during the cycle are extreme. Densities as high as 4,000 hares per square kilometer (or 10,000 hares per square mile) have been estimated at the peak (or high point) of the cycle. These populations can "crash" to densities of less than one hare per square kilometer (or 2.6 hares per square mile) within a period of one year. The populations slowly increase to peak densities over the next 6 to 13 years. The densities during peak years, however, are not always the same.

Just what is it that drives the snowshoe hare cycle? This question has puzzled people living in northern areas and scientists for many years. On a broad scale, it may be the 22-year sunspot cycle and its effects on boreal forest weather patterns or forest fires. On a smaller scale, the cycles may be affected by over browsing the food supply, predators, shock disease due to stress, parasites, or a combination of these. The primary theory pertaining to the snowshoe hare population cycle describes the mechanics as a combination of predators and browse (food) availability. During the peak of their cycle, hares eat a large proportion of the shrubs available in their area. They



can also kill many of the shrubs in their area by chewing through the outer layer of bark. Over-browsing of shrubs results in a food-shortage that causes malnourishment, starvation and reduced reproduction. This leads to the start of the population crash or decline. Also as food supplies decrease the health of hares declines and makes many individuals more vulnerable to predators and disease. In the western Yukon scientists believe that the hare cycle is caused by changes in food supply and predation. The declines and increases in the population of hares were influenced by the reproductive rates of adult hares and the survival rates of all ages of hares.



三十、帝王蝶

标题	文体类型	文章内容与解析	考试日期
帝王蝶	Must be true Strengthen Support	<p>V1. 一种蝴蝶会飞很远然后 lay eggs on milkweed, 卵孵化后会长成 caterpillar, 在幼虫的生长过程中会吸收到 milkweed 里面的一中物质, 这种物质和地域有关, 然后会留在 caterpillar 体内。</p> <p>【答案】lay eggs 的蝴蝶体内的这种物质, 和 caterpillar 里面的应该不一样。</p> <p>V2. 一种蝴蝶在不同地方含某种东西不同的植物产卵, 然后生出来的毛毛虫身体中 A 的含量也不一样, 长大飞到的产卵地方也不同。问什么可以加强这个推断?</p> <p>【选项】这个种物质是唯一能被检查出来的 有相同 A 种物质的蝴蝶还是回到出生地方产卵 蝴蝶不能吸收或积累其他地方的 A 蝴蝶长大以后不吃葡萄糖</p> <p>题目和以下不同, 但也是蝴蝶产卵。问的是文章支持了那个选项, 我选的大意是不同 region 的 butterfly 所含的 glycosides 不同。</p>	<p>(201111)</p> <p>(201207)</p> <p>(201211)</p> <p>(201302)</p>

Upon maturity, monarch butterflies travel hundreds of miles from their places of origin and lay their eggs on milkweed. The caterpillars that emerge feed on milkweed and absorb the glycosides in milkweed sap. The specific glycosides present in milkweed differ from region to region within the monarch butterfly's range. Mature butterflies retain the glycosides they absorb as caterpillars. Clearly, therefore, the glycosides in a mature monarch butterfly could be used to determine its place of origin.

Which of the following, if true, most strengthens the argument?

- i Mature monarch butterflies do not feed on parts of milkweed that contain glycosides.
- i The glycosides in milkweed sap are slightly toxic to caterpillars of other species.
- i The vast majority of the monarch butterflies that are laying eggs in a given region will have traveled there from a single region.
- i There are substances other than glycosides in milkweed sap that accumulate in a monarch caterpillar and are retained in the body of the mature butterfly.
- i There are certain glycosides that are found in the sap of all milkweeds, no matter where they grow within the monarch butterfly's range.

Answer: A



三十一、胡蜂吃天牛

标题	文体类型	文章内容与解析	考试日期
引进胡蜂吃天牛	Assumption	<p>一个叫 XX stem 的虫对 north American 的 corn 造成很大的伤害，所以建议引进一个专吃这个虫的另一种虫。</p> <p>这样 corn 的产量会大大提高，而吃虫的虫不会吃其他东西所以很安全。</p> <p>问这种基于那些 assumption</p> <p>【答案】这种黄蜂不会被北美的天敌吃掉。</p>	(201208)

Stem borers are insect pests that often ruin North American corn crops. On some other continents, crop damage by stem borers is controlled by a certain species of wasp. Since these wasps eat nothing but stem borers, importing them into North America will keep crop damage from stem borers under control without endangering other North American insect species.

Which of the following is an assumption on which the argument depends?

- (A) Corn is the principal food of stem borers that live on continents other than North America.
- (B) The wasps are capable of surviving in North America long enough to eat significant numbers of stem borers.
- (C) No wasp in North America is closely related to the species of wasp that eats stem borers.
- (D) On continent other than North America, the wasps control stem borers more effectively than does any other pest control measure.
- (E) Corn crops on continents other than North America are not damaged by any insect pests other than stem borers.

天牛是一种经常毁坏北美谷类庄稼的有害昆虫。在其他一些大陆上，天牛对庄稼的毁坏可以被某黄蜂所控制。因为这种黄蜂只以天牛为食，将其引进北美可使庄稼免遭天牛的毁坏且不危害其他北美昆虫。

下面哪一个是上论述所基于的假设？

- (A) 谷物是生长在北美以外大陆的天牛的主要食物。
- (B) 这种黄蜂能够在北美长期存活以吃掉大量的天牛。
- (C) 在北美没有与吃天牛的蜂相似的黄蜂。
- (D) 在北美以外的大陆，这种黄蜂能比其他昆虫控制方法更有效地控制天牛。
- (E) 北美大陆以外的谷物庄稼不会被任何天牛毁坏。

答案：(B)

201208 GRE 考试中正确答案被改编成：

There are no predators that prey on these wasps. (因此这些黄蜂能活下来)



三十二、能源消耗

标题	文体类型	文章内容与解析	考试日期
能源消耗量	weaken	<p>美国 1970~1980 年间，国内化石能源消耗先增后减，但工业产出却增加了。</p> <p>结论：工业生产使用了更为节约能源的方法。</p> <p>问题：哪个选项能 weaken 结论。</p> <p>【答案】 大能耗企业减产</p> <p>其他干扰选项：A. 人们找到了更便宜的替代能源。</p> <p>B. 工业以外的能量消耗（貌似是民用）。</p> <p>C. 1980 消耗的其实比 1970 高。</p>	(201208)

Between 1970 and 1980, energy consumption by United States industry peaked and then declined, so that by 1980 total industrial use of energy was below the 1970 level even though total industrial output had grown substantially in the same period. Industry must have instituted highly effective energy conservation measures in those years to have achieved such impressive results.

Which of the following, if true, most seriously weakens the conclusion of the argument?

- (A) Many industries switched to the greatest extent possible from high-priced oil to lower-priced alternatives throughout the 1970's.
- (B) Total residential energy consumption was higher in the United States in 1980 than it had been in 1970
- (C) Many industrial users of energy had paid little attention to energy conservation prior to 1970.
- (D) Industrial output grew less rapidly from 1970 to 1980 than it had from 1960 to 1970.
- (E) The industries whose production dropped sharply during the 1970's included a disproportionately large number of energy-intensive industries.

Answer: (E)



Although recent years have seen substantial reductions in noxious pollutants from individual motor vehicles, the number of such vehicles has been steadily increasing. Consequently, more than 100 cities in the United States still have levels of carbon monoxide, particulate matter, and ozone (generated by photochemical reactions with hydrocarbons from vehicle exhaust) that exceed legally established limits.

Which of the following most closely parallels the situation described in the first sentence of the passage?

- ☐ A Although a town reduces its public services in order to avoid a tax increase, the town's tax rate exceeds that of other towns in the surrounding area.
- ☐ B Although a state passes strict laws to limit the type of toxic material that can be disposed of in public landfills, illegal dumping continues to increase.
- ☐ C Although a town's citizens reduce their individual use of water, the town's water supplies continue to dwindle because of a steady increase in the total population of the town.
- ☐ D Although a country attempts to increase the sale of domestic goods by adding a tax to the price of imported goods, the sale of imported goods within the country continues to increase.
- ☐ E Although a country reduces the speed limit on its national highways, the number of fatalities caused by automobile accidents continues to increase.

分析：文中正确定位题目的意思是「下面哪个选项与文章中的第一句话所描述的情况相似？」，很明显，这到题属于典型的模拟题。首先，我们

迅速地在文章定位，找到第一句话，即 Although, recent years have seen substantial reductions in noxious pollutants from individual motor vehicles, the number of such vehicles has been steadily increasing consequently, more than 100 cities in the United States still have levels of carbon monoxide, particulate matter, and ozone (generated by photochemical reactions with hydrocarbons from vehicle exhaust) that exceed legally established limits

分析所给信息

「美国单个汽车尾气排放量虽然下降，但是汽车的总数还是在稳定地上升。因此，结果还是，美国的 100 多个城市仍然是污染排放总量在大幅度上升。」

逻辑关系：「个体量下降，但数量增加，所以总和还是增加的」。

寻找正确选项

C 选项的意思是「虽然小镇居民减少了他们的个人用水量，但是人口增加了，所以，总供水量还是不足。」

