

Exercise 13

老观点 different ancestors

Biologists have **long maintained** that two groups of pinnipeds, sea lions and walruses, are descended from a terrestrial bearlike animal, whereas the remaining

Line group, seals, shares an ancestor with weasels. **But** the

5 recent discovery of detailed similarities in the skeletal structure of the flippers in all three groups undermines the attempt to explain away superficial resemblance as

老观点 due to **convergent evolution**—the independent development of similarities between unrelated groups in

10 response to **similar environmental pressures**. Flippers may **indeed** be a necessary response to aquatic life, turtles, whales, and dugongs also have them. **But** the common detailed design found among the pinnipeds probably indicates a **common ancestor**. **Moreover**,

15 walruses and seals drive themselves through the water with thrusts of their hind flippers, but sea lions use their front flippers. If anatomical similarity in the flippers resulted from similar environmental pressures, as posited by the convergent-evolution theory, one
20 would expect walruses and seals, but not seals and sea lions, to have similar flippers. (162 words)

反证法

1. The author implies that which of the following was part of the long-standing view concerning pinnipeds?

- ☐ A Pinnipeds are all descended from a terrestrial bearlike animal.
- ☐ B Pinnipeds share a common ancestor with turtles, whales, and dugongs
- ☐ C Similarities among pinnipeds are due to their all having had to adapt to aquatic life.

2. The author implies which of the following about the fact that turtles, whales, and dugongs all have flippers?

- ☐ A It can be explained by the hypothesis that turtles, whales, and dugongs are very closely related.
- ☐ B It can be explained by the idea of convergent evolution.
- ☐ C It suggests that turtles, whales, and dugongs evolved in separate parts of the world
- ☐ D It undermines the view that turtles, whales, and dugongs are all descended from terrestrial ancestors.
- ☐ E It is the primary difference between turtles, whales, and dugongs, on the one hand, and pinnipeds, on the other.

3. Select the sentence in the passage in which the author shows that the implication of the common view is contradicted by a new finding.

For each of Questions 5-8, select one answer choice unless otherwise instructed.

Questions 5 to 8 are based on the following reading passage.

Present-day philosophers **usually envision** their discipline as an endeavor that has been, **since antiquity**, distinct from and superior to any particular intellectual discipline such as theology or science. The basis for this view, **however**, lies in a serious misinterpretation of the past, a projection of modern concerns onto past events. The idea of an autonomous discipline called “philosophy,” distinct from and sitting in judgment on such pursuits as theology and science turns out, on close examination, to be of **quite recent origin**. When, in the seventeenth century, Descartes and Hobbes rejected medieval philosophy, they did not think of themselves, as modern philosophers do, as proposing a new and better philosophy, but rather as furthering “the warfare between science and theology.” They were fighting, albeit discreetly, to open the intellectual world to the new science and to liberate intellectual life from ecclesiastical philosophy and envisioned their work as contributing to the growth, not of philosophy, but of research in mathematics and physics. This link between philosophical interests and scientific practice persisted until the nineteenth century, when decline in ecclesiastical power over scholarship and changes in the nature of science provoked the final separation of philosophy from both.

The demarcation of philosophy from science was **facilitated** by the development in the early nineteenth century of a new notion, that philosophy’s core interest should be epistemology, the general explanation of what it means to know something. Modern philosophers now trace that notion back at least to Descartes and Spinoza, but it was not explicitly articulated until the late eighteenth century, by Kant, and did not become built into the structure of academic institutions and the standard self-descriptions of philosophy professors until the late nineteenth century. Without the idea of epistemology, the survival of philosophy in an age of modern science is hard to imagine. Metaphysics, philosophy’s traditional core—considered as the most general description of how the heavens and the earth are put together—had been rendered almost completely meaningless by the spectacular progress of physics. Kant, however, by focusing philosophy on the problem of knowledge, managed to replace metaphysics with epistemology, and thus to transform the notion of philosophy as “queen of sciences” into the new notion of philosophy as a separate, foundational discipline: philosophy became “primary” no longer in the sense of “highest” but in the sense of “underlying”.

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5. Which of the following best expresses the author's main point?
- ☐ Ⓐ Philosophy's overriding interest in basic human questions is a legacy primarily of the work of Kant.
 - ☐ Ⓑ Philosophy was deeply involved in the seventeenth-century warfare between science and religion.
 - ☐ Ⓒ The set of problems of primary importance to philosophers has remained relatively constant since antiquity.
 - ☐ Ⓓ The status of philosophy as an independent intellectual pursuit is a relatively recent development.
 - ☐ Ⓔ The role of philosophy in guiding intellectual speculation has gradually been usurped by science.

For the following question, consider each of the choices separately and select all that apply

6. The author of the passage implies which of the following in discussing the development of philosophy during the nineteenth century EXCEPT?
- ☐ Ⓐ Nineteenth-century philosophy took science as its model for understanding the bases of knowledge.
 - ☐ Ⓑ Nineteenth-century philosophers carried out a program of investigation explicitly laid out by Descartes and Spinoza.
 - ☐ Ⓒ Kant had an overwhelming impact on the direction of nineteenth-century philosophy.

7. Select the sentence in the passage in which the author characterizes Descartes' support for the new science of the seventeenth century.

For the following question, consider each of the choices separately and select all that apply

8. With which of the following statements concerning the writing of history would the author of the passage be most likely to agree?
- ☐ Ⓐ History should not be distorted by attributing present-day consciousness to historical figures.
 - ☐ Ⓑ History should be concerned with describing those aspects of the past that differ most from those of the present.
 - ☐ Ⓒ History should not emphasize the role played by ideas over the role played by individuals.

Questions 4 and 5 are based on the following reading passage.

The complications frequently accompanying diabetes, such as impairment of vision and of kidney function, are now thought to result from **the lack of continuous control of blood glucose concentrations**. The **healthy** pancreas, in response to increases in blood glucose concentration, releases small quantities of insulin throughout the day and thereby maintains the concentration within physiological limits (normoglycemia). But the diabetic generally receives only one large dose daily. The diabetic's blood glucose concentration can **thus fluctuate** greatly during the interval between doses, and it has been suggested that the complications result from the periods of high concentrations of blood glucose (hyperglycemia). Many investigators thus believe that restoration of normoglycemia might halt the progression of such complications and perhaps even reverse them.

For the following question, consider each of the choices separately and select all that apply

4. The author provides information that would answer which of the following questions?
- ☐ A What is hyperglycemia?
 - ☐ B What is one cause of hyperglycemia?
 - ☐ C What are some of the organs that can be adversely affected by hyperglycemia?
5. Select the sentence that shows the cause of radical changes in the diabetic's blood glucose concentration.

Questions 6 to 8 are based on the following reading passage.

The **success** of fluoride in combating dental decay is well established and, without a doubt, socially beneficial. **However**, fluoride's **toxic properties** have been known for a century. In **humans excessive intake (for adults, over 4 milligrams per day) over many years** can lead to skeletal fluorosis, a well-defined skeletal disorder, and in some plant species, fluoride is more toxic than ozone, sulfur dioxide, or pesticides.

Some important **questions** remain. For example, the precise lower limit at which the fluoride content of bone becomes toxic is still undetermined. And while fluoride intake from water and air can be evaluated relatively easily, it is much harder to estimate how much a given population ingests from foodstuffs because of the wide variations in individual eating habits and in fluoride concentrations in foodstuffs.

6. The passage suggests that it would be easier to calculate fluoride intake from food if
- Ⓐ adequate diets were available for most people.
 - Ⓑ individual eating habits were more uniform
 - Ⓒ the fluoride content of food was more varied
 - Ⓓ more people were aware of the fluoride content of food
 - Ⓔ methods for measuring the fluoride content of food were more generally agreed on
7. One function of the second paragraph of the passage is to
- Ⓐ raise doubts about fluoride's toxicity
 - Ⓑ introduce the issue of fluoride's toxicity
 - Ⓒ differentiate a toxic from a nontoxic amount of fluoride
 - Ⓓ indicate that necessary knowledge of fluoride remains incomplete
 - Ⓔ discuss the foodstuffs that are most likely to contain significant concentrations of fluoride

For the following question, consider each of the choices separately and select all that apply

8. The passage suggests which of the following about the effect of fluoride on humans?
- Ⓐ The effect of fluoride intake from water and air is relatively difficult to monitor.
 - Ⓑ An intake of 4 milligrams over a long period of time usually leads to a skeletal disorder in humans.
 - Ⓒ An intake of slightly more than 4 milligrams for only a few months is not likely to be life-threatening.

Questions 9 to 12 are based on the following reading passage.

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 1843, 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.

For the following question, consider each of the choices separately and select all that apply

9. According to the passage, a useful description of participants"(lines 11-12) exists for which of the following insurrections of nineteenth-century France?

- ☐ A The July insurrection of 1830
- ☐ B The February Revolution of 1848
- ☐ C The May insurrection of 1871

10. Which of the following, best describes the organization of the second paragraph?

- Ⓐ The thesis of the passage is stated and supporting evidence systematically presented.
- Ⓑ Two views regarding the thesis presented in the first paragraph are compared and contrasted
- Ⓒ Evidence refuting the thesis presented in the first paragraph is systematically presented.
- Ⓓ The thesis presented in the first paragraph is systematically supported.
- Ⓔ The thesis presented in the first paragraph is further defined and a conclusion drawn.

11. Which of the following can be inferred about the "detailed judicial dossiers" referred to in line 50?

- Ⓐ Information contained in the dossiers sheds light on the social origins of a revolution's participants.
- Ⓑ The dossiers closely resemble the narratives written by the revolution's leaders in their personal memoirs.
- Ⓒ The information that such dossiers contain is untrustworthy and unrepresentative of a revolution's participants.
- Ⓓ Social historians prefer to avoid such dossiers whenever possible because they are excessively detailed.
- Ⓔ The February Revolution of 1848 produced more of these dossiers than did the June insurrection.

12. Which of the following is the most logical objection to the claim made (lines 38-39) ?

- Ⓐ The February Revolution of 1848 is much less significant than the July insurrection of 1830.
- Ⓑ The backgrounds and motivations of participants in the July insurrection of 1830 have been identified, however cursorily.
- Ⓒ Even less is known about the July insurrection of 1830 than about the February Revolution of 1848.
- Ⓓ Historical records made during the July insurrection of 1830 are less reliable than those made during the May insurrection of 1871.
- Ⓔ The importance of the July insurrection of 1830 has been magnified at the expense of the significance of the February Revolution of 1848.

Exercise 23

The **common belief** of some linguists that each language is a **perfect** vehicle for the thoughts of the nation speaking it is in some ways the exact counterpart of the conviction of the Manchester school of economics that supply and demand will regulate everything for the **best**. Just as economists were **blind to** the numerous cases in which the law of supply and demand left actual wants unsatisfied, so also many linguists are **deaf to** those instances in which the very nature of a language calls forth misunderstandings in everyday conversation, and in which, consequently, a word has to be modified or defined in order to present the idea intended by the speaker: "He took his stick-no, not John's, but his own." **No language is perfect**, and if we admit this truth, we must also admit that it is not unreasonable to investigate the relative merits of different languages or of different details in languages. (155 words)

1. The primary purpose of the passage is to
 - (A) analyze an interesting feature of the English language
 - (B) refute a belief held by some linguists
 - (C) show that economic theory is relevant to linguistic study
 - (D) illustrate the confusion that can result from the improper use of language
 - (E) suggest a way in which languages can be made more nearly perfect

For the following question, consider each of the choices separately and select all that apply

2. The misunderstanding presented by the author in the passage is similar to which of the following?
 - ☐ A X uses the word "you" to refer to a group, but Y thinks that X is referring to one person only.
 - ☐ B X mistakenly uses the word "anomaly" to refer to a typical example, but Y knows that "anomaly" means "exception."
 - ☐ C X uses the word "bachelor" to mean "unmarried man," but Y mistakenly thinks that bachelor means "unmarried woman."
3. In presenting the argument, the author does all of the following EXCEPT
 - (A) give an example
 - (B) draw a conclusion
 - (C) make a generalization
 - (D) make a comparison
 - (E) present a paradox

Currently, there are **two models** of solar activity. The first supposes that the Sun's internal motions (caused by rotation and convection) interact with its large-scale magnetic field to produce a dynamo, a device in which mechanical energy is converted into the energy of a magnetic field. In short, the Sun's large-scale magnetic field is taken to be self-sustaining, so that the solar-activity cycle it drives would be maintained with **little overall change** for perhaps billions of years. The alternative explanation supposes that the Sun's large-scale magnetic field is a remnant of the field the Sun acquired when it formed, and is not sustained against decay. In this model, the solar mechanism dependent on the Sun's magnetic field runs down more quickly. Thus, the characteristics of the solar-activity cycle could be expected to **change** over a long period of time.

(140 words)

4. Which of the following statements about the two models of solar activity, as they are described in the passage, is accurate?

- (A) In both models cyclical solar activity is regarded as a long-lived feature of the Sun, persisting with little change over billions of years.
- (B) In both models the solar-activity cycle is hypothesized as being dependent on the large-scale solar magnetic field.
- (C) In one model the Sun's magnetic field is thought to play a role in causing solar activity, whereas in the other model it is not.
- (D) In one model solar activity is presumed to be unrelated to terrestrial phenomena, whereas in the other model solar activity is thought to have observable effects on the Earth.
- (E) In one model cycles of solar activity with periodicities longer than a few decades are considered to be impossible, whereas in the other model such cycles are predicted.

Modern archaeological finds can still contribute much to the study of ancient literature. For example, forty years ago a survey of the early Greek dramatist Aeschylus' plays would have started with *The Suppliant Women*. Many factors internal to the play, but perhaps most especially the prominence of the chorus, led scholars to consider it one of Aeschylus' earlier works. The consensus was that here was a drama truly reflecting an early stage in the evolution of tragedy out of choral lyric. The play was dated as early as the 490's B.C., in any event, well before Aeschylus' play *The Persians* of 472 B.C. Then, in 1952, a fragment of papyrus found at Oxyrhynchus was published. The fragment announced that Aeschylus won first prize with his Danaid tetralogy, of which *The Suppliant Women* is the opening play, and defeated Sophocles in the process. Sophocles did not compete in any dramatic contest before 468 B.C., when he won his first victory. Hence, the Danaid tetralogy must be put after 468 B.C. (169 words)

6. According to the passage, in the absence of definite knowledge concerning the dates of composition of ancient literary works, literary historians do which of the following when trying to establish the chronology of an author's work?

- (A) Make assumptions about a single work's date of composition if such assumptions would not seriously affect interpretations of other works by the same author.
- (B) Draw inferences concerning the date of a work's composition based on evidence internal to that work and on the author's other works.
- (C) Ignore the date of a work's composition which is supplied by archaeological research when literary factors internal to the work contradict that date.
- (D) Refrain from speculation concerning a work's date of composition unless archaeological finds produce information concerning it.
- (E) Estimate the date of a work's composition without attempting to relate it to the author's development as an artist.

As Gilbert White, Darwin, and others **observed** long ago, all species appear to have the innate capacity to increase their numbers from generation to generation. The task for ecologists is to untangle the **environmental and biological factors** that hold this intrinsic capacity for population growth in check over the long run. The great variety of dynamic behaviors exhibited by different populations makes this task more difficult: some populations remain roughly constant from year to year; others exhibit regular cycles of abundance and scarcity; still others vary wildly, with outbreaks and crashes that are in some cases plainly correlated with the weather, and in other cases not.

To impose some order on this kaleidoscope of patterns, one school of thought proposes **dividing populations into two groups**. These ecologists posit that the relatively steady populations have "density-dependent" growth parameters; that is, rates of birth, death, and migration which depend strongly on population density. The highly varying populations have "density-independent" growth parameters, with vital rates buffeted by environmental events; these rates fluctuate in a way that is wholly independent of population density.

This dichotomy has its uses, but it can cause **problems** if taken too literally. For one thing, no population can be driven entirely by density-independent factors all the time. No matter how severely or unpredictably birth, death and migration rates may be fluctuating around their long-term averages, if there were no density-dependent effects, the population would, in the long run, either increase or decrease without bound (barring a miracle by which gains and losses canceled exactly). Put another way, it may be that on average 99 percent of all deaths in a population arise from density-independent causes, and only one percent from factors varying with density. The factors making up the one percent may seem unimportant, and their cause may be correspondingly hard to determine. Yet, whether recognized or not, they will usually determine the long-term average population density.

~~In order to understand the nature of the ecologist's investigation, we~~ may think of the density-dependent effects on growth parameters as the **"signal"** ~~ecologists are trying to isolate and interpret, one that tends to make the population increase from relatively low values or decrease from relatively high ones, while~~ the density-independent effects act to produce **"noise"** in the population dynamics. For populations that remain relatively constant, or that oscillate around repeated cycles, the signal can be fairly easily characterized and its effects described, even though the causative biological mechanism may remain unknown. For irregularly fluctuating populations, we are likely to have too few observations to have any hope of extracting the signal from the overwhelming noise. **But it now seems clear that** all populations are regulated by a **mixture** of density-dependent and density-independent effects in varying proportions.

7. The author of the passage is primarily concerned with

- ☒ (A) discussing two categories of factors that control population growth and assessing their relative importance
- (B) describing how growth rates in natural populations fluctuate over time and explaining why these changes occur
- (C) proposing a ~~hypothesis~~ concerning population sizes and suggesting ways to test it
- (D) posing a fundamental ~~question~~ about environmental factors in population growth and presenting some currently accepted answers
- (E) ~~refuting~~ a commonly accepted theory about population density and offering a new alternative

8. Select the sentence in the passage that presents the author's attitude toward the dichotomy discussed in the second paragraph.

9. Which of the following statements can be inferred from the last paragraph?

- (A) For irregularly fluctuating populations, doubling the number of observations made will probably result in the isolation of density-dependent effects.
- (B) Density-dependent effects on population dynamics do not occur as ~~frequently~~ as do density-independent effects.
- (C) At present, ecologists do not ~~understand~~ any of the underlying causes of the density-dependent effects they observe in population dynamics..
- (D) Density-dependent effects on growth parameters are thought to be ~~caused by~~ some sort of biochemical "signaling" that ecologists hope eventually to understand.
- (E) It is sometimes possible to infer the existence of a density-dependent factor controlling population growth without understanding its causative mechanism.

For the following question, consider each of the choices separately and select all that apply

10. According to the passage, all of the following behaviors have been exhibited by different populations

- ☐ A roughly constant population levels from year to year
- ☐ B regular cycles of increases and decreases in numbers
- ☐ C erratic increases in numbers correlated with the weather

Because of its accuracy in outlining the Earth's subsurface, the seismic-reflection method remains the most important tool in the search for petroleum reserves. In field practice, a subsurface is mapped by line arranging a series of wave-train sources, such as small dynamite explosions, in a grid pattern. As each source is activated, it generates a wave train that moves downward at a speed determined uniquely by the rock's elastic characteristics. As rock interfaces are crossed, the elastic characteristics encountered generally change abruptly, which causes part of the energy to be reflected back to the surface, where it is recorded by seismic instruments. The seismic records must be processed to correct for positional differences between the source and the receiver, for unrelated wave trains, and for multiple reflections from the rock interfaces. Then the data acquired at each of the specific source locations are combined to generate a physical profile of the subsurface, which can eventually be used to select targets for drilling.

(162 words)

For the following question, consider each of the choices separately and select all that apply

4. According to the passage, in the seismic-reflection method which of the following have a significant effect on the signal detected by the seismic instruments
- ☐ A presence of unrelated wave trains
 - ☐ B placement of the seismic instruments
 - ☐ C properties of rocks through which the wave train has traveled
5. It can be inferred from the passage that the seismic-reflection method would be likely to yield an inaccurate physical profile of the subsurface in which of the following circumstances?
- (A) If the speed at which the wave train moved downward changed
 - (B) If the receiver were not positioned directly at the wave-train source
 - (C) If the rock on one side of a rock interface had similar elastic characteristics to those of the rock on the other side
 - (D) If the seismic records obtained for the different sources in a grid were highly similar to each other
 - (E) If there were no petroleum deposits beneath the area defined by the grid of wave-train sources
6. Which of the following best describes the organization of the passage?
- (A) A method is criticized, and an alternative is suggested.
 - (B) An illustration is examined, and some errors are exposed.
 - (C) An assertion is made, and a procedure is outlined.
 - (D) A series of examples is presented, and a conclusion is drawn.
 - (E) A hypothesis is advanced, and supporting evidence is supplied.

Paradoxically, with all of our natural, intuitive, commonsense capacity to grasp human relations, the science of human relations has been one of the last to develop. Different explanations of this paradox have been suggested. One is that science would destroy the vain and pleasing illusions people have about themselves; but we might ask why people have always loved to read pessimistic, debunking writings, from Ecclesiastes to Freud. It has also been proposed that just because we know so much about people intuitively, there has been less incentive for studying them scientifically; why should one develop a theory, carry out systematic observations, or make predictions about the obvious?

(107 words)

7. The author refers to people who are attracted to "pessimistic, debunking writings" in order to support which of the following ideas?
- (A) Interesting books about human relations are typically pessimistic.
 - (B) People tend to ignore scientific explanations of human relations.
 - (C) People rarely hold pleasing illusions about themselves.
 - (D) A scientific approach human relations would undermine the pleasing illusions people hold of themselves.
 - (E) It is doubtful that the science of human relations developed slowly because of a desire to maintain pleasing illusions.
8. In the context in which it appears, "paradox" most nearly means
- Ⓐ diametrical opposition
 - Ⓑ unintended irony
 - Ⓒ stark dichotomy
 - Ⓓ exact counterpoint
 - Ⓔ contradiction to common sense

过去已知观点：反驳 / 背景铺垫

Why during sickness should **body temperature** of warm-blooded animal **rise**? It has long been known that the level of serum iron in animals falls during infection. Garibaldi first suggested a relationship between fever and iron. He found that microbial synthesis of siderophores -- substances that bind iron -- in bacteria of the genus *Salmonella* declined at environmental temperatures above 37°C and stopped at 40.3°C. **Thus**, fever would make it more difficult for an infecting bacterium to acquire iron and thus to multiply. **Cold-blooded animals** were used to test this hypothesis. **Kluger** reported that of iguanas infected with the potentially lethal bacterium *A. hydrophilia*, more survived at temperatures of 42°C than at 37°C, even though healthy animals prefer the lower temperature. When animals at 42°C were injected with an iron solution, however, mortality rates increased significantly.

(135 words)

9. According to the passage, Garibaldi determined which of the following?
- (A) That serum iron is produced through microbial synthesis
 - (B) That microbial synthesis of siderophores in warm-blooded animals is more efficient at higher temperatures.
 - (C) That only iron bound to other substances can be used by bacteria.
 - (D) That there is a relationship between the synthesis of siderophores in bacteria of the genus *Salmonella* and environmental temperature.
 - (E) That bacteria of the genus *Salmonella* require iron as a nutrient.
10. If it were to be determined that similar phenomena occur in warm-blooded animals, which of the following, assuming each is possible, is likely to be the **most effective treatment** for warm-blooded animals with bacterial infections?
- (A) Administering a medication that lowers the animals' body temperature
 - (B) Injecting the animals with an iron solution
 - (C) Administering a medication that makes serum iron unavailable to bacteria
 - (D) Providing the animals with reduced-iron diets
 - (E) Keeping the animals in an environment with temperatures higher than 37°C

It is frequently assumed that the mechanization of work has a revolutionary effect on the lives of the people who operate the new machines and on the society into which the machines have been introduced. For example, it has been suggested that the employment of women in industry took them out of the household, their traditional sphere, and fundamentally altered their position in society. In the nineteenth century, when women began to enter factories, Jules Simon, a French politician, warned that by doing so, women would give up their femininity. Friedrich Engels, however, predicted that women would be liberated from the "social, legal, and economic subordination" of the family by technological developments that made possible the recruitment of "the whole female sex into public industry." Observers thus differed concerning the social desirability of mechanization's effects, but they agreed that it would transform women's lives.

Historians, particularly those investigating the history of women, now seriously question this assumption of transforming power. They conclude that such dramatic technological innovations as the spinning jenny, the sewing machine, the typewriter, and the vacuum cleaner have not resulted in equally dramatic social changes in women's economic position or in the prevailing evaluation of women's work. The employment of young women in textile mills during the Industrial Revolution was largely an extension of an older pattern of employment of young, single women as domestics. It was not the change in office technology, but rather the separation of secretarial work, previously seen as an apprenticeship for beginning managers, from administrative work that in the 1880's created a new class of "dead-end" jobs, thenceforth considered "women's work." The increase in the numbers of married women employed outside the home in the twentieth century had less to do with the mechanization of housework and an increase in leisure time for these women than it did with their own economic necessity and with high marriage rates that shrank the available pool of single women workers, previously, in many cases, the only women employers would hire.

Women's work has changed considerably in the past 200 years, moving from the household to the office or the factory, and later becoming mostly white-collar instead of

blue-collar work. Fundamentally, however, the conditions under which women work have changed little since before the Industrial Revolution; the segregation of occupations by gender, lower pay for women as a group, jobs that require relatively low levels of skill and offer women little opportunity for advancement all persist, while women's household labor remains demanding. Recent historical investigation has led to a major revision of the notion that technology is always inherently revolutionary in its effects on society. Mechanization may even have slowed any change in the traditional position of women both in the labor market and in the home.

3. Which of the following statements best summarizes the main idea of the passage?

- (A) The effects of the mechanization of women's work have not borne out the frequently held assumption that new technology is inherently revolutionary.
- (B) Recent studies have shown that mechanization revolutionizes a society's traditional values and the customary roles of its members.
- (C) Mechanization has caused the nature of women's work to change since the Industrial Revolution.
- (D) The mechanization of work creates whole new classes of jobs that did not previously exist.
- (E) The mechanization of women's work, while extremely revolutionary in its effects, has not, on the whole, had the deleterious effects that some critics had feared.

4. It can be inferred from the passage that the author would consider which of the following to be an indication of a fundamental alteration in the conditions of women's work?

- (A) Statistics showing that the majority of women now occupy white-collar positions
- (B) Interviews with married men indicating that they are now doing some household tasks
- (C) Surveys of the labor market documenting the recent creation of a new class of jobs in electronics in which women workers outnumber men four to one
- (D) Census results showing that working women's wages and salaries are, on the average, as high as those of working men
- (E) Enrollment figures from universities demonstrating that increasing numbers of young women are choosing to continue their education beyond the undergraduate level

For the following question, consider each of the choices separately and select all that apply

5. Which of the following statement about many **employers** before the **twentieth century** are NOT implied in the passage?

- ☐ A They did not employ women in factories.
- ☐ B They tended to employ single rather than married women.
- ☐ C They hired women only when qualified men were not available to fill the open positions.

6. Which of the following best describes the function of the concluding sentence of the passage?

- (A) It sums up the general points concerning the mechanization of work made in the passage as a whole.
- (B) It draws a conclusion concerning the effects of the mechanization of work which goes beyond the evidence presented in the passage as a whole.
- (C) It restates the point concerning technology made in the sentence immediately preceding it.
- (D) It qualifies the author's agreement with scholars who argue for a major revision in the assessment of the impact of mechanization on society
- (E) It suggests a compromise between two seemingly contradictory views concerning the effects of mechanization on society.

Scholars often fail to see that music played an important role in the preservation of African culture in the United States. They correctly note that slavery stripped some cultural elements from Black people-their political and economic systems-but they underestimate the significance of music in sustaining other African cultural values. African music, unlike the music of some other cultures, was based on a total vision of life in which music was not an isolated social domain. In African culture music was pervasive, serving not only religion, but all phases of life, including birth, death, work, and play. Music, like art in general, was so inextricably a part of African culture that it became a crucial means of preserving the culture during and after the dislocations of slavery.

(126 words)

10. In the argument given, the two highlighted portions play which of the following roles?
- Ⓐ The first sentence introduces the topic of the passage and the last one summarizes the passage.
 - Ⓑ The first sentence presents a thesis and the last one further develops the thesis.
 - Ⓒ The first sentence summarizes the main idea of the passage and the last one paraphrases it literally.
 - Ⓓ The first sentence presents a context for the discussion of the passage and the last one summarizes the discussion.
 - Ⓔ The first sentence presents the negative thesis of the passage and the last one presents the positive thesis.

It has long been known that during an El Nino, two conditions exist: (1) unusually warm water extends along the eastern Pacific, principally along the coasts of Ecuador and Peru, and (2) winds blow from the west into the warmer air rising over the warm water in the east. These winds tend to create a feedback mechanism by driving the warmer surface water into a "pile" that blocks the normal upwelling of deeper, cold water in the east and further warms the eastern water, thus strengthening the wind still more. The contribution of the recent model is to show that the winds of an El Nino, which raise sea level in the east, simultaneously send a signal to the west lowering sea level. According to the model, that signal is generated as a negative Rossby wave, a wave of depressed, or negative, sea level, that moves westward parallel to the equator at 25 to 85 kilometers per day.

(158 words)

2. According to the passage, which of the following features is characteristic of an El Nino?

- (A) Cold coastal water near Peru
- (B) Winds blowing from the west
- (C) Random occurrence
- (D) Worldwide effects
- (E) Short duration

For the following question, consider each of the choices separately and select all that apply

3. It can be inferred from the passage that which of the following would result fairly immediately from the cessation of the winds of an El Nino?

- ☐ A Negative Rossby waves would cease to be generated in the eastern Pacific.
- ☐ B The sea level in the eastern Pacific would fall.
- ☐ C The surface water in the eastern Pacific would again be cooled by being mixed with deep water.

In a recent study, David Cressy examines **two central questions** concerning English immigration to New England in the 1630's: what kinds of people immigrated and why? Cressy finds that most adult immigrants were skilled in farming or crafts, were literate, and were organized in families. Each of these characteristics sharply **distinguishes** the 21,000 people who left for New England in the 1630's **from** most of the approximately 377,000 English people who had immigrated to America by 1700.

With respect to their **reasons** for immigrating, Cressy does not deny the frequently noted fact that some of the immigrants of the 1630's, most notably the **organizers** and clergy, advanced religious explanations for departure, but he finds that such explanations usually assumed primacy only in retrospect. When he moves beyond the principal actors, he finds that religious explanations were less frequently offered and he concludes that most people immigrated because they were recruited by promises of **material improvement**.

(155 words)

4. According to the passage, Cressy would agree with which of the following statements about the **organizers** among the English immigrants to New England in the 1630's?

- I. Most of them were clergy.
- II. Some of them offered a religious explanation for their immigration.
- III. They did not offer any reasons for their immigration until some time after they had immigrated.
- IV. They were more likely than the average immigrant to be motivated by material considerations.

- (A) I only
- (B) II only
- (C) II and III only
- (D) I, III, and IV only
- (E) II, III, and IV only

5. The passage suggests that the majority of those English people who had immigrated to America by the late seventeenth century were

- (A) clergy
- (B) young children
- (C) organized in families
- (D) skilled in crafts
- (E) illiterate

Traditionally, pollination by wind has been viewed as a reproductive process marked by random events in which the vagaries of the wind are compensated for by the generation of vast quantities of pollen, so that the ultimate production of new seeds is assured at the expense of producing much more pollen than is actually used. Because the potential hazards pollen grains are subject to as they are transported over long distances are enormous, wind-pollinated plants have, in the view above, compensated for the ensuing loss of pollen through happenstance by virtue of producing an amount of pollen that is one to three orders of magnitude greater than the amount produced by species pollinated by insects.

However, a number of features that are characteristic of wind-pollinated plants reduce pollen waste. For example, many wind-pollinated species fail to release pollen when wind speeds are low or when humid conditions prevail. Recent studies suggest another way in which species compensate for the inefficiency of wind pollination. These studies suggest that species frequently take advantage of the physics of pollen motion by generating specific aerodynamic environments within the immediate vicinity of their female reproductive organs. It is the morphology of these organs that dictates the pattern of airflow disturbances through which pollen must travel. The speed and direction of the airflow disturbances can combine with the physical properties of a species' pollen to produce a species-specific pattern of pollen collision on the surfaces of female reproductive organs. Provided that these surfaces are strategically located, the consequences of this combination can significantly increase the pollen-capture efficiency of a female reproductive organ.

A critical question that remains to be answered is whether the morphological attributes of the female reproductive organs of wind-pollinated species are evolutionary adaptations to wind pollination or are merely fortuitous. A complete resolution of the question is as yet impossible since adaptation must be evaluated for each species within its own unique functional context. However, it must be said that, while evidence of such evolutionary adaptations does exist in some species, one must be careful about attributing morphology to adaptation. For example, the spiral arrangement of

scale-bract complexes on ovule-bearing pine cones, where the female reproductive organs of conifers are located, is important to the production of airflow patterns that spiral over the cone's surfaces, thereby passing airborne pollen from one scale to the next. However, these patterns cannot be viewed as an adaptation to wind pollination because the spiral arrangement occurs in a number of non-wind-pollinated plant lineages and is regarded as a characteristic of vascular plants, of which conifers are only one kind, as a whole. Therefore, the spiral arrangement is not likely to be the result of a direct adaptation to wind pollination.

(453 words)

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6. The author of the passage is primarily concerned with discussing
- (A) the current debate on whether the morphological attributes of wind-pollinated plants are evolutionary adaptations
 - (B) the kinds of airflow patterns that permit wind-pollinated plants to capture pollen most efficiently
 - (C) the ways in which the reproductive processes of wind-pollinated plants are controlled by random events
 - (D) a recently proposed explanation of a way in which wind-pollinated plants reduce pollen waste
 - (E) a specific morphological attribute that permits one species of wind-pollinated plant to capture pollen

7. According to the passage, the "aerodynamic environments" mentioned in the second paragraph, when they are produced, are primarily determined by the
- (A) presence of insects near the plant
 - (B) physical properties of the plant's pollen
 - (C) shape of the plant's female reproductive organs
 - (D) amount of pollen generated by the plant
 - (E) number of seeds produced by the plant

8. The passage suggests that the recent studies cited in the second paragraph have not done which of the following?
- (A) Made any distinctions between different species of wind-pollinated plants.
 - (B) Considered the physical properties of the pollen that is produced by wind-pollinated plants.
 - (C) Indicated the general range within which plant-generated airflow disturbances are apt to occur.
 - (D) Included investigations of the physics of pollen motion and its relationship to the efficient capture of pollen by the female reproductive organs of wind-pollinated plants.
 - (E) Demonstrated that the morphological attributes of the female reproductive organs of wind-pollinated plants are usually evolutionary adaptations to wind pollination.

9. It can be inferred from the passage that the claim that the spiral arrangement of scale-bract complexes on an ovule-bearing pine cone is an adaptation to wind pollination would be more convincing if which of the following were true?
- (A) Such an arrangement occurred only in wind-pollinated plants.
 - (B) Such an arrangement occurred in vascular plants as a whole.
 - (C) Such an arrangement could be shown to be beneficial to pollen release.
 - (D) The number of bracts could be shown to have increased over time.
 - (E) The airflow patterns over the cone's surfaces could be shown to be produced by such arrangements.

Isadora Duncan's masterly writings on the dance reveal the depth of her determination to create a lyric form of the art which was free of characterization, storytelling, and the theatrical exhibition of skills. She wished to discard the traditional methods and established vocabularies of such dance forms as ballet and to explore the internal sources of human expressiveness. She shunned bodily ornamentation and strove to use only the natural movements of her body, undistorted by acrobatic exaggeration and stimulated only by internal compulsion. In her recitals Duncan danced to the music of Beethoven, Wagner, and Gluck, among others, but, contrary to popular belief, she made no attempt to visualize or to interpret the music; rather, she simply relied on it to provide the inspiration for expressing inner feelings through movement.

(130 words)

10. Select the sentence in the passage that implies the argumentative function which the author mentions Duncan's reliance on music in her recitals to serve.