#### **GMAT READING COMPREHENSION SAMPLE QUESTIONS**

Instruction: This file contains 285 sample questions on GMAT Reading Comprehension and explanations for 24 of them. For answers with complete explanations to other 261 questions, please order the <a href="Complete GMAT Prep Course">Complete GMAT Prep Course</a> which includes <a href="Verbal Study Guide">Verbal Study Guide</a>, <a href="Essay Prep Course">Essay Prep Course</a>, and <a href="Math Review">Math Review</a>.

# READING COMPREHENSION Passage 1

Caffeine, the stimulant in coffee, has been called "the most widely used psychoactive substance on Earth ." Synder, Daly and Bruns have recently proposed that caffeine affects behavior by countering the activity in

- (5) the human brain of a naturally occurring chemical called adenosine. Adenosine normally depresses neuron firing in many areas of the brain. It apparently does this by inhibiting the release of neurotransmitters, chemicals that carry nerve impulses from one neuron to the next.
- (10) Like many other agents that affect neuron firing, adenosine must first bind to specific receptors on neuronal membranes. There are at least two classes of these receptors, which have been designated A1 and A2. Snyder et al propose that caffeine, which is struc-
- (15) turally similar to adenosine, is able to bind to both types of receptors, which prevents adenosine from attaching there and allows the neurons to fire more readily than they otherwise would.

For many years, caffeine's effects have been attri-

- (20) buted to its inhibition of the production of phosphodiesterase, an enzyme that breaks down the chemical called cyclic AMP.A number of neurotransmitters exert their effects by first increasing cyclic AMP concentrations in target neurons. Therefore, prolonged periods at
- (25) the elevated concentrations, as might be brought about by a phosphodiesterase inhibitor, could lead to a greater amount of neuron firing and, consequently, to behavioral stimulation. But Snyder et al point out that the caffeine concentrations needed to inhibit the production
- (30) of phosphodiesterase in the brain are much higher than those that produce stimulation. Moreover, other compounds that block phosphodiesterase's activity are not stimulants.

To buttress their case that caffeine acts instead by pre(35) venting adenosine binding, Snyder et al compared the
stimulatory effects of a series of caffeine derivatives with
their ability to dislodge adenosine from its receptors in

- the brains of mice. "In general," they reported, "the ability of the compounds to compete at the receptors
- (40) correlates with their ability to stimulate locomotion in the mouse; i.e., the higher their capacity to bind at the receptors, the higher their ability to stimulate locomotion." Theophylline, a close structural relative of caffeine and the major stimulant in tea, was one of the most
- (45) effective compounds in both regards.
  - There were some apparent exceptions to the general correlation observed between adenosine-receptor binding and stimulation. One of these was a compound called 3-isobuty1-1-methylxanthine(IBMX), which bound very
- (50) well but actually depressed mouse locomotion. Snyder et al suggest that this is not a major stumbling block to their hypothesis. The problem is that the compound has mixed effects in the brain, a not unusual occurrence with psychoactive drugs. Even caffeine, which is generally
- (55) known only for its stimulatory effects, displays this property, depressing mouse locomotion at very low concentrations and stimulating it at higher ones.
- 1. The primary purpose of the passage is to
- (A) discuss a plan for investigation of a phenomenon that is not yet fully understood
- (B) present two explanations of a phenomenon and reconcile the differences between them
- (C) summarize two theories and suggest a third theory that overcomes the problems encountered in the first two
- (D) describe an alternative hypothesis and provide evidence and arguments that support it
- (E) challenge the validity of a theory by exposing the inconsistencies and contradictions in it

D is the best answer. This question requires you to identify the primary concern of the passage as a whole. The first paragraph presents a recent hypothesis about how caffeine affects behavior. The second paragraph describes an earlier and widely accepted hypothesis about how caffeine affects behavior, and then presents evidence that is not consistent with that hypothesis. The third and fourth paragraphs return to the newer hypothesis introduced in the first paragraph and provide "evidence and arguments" that support this alternative hypothesis.

- 2. According so Snyder et al, caffeine differs from adenosine in that caffeine
  - (A) stimulates behavior in the mouse and in humans, whereas adenosine stimulates behavior in humans only
  - (B) has mixed effects in the brain, whereas adenosine has only a stimulatory effect
  - (C) increases cyclic AMP concentrations in target neurons, whereas adenosine decreases such concentrations

- (D) permits release of neurotransmitters when it is bound to adenosine receptors, whereas adenosine inhibits such release
- (E) inhibits both neuron firing and the production of phosphodiesterase when there is a sufficient concentration in the brain, whereas adenosine inhibits only neuron firing

D is the best answer.

Lines 11-23 state that adenosine "depresses neuron firing" by binding to specific receptors on neuronal membranes, which in turn inhibits the release of neurotransmitters. Lines 27-35 describe Snyder et al's hypothesis about caffeine. They propose that caffeine binds to specific receptors on neuronal membranes, which prevents adenosine from binding to those receptors and "allows the neurons to fire more readily that they otherwise would". Therefore, according to Snyder et al, caffeine differs from adenosine in that caffeine permits neurotransmitter release when it is bound to adenosine receptors, whereas adenosine inhibits neruotransmitter release.

- 3. In response to experimental results concerning IBMX, Snyder et al contended that it is not uncommon for psychoactive drugs to have
  - (A) mixed effects in the brain
  - (B) inhibitory effects on enzymes in the brain
  - (C) close structural relationships with caffeine
  - (D) depressive effects on mouse locomotion
  - (E) the ability to dislodge caffeine from receptors in the brain

#### Answer with explanation:

A is the best answer. The effects of IBMX are discussed in the last paragraph of the passage. IBMX apparently binds to adenosine-specific receptors on neuronal membranes, but, in contrast to the other caffeine derivatives that Snyder et al experimented with, IBMX depresses rather than stimulates mouse locomotion. Snyder et al respond to this experimental result by stating that IBMX has "mixed effects in the brain, a not unusual occurrence with psychoactive drugs" (line 104-107)

- 4. According to Snyder et al, all of the following compounds can bind to specific receptors in the brain EXCEPT
  - (A) IBMX
  - (B) caffeine
  - (C) adenosine
  - (D) theophylline
  - (E) phosphodiesterase

#### Answer with explanation:

E is the best answer. This question asks you to identify which compound, according to Snyder et al, does NOT bind to specific receptors in the brain. Phosphodiesterase, identified as an "enzyme that breaks down the chemical called cyclic AMP" (lines 40-42), is the only compound that is not identified as one that binds to specific receptors in the brain.

- 5. Snyder et al suggest that caffeine's ability to bind to A1 and A2 receptors can be at least partially attributed to which of the following?
  - (A) The chemical relationship between caffeine and phosphodiesterase
  - (B) The structural relationship between caffeine and adenosine
  - (C) The structural similarity between caffeine and neurotransmitters
  - (D) The ability of caffeine to stimulate behavior
  - (E) The natural occurrence of caffeine and adenosine in the brain

B is the best answer.

This question asks you to identify information that is suggested rather than directly stated in the passage. To answer it, first look for the location in the passage of the information specified in the question. The A1 and A2 receptors are mentioned in lines 23-26. Lines 27-35 go on to describe Snyder et al's hypothesis about the effects of caffeine on behavior. They propose that caffeine, "which is structurally similar to adenosine," is able to bind to A1 and A2 receptors in the brain, the same receptors that adenosine normally binds to. Thus, the passage suggests that the structural relationship between caffeine and adenosine may be partially responsible for caffeine's ability to bind to A1 and A2 receptors.

- 6. The author quotes Snyder et al in lines 38-43 most probably in order to
  - (A) reveal some of the assumptions underlying their theory
  - (B) summarize a major finding of their experiments
  - (C) point out that their experiments were limited to the mouse
  - (D) indicate that their experiments resulted only in general correlations
  - (E) refute the objections made by supporters of the older theory

## Answer with explanation:

B is the best answer.

This question asks you to identify the function of a quotation in the third paragraph of the passage. The third paragraph provides evidence for Snyder et al's hypothesis by discussing experiments they conducted on mice. The quotation in lines 74-84 "summarizes" the findings of these experiments. Snyder et al found that a number of caffeine derivatives are able to bind to specific receptors in the brains of mice just as adenosine does, and that the derivatives that are most successful at stimulating locomotion are also the most successful in competing with adenosine in binding at the receptors. This finding is "major" in that it supports their hypothesis that the simulative effects of caffeine are a result of its ability to compete with adenosine.

# Passage 2

Archaeology as a profession faces two major problems. First, it is the poorest of the poor. Only paltry sums are available for excavating and even less is available for publishing the results and preserving the sites

(5) once excavated. Yet archaeologists deal with priceless

objects every day. Second, there is the problem of illegal excavation, resulting in museum-quality pieces being sold to the highest bidder.

I would like to make an outrageous suggestion that

(10) would at one stroke provide funds for archaeology and reduce the amount of illegal digging. I would propose that scientific archeological expeditions and governmental authorities sell excavated artifacts on the open market. Such sales would provide substantial funds for

- (15) the excavation and preservation of archaeological sites and the publication of results. At the same time, they would break the illegal excavator's grip on the market, thereby decreasing the inducement to engage in illegal activities.
- (20) You might object that professionals excavate to acquire knowledge, not money. Moreover, ancient artifacts are part of our global cultural heritage, which should be available for all to appreciate, not sold to the highest bidder. I agree. Sell nothing that has unique
- (25)artistic merit or scientific value. But, you might reply, everything that comes our of the ground has scientific value. Here we part company. Theoretically, you may be correct in claiming that every artifact has potential scientific value. Practically, you are wrong.
- (30) I refer to the thousands of pottery vessels and ancient lamps that are essentially duplicates of one another. In one small excavation in Cyprus, archaeologists recently uncovered 2,000 virtually indistinguishable small jugs in a single courtyard, Even precious royal seal impressions
- (35)known as/melekh handles have been found in abundance---more than 4,000 examples so far.

The basements of museums are simply not large enough to store the artifacts that are likely to be discovered in the future. There is not enough money even to

- (40)catalogue the finds; as a result, they cannot be found again and become as inaccessible as if they had never been discovered. Indeed, with the help of a computer, sold artifacts could be more accessible than are the pieces stored in bulging museum basements. Prior to
- (45) sale, each could be photographed and the list of the purchasers could be maintained on the computer A purchaser could even be required to agree to return the piece if it should become needed for scientific purposes.

It would be unrealistic to suggest that illegal digging

(50) would stop if artifacts were sold on the open market.

But the demand for the clandestine product would be substantially reduced. Who would want an unmarked pot when another was available whose provenance was known, and that was dated stratigraphically by the professional archaeologist who excavated it?

- 7. The primary purpose of the passage is to propose
  - (A) an alternative to museum display of artifacts
  - (B) a way to curb illegal digging while benefiting the archaeological profession
  - (C) a way to distinguish artifacts with scientific value from those that have no such value
  - (D) the governmental regulation of archaeological sites
  - (E) a new system for cataloguing duplicate artifacts

## Answer with explanation:

B is the best answer.

The first paragraph identifies two major problems faced by the archaeological profession: inadequate funding and illegal digging. Lines 12-15 indicate that the author is going to suggest how to remedy both problems, thereby benefiting the archaeological profession. The author proceeds to propose allowing the sale of excavated artifacts (lines 16-19) and to explain how this would solve both problems (lines 19-26). The author then supports the proposal by countering possible objections to it, and in the last paragraph explains how the proposal would curb illegal digging (lines 74-80). Thus, the way information is organized in the passage indicates that the author's purpose is to suggest that allowing the sale of excavated artifacts would provide funds for the archaeological profession and curb illegal digging.

- 8. The author implies that all of the following statements about duplicate artifacts are true EXCEPT:
- (A) A market for such artifacts already exists.
- (B) Such artifacts seldom have scientific value.
- (C) There is likely to be a continuing supply of such artifacts.
- (D) Museums are well supplied with examples of such artifacts.
- (E) Such artifacts frequently exceed in quality those already catalogued in museum collections.

#### Answer with explanation:

E is the best answer. The question requires you to identify the answer choice that CANNOT be inferred from the passage. Nothing in the passage implies that duplicate artifacts exceed museum objects in quality.

- 9. Which of the following is mentioned in the passage as a disadvantage of storing artifacts in museum basements?
- (A) Museum officials rarely allow scholars access to such artifacts.

- (B) Space that could be better used for display is taken up for storage.
- (C) Artifacts discovered in one excavation often become separated from each other.
- (D) Such artifacts are often damaged by variations in temperature and humidity.
- (E) Such artifacts' often remain uncatalogued and thus cannot be located once they are put in storage.

E is the best answer. The disadvantages of storing artifacts in museum basements are discussed in the fifth paragraph. Lines 56-60 state that "There is not enough money-to catalogue the finds" and declare that as a result stored objects cannot be located.

- 10. The author mentions the excavation in Cyprus (lines 31-34) to emphasize which of the following points?
- (A) Ancient lamps and pottery vessels are less valuable, although more rare, than royal seal impressions.
- (B) Artifacts that are very similar to each other present cataloguing difficulties to archaeologists.
- (C) Artifacts that are not uniquely valuable, and therefore could be sold, are available in large quantities.
- (D) Cyprus is the most important location for unearthing large quantities of salable artifacts.
- (E) Illegal sales of duplicate artifacts are wide-spread, particularly on the island of Cyprus.

## Answer with explanation:

C is the best answer. In lines 38-41, the author refutes the assertion that every object excavated has potential scientific value and therefore should not be sold.

In lines 42-44, the author defines those objects that do not have scientific value: "the thousands of pottery vessels-that are essentially duplicates of one another." The Cyprus excavation appears in the next sentence as an example of one location in which such duplicate artifacts have been found in large quantities.

The reference to "2,000 virtually indistinguishable small jugs" highlights the profusion and uniformity of the Cyprus finds. Thus, the excavation is mentioned in order to emphasize the ready availability of objects that lack unique value and therefore could be sold.

- 11. The author's argument concerning the effect of the official sale of duplicate artifacts on illegal excavation is based on which of the following assumptions?
- (A) Prospective purchasers would prefer to buy authenticated artifacts.
- (B) The price of illegally excavated artifacts would rise.
- (C) Computers could be used to trace sold artifacts.
- (D) Illegal excavators would be forced to sell only duplicate artifacts.
- (E) Money gained from selling authenticated artifacts could be used to investigate and prosecute illegal excavators.

#### Answer with explanation:

A is the best answer. The author's argument concerning the effect of the official sale of duplicate artifacts on illegal excation appears in lines 74-75, in which the author predicts that

such official sale would reduce demand for "the clandestine product." The rhetorical question that follows (lines 76-80) indicates that the author finds it unlikely that any purchaser would prefer objects of unknown provenance to objects of known origin, or, to rephrase, the author assumes that most people would prefer to purchase objects of authenticated provenance, as this choice states.

- 12. The author anticipates which of the following initial objections to the adoption of his proposal?
- (A) Museum officials will become unwilling to store artifacts.
- (B) An oversupply of salable artifacts will result and the demand for them will fall.
- (C) Artifacts that would have been displayed in public places will be sold to private collectors.
- (D) Illegal excavators will have an even larger supply of artifacts for resale.
- (E) Counterfeiting of artifacts will become more commonplace.

## Answer with explanation:

C is the best answer. The author begins the third paragraph by saying "you might object-" in order to anticipate possible objections to the adoption of his proposal. In the next sentence the author asserts that "ancient artifacts-should be available for all to appreciate, not sold to the highest bidder" 9lines 29-33), acknowledging an opponent's fear that individuals might be allowed to purchase objects that ought to be displayed in public institutions. This objection is paraphrased in this choice.

# Passage 3

Federal efforts to aid minority businesses began in the 1960's when the Small Business Administration (SBA) began making federally guaranteed loans and government-sponsored management and technical assistance

- (5) available to minority business enterprises. While this program enabled many minority entrepreneurs to form new businesses, the results were disappointing, since managerial inexperience, unfavorable locations, and capital shortages led to high failure rates. Even 15
- (10) years after the program was implemented, minority business receipts were not quite two percent of the national economy's total receipts.

Recently federal policymakers have adopted an approach intended to accelerate development of the

(15) minority business sector by moving away from directly aiding small minority enterprises and toward supporting larger, growth-oriented minority firms through intermediary companies. In this approach, large corporations participate in the development of successful and stable

- (20) minority businesses by making use of governmentsponsored venture capital. The capital is used by a participating company to establish a Minority Enterprise Small Business Investment Company or MESBIC. The MESBIC then provides capital and guidance to minority
- (25) businesses that have potential to become future suppliers or customers of the sponsoring company.

MESBIC's are the result of the belief that providing established firms with easier access to relevant management techniques and more job-specific experience, as

(30) well as substantial amounts of capital, gives those firms a greater opportunity to develop sound business foundations than does simply making general management experience and small amounts of capital available.

Further, since potential markets for the minority busi-

- (35)nesses already exist through the sponsoring companies, the minority businesses face considerably less risk in terms of location and market fluctuation. Following early financial and operating problems, sponsoring corporations began to capitalize MESBIC's far above
- (40) the legal minimum of \$500,000 in order to generate sufficient income and to sustain the quality of management needed. MESBIC'c are now emerging as increasingly important financing sources for minority enterprises.
- (45) Ironically, MESBIC staffs, which usually consist of Hispanic and Black professionals, tend to approach investments in minority firms more pragmatically than do many MESBIC directors, who are usually senior managers from sponsoring corporations. The latter
- (50)often still think mainly in terms of the "social responsibility approach" and thus seem to prefer deals that are riskier and less attractive than normal investment criteria would warrant. Such differences in viewpoint have produced uneasiness among many minority staff members,
- (55)who feel that minority entrepreneurs and businesses should be judged by established business considerations. These staff members believe their point of view is closer to the original philosophy of MESBIC's and they are concerned that, unless a more prudent course is followed, MESBIC directors may revert to policies likely to re-create the disappointing results of the original SBA approach.

- 13. Which of the following best states the central idea of the passage?
- (A) The use of MESBIC's for aiding minority entrepreneurs seems to have greater potential for success than does the original SBA approach.
- (B) There is a crucial difference in point of view between the staff and directors of some MESBIC's.
- (C) After initial problems with management and marketing, minority businesses have begun to expand at a steady rate.
- (D) Minority entrepreneurs wishing to form new businesses now have several equally successful federal programs on which to rely.
- (E) For the first time since 1960, large corporations are making significant contributions to the development of minority businesses.

A is the best answer. The passage begins by indicating that the results of the SBA approach to aiding minority entrepreneurs "were disappointing" (line 11). Lines 62-64 state that "MESBIC's are now emerging as increasingly important financing sources for minority enterprises." Much of the passage is devoted to supporting the author's view that MESBIC'x have the greater potential for success, and the last sentence in the passage confirms this view.

- 14. According to the passage, the MESBIC approach differs from the SBA approach in that MESBIC's
- (A) seek federal contracts to provide marketsfor minority businesses
- (B) encourage minority businesses to provide markets for other minority businesses
- (C) attempt to maintain a specified rate of growth in the minority business sector
- (D) rely on the participation of large corporations to finance minority businesses
- (E) select minority businesses on the basis of their location

## Answer with explanation:

D is the best answer.

In the second paragraph, the author describes the MESBIC approach as one in which "large corporations participate in the development of successful and stable minority businesses by making use of government-sponsored venture capital" (lines 26-31). There is no indication in the passage that the SBA approach relies on the participation of large corporations.

- 15. Which of the following does the author cite to support the conclusion that the results of the SBA program were disappointing?
- (A) The small number of new minority enterprises formed as a result of the program
- (B) The small number of minority enterprises that took advantage of the management and technical assistance offiered under the program
- (C) The small percentage of the nation's business receipts earned by minority enterprises following the programs, implementation.
- (D) The small percentage of recipient minority enterprises that were able to repay federally guaranteed loans made under the program

(E) The small number of minority enterprises that chose to participate in the program

## Answer with explanation:

C is the best answer. The author concludes that the results of the SBA approach "were disappointing" (line 11). Then he supports the conclusion by citing the fact that "Even 15 years after the program was implemented, minority business receipts were not quite two percent of the national economy's total receipts." (lines 14-18).

- 16. Which of the following statements about the SBA program can be inferred from the passage?
- (A) The maximum term for loans made to recipient businesses was 15 years.
- (B) Business loans were considered to be more useful to recipient businesses than was management and technical assistance.
- (C) The anticipated failure rate for recipient businesses was significantly lower than the rate that actually resulted.
- (D) Recipient businesses were encouraged to relocate to areas more favorable for business development.
- (E) The capitalization needs of recipient businesses were assessed and then provided for adequately.

#### Answer with explanation:

C is the best answer. This question asks you to draw an inference about the SBA program. Although the passage does not actually state that the failure rate for SBA recipient businesses was higher than anticipated, in the first paragraph the author does sate that the results of the SBA program were disappointing, in part because of the high failure rate among SBA-sponsored businesses. From this it can be inferred that the anticipated failure rate was lower than the actual rate.

- 17. The author refers to the "financial and operating problems"(line 38) encountered by MESBIC's primarily in order to
- (A) broaden the scope of the discussion to include the legal considerations of funding MESBIC'S through sponsoring companies
- (B) call attention to the fact that MESBIC's must receive adequate funding in order to function effectively
- (C) show that sponsoring companies were willing to invest only \$500,000 of government-sponsored venture capital in the original MESBIC's
- (D) compare SBA and MESBIC limits on minimum funding
- (E) refute suggestions that MESBIC's have been only marginally successful

# Answer with explanation:

B is the best answer.

The reference in lines 56-57 to "financial and operating problems" appears in the context of a discussion of why corporations came to capitalize MESBIC"s "far above the legal minimum of \$500,000." The problems are cited to illustrate the reasons that MESBIC's need more than the minimum funding required by law, and thus call attention to this need.

- 18. The author's primary objective in the passage is to
- (A) disprove the view that federal efforts to aid minority businesses have been ineffective
- (B) explain how federal efforts to aid minority businesses have changed since the 1960's
- (C) establish a direct link between the federal efforts to aid minority businesses made before the 1960's and those made in the 1980's
- (D) analyze the basis for the belief that job-specific experience is more useful to minority businesses than is general management experience
- (E) argue that the "social responsibility approach" to aiding minority businesses is superior to any other approach

B is the best answer. The passage describes efforts undertaken in the 1960's to and minority businesses and then describes MESBIC's, a newer approach to such efforts.

# Passage 4

The majority of successful senior managers do not closely follow the classical rational model of first clarifying goals, assessing the problem, formulating options, estimating likelihoods of success, making a decision,

- (5) and only then taking action to implement the decision. Rather, in their day-by-day tactical maneuvers, these senior executives rely on what is vaguely termed "intuition" to mangage a network of interrelated problems that require them to deal with ambiguity, inconsistency,
- (10)novelty, and surprise; and to integrate action into the process to thinking.

Generations of writers on management have recognized that some practicing managers rely heavily on intuition. In general, however, such writers display a

(15) poor grasp of what intuition is. Some see it as the opposite of rationality: others view it as an excuse for capriciousness.

Isenberg's recent research on the cognitive processes of senior managers reveals that managers' intuition is

- (20)neither of these. Rather, senior managers use intuition in at least five distinct ways. First, they intuitively sense when a problem exists. Second, managers rely on intuition to perform well-learned behavior patterns rapidly. This intuition is not arbitrary or irrational, but is based
- (25) on years of painstaking practice and hands-on experience that build skills. A third function of intuition is to synthesize isolated bits of data and practice into an inte-

- grated picture, often in an "Aha!" experience. Fourth, some managers use intuition as a check on the results
- (30)of more rational analysis. Most senior executives are familiar with the formal decision analysis models and tools, and those who use such systematic methods for reaching decisions are occasionally leery of solutions suggested by these methods which run counter to their
- (35) sense of the correct course of action. Finally, managers can use intuition to bypass in-depth analysis and move rapidly to engender a plausible solution. Used in this way, intuition is an almost instantaneous cognitive process in which a manager recognizes familiar patterns.
- (40) One of the implications of the intuitive style of executive management is that "thinking" is inseparable from acting. Since managers often "know" what is right before they can analyze and explain it, they frequently act first and explain later. Analysis is inextricably tied
- (45)to action in thinking/acting cycles, in which managers develop thoughts about their companies and organizations not by analyzing a problematic situation and then acting, but by acting and analyzing in close concert.

Given the great uncertainty of many of the manage(50)ment issues that they face, senior managers often instigate a course of action simply to learn more about an
issue. They then use the results of the action to develop
a more complete understanding of the issue. One implication of thinking/acting cycles is that action is often

- **(55)**part of defining the problem, not just of implementing the solution.
- 19. According to the passage, senior managers use intuition in all of the following ways EXCEPT to
- (A) speed up of the creation of a solution to a problem
- (B) identify a problem
- (C) bring together disparate facts
- (D) stipulate clear goals
- (E) evaluate possible solutions to a problem

# Answer with explanation:

D is the best answer. The question requires you to recognize which of the choices is NOT mentioned in the passage as a way in which senior managers use intuition.

The passage does not mention stipulating goals.

- 20. The passage suggests which of the following about the "writers on management" mentioned in line 12?
- (A) They have criticized managers for not following the classical rational model of decision analysis.
- (B) They have not based their analyses on a sufficiently large sample of actual managers.
- (C) They have relied in drawing their conclusions on what managers say rather than on what managers do.
- (D) They have misunderstood how managers use intuition in making business decisions.
- (E) They have not acknowledged the role of intuition in managerial practice.

D is the best answer. The author asserts that the writers in question "display a poor grasp of what intuition is" (lines 21-22). The next paragraph presents a view that, according to the author of the passage, characterizes intuition more accurately than the writers on management do. Isenberg's research is specifically described as showing the ways in which managers use intuition (lines 28-30). Therefore, what Isenberg correctly comprehends, and the writers in question misunderstand, is how managers use intuition, as this choice states.

- 21. Which of the following best exemplifies "an 'Aha!' experience" (line 28) as it is presented in the passage?
- (A) A manager risks taking an action whose outcome is unpredictable to discover whether the action changes the problem at hand.
- (B) A manager performs well-learned and familiar behavior patterns in creative and uncharacteristic ways to solve a problem.
- (C) A manager suddenly connects seemingly unrelated facts and experiences to create a pattern relevant to the problem at hand.
- (D) A manager rapidly identifies the methodology used to compile data yielded by systematic analysis.
- (E) A manager swiftly decides which of several sets of tactics to implement in order to deal with the contingencies suggested by a problem.

## Answer with explanation:

C is the best answer. An "Aha! Experience" is said in lines 37-41 to result from the synthesizing of "isolated bits of data and practice into an integrated picture." This choice is the best example of this kind of process. The connecting of seemingly unrelated facts and experiences mentioned in the answer choice is equivalent to synthesizing "isolated bits of data and practice," and the pattern referred to is comparable to an "integrated picture."

- 22. According to the passage, the classical model of decision analysis includes all of the following EXCEPT
- (A) evaluation of a problem
- (B) creation of possible solutions to a problem
- (C) establishment of clear goals to be reached by the decision
- (D) action undertaken in order to discover more information about a problem

(E) comparison of the probable effects of different solutions to a problem

## Answer with explanation:

D is the best answer. The question requires you to recognize which of the choices is NOT mentioned in the passage as a component of the classical model of decision analysis. Only this choice, "action undertaken in order to discover more information about a problem," does not appear in the passage.

- 23. It can be inferred from the passage that which of the following would most probably be one major difference in behavior between Manager X, who uses intuition to reach decisions, and Manager Y, who uses only formal decision analysis?
- (A) Manager X analyzes first and then acts; Manager Y does not.
- (B) Manager X checks possible solutions to a problem by systematic analysis; Manager Y does not
- (C) Manager X takes action in order to arrive at the solution to a problem; Manager Y does not.
- (D) Manager Y draws on years of hands-on experience in creating a solution to a problem; Manager X does not.
- (E) Manger Y depends on day-to-day tactical maneuvering; manager X does not.

#### Answer with explanation:

C is the best answer. The question requires you to compare behavior based on intuition with behavior based on formal decision analysis. This choice specifies that the manager who uses intuition incorporates action into the decision-making process, but the manager who uses formal analysis does not. This distinction is made in several places in the passage. Lines 6-7 emphasize that decision-making and action-taking are separate steps in formal decision analysis: "making a decision, and only then taking action." On the other hand, those who use intuition "integrate action into the process of thinking" (lines 15-16). Again, the author mentions that in the intuitive style of management, " 'thinking' is inseparable from acting" (lines 60-61), and "action is often part of defining the problem" (lines 80-81).

- 24. The passage provides support for which of the following statements?
- (A) Managers who rely on intuition are more successful than those who rely on formal decision analysis.
- (B) Managers cannot justify their intuitive decisions.
- (C) Managers' intuition works contrary to their rational and analytical skills
- (D) Logical analysis of a problem increases the number of possible solutions.
- (E) Intuition enables managers to employ their practical experience more efficiently.

## Answer with explanation:

E is the best answer. The question requires you to identify a statement that can be inferred from information in the passage but is not explicitly stated. The author asserts that intuitive managers can "move rapidly to engender a plausible solution" (lines 53-54) and that their intuition is based on "experience that builds skill" (line 37). This implies that the combination of

skill and rapidity enables mangers to employ their practical experience more efficiently, as this choice states.

# Passage 5

Nearly a century ago, biologists found that if they separated an invertebrate animal embryo into two parts at an early stage of its life, it would survive and develop as two normal embryos. This led them to believe that the

- (5) cells in the early embryo are undetermined in the sense that each cell has the potential to develop in a variety of different ways. Later biologists found that the situation was not so simple. It matters in which plane the embryo is cut. If it is cut in a plane different from the one used
- (10) by the early investigators, it will not form two whole embryos.

A debate arose over what exactly was happening. Which embryo cells are determined, just when do theybecome irreversibly committed to their fates, and what

- (15) are the "morphogenetic determinants" that tell a cell what to become? But the debate could not be resolved because no one was able to ask the crucial questions in a form in which they could be pursued productively. Recent discoveries in molecular biology, however, have
- (20) opened up prospects for a resolution of the debate.

  Now investigators think they know at least some of the molecules that act as morphogenetic determinants in early development. They have been able o show that, in a sense, cell determination begins even before an egg

(25) is fertilized.

Studying sea urchins, biologist Paul Gross found that an unfertilized egg contains substances that function as morphogenetic determinants. They are located in the cytoplasm of the egg cell; i.e., in that part of the

- (30) cell's protoplasm that lies outside of the nucleus. In the unfertilized egg, the substances are inactive and are not distributed homogeneously. When the egg is fertilized, the substances become active and, presumably, govern the behavior of the genes they interact with. Since the
- (35) substances are unevenly distributed in the egg, when the fertilized egg divides, the resulting cells are different from the start and so can be qualitatively different in their own gene activity.

The substances that Gross studied are maternal

- (40)messenger RNA's --products of certain of the maternal genes. He and other biologists studying a wide variety of organisms have found that these particular RNA's direct, in large part, the synthesis of histones, a class of proteins that bind to DNA. Once synthesized, the
- (45)histones move into the cell nucleus, where section of DNA wrap around them to form a structure that resembles beads, or knots, on a string. The beads are DNA segments wrapped around the histones; the string is the intervening DNA. And it is the structure of these beaded
- **(50)** DNA strings that guides the fate of the cells in which they are located.
- 25. It can be inferred from the passage that the morphogenetic determinants present in the early embryo are
- (A) located in the nucleus of the embryo cells
- (B) evenly distributed unless the embryo is not developing normally
- (C) inactive until the embryo cells become irreversibly committed to their final function
- (D) identical to those that were already present in the unfertilized egg
- (E) present in larger quantities than is necessary for the development of a single individual
- 26. The main topic of the passage is
- (A) the early development of embryos of lower marine organisms
- (B) the main contribution of modern embryology to molecular biology
- (C) the role of molecular biology in disproving older theories of embryonic development
- (D) cell determination as an issue in the study of embryonic development
- (E) scientific dogma as a factor in the recent debate over the value of molecular biology
- 27. According to the passage, when biologists believed that the cells in the early embryo were undetermined, they made which of the following mistakes?
- (A) They did not attempt to replicate the original experiment of separating an embryo into two parts.
- (B) They did not realize that there was a connection between the issue of cell determination and the outcome of the separation experiment.
- (C) They assumed that the results of experiments on embryos did not depend on the particular animal species used for such experiments.
- (D) They assumed that it was crucial to perform the separation experiment at an early stage in the embryo's life.
- (E) They assumed that different ways of separating an embryo into two parts would be equivalent as far as the fate of the two parts was concerned.

- 28. It can be inferred from the passage that the initial production of histones after an egg is fertilized takes place
- (A) in the cytoplasm
- (B) in the maternal genes
- (C) throughout the protoplasm
- (D) in the beaded portions of the DNA strings
- (E) in certain sections of the cell nucleus
- 29. It can be inferred from the passage that which of the following is dependent on the fertilization of an egg?
- (A) Copying of maternal genes to produce maternal messenger RNA's
- (B) Sythesis of proteins called histones
- (C) Division of a cell into its nucleus and the cytoplasm
- (D) Determination of the egg cell's potential for division
- (E) Generation of all of a cell's morphogenetic determinants
- 30. According to the passage, the morphogenetic determinants present in the unfertilized egg cell are which of the following?
- (A) Proteins bound to the nucleus
- (B) Histones
- (C) Maternal messenger RNA's
- (D) Cytoplasm
- (E) Nonbeaded intervening DNA

In the two decades between 1910 and 1930, over ten percent to the Black population of the United States left the South, where the preponderance of the Black population had been located, and migrated to northern

- (5) states, with the largest number moving, it is claimed, between 1916 and 1918. It has been frequently assumed, but not proved, that the majority of the migrants in what has come to be called the Great Migration came from rural areas and were motivated by two concurrent
- (10) factors: the collapse of the cotton industry following the boll weevil infestation, which began in 1898, and increased demand in the North for labor following the cessation of European immigration caused by the outbreak of the First World War in 1914. This assump-
- (15) tion has led to the conclusion that the migrants' subsequent lack of economic mobility in the North is tied to rural background, a background that implies unfamiliarity with urban living and a lack of industrial skills.

- But the question of who actually left the South has (20)never been rigorously investigated. Although numerous investigations document an exodus from rural southern areas to southern cities prior to the Great Migration. no one has considered whether the same migrants then moved on to northern cities. In 1910 over 600,000
- (25)Black workers, or ten percent of the Black work force, reported themselves to be engaged in "manufacturing and mechanical pursuits," the federal census category roughly encompassing the entire industrial sector. The Great Migration could easily have been made up entirely
- (30) of this group and their families. It is perhaps surprising to argue that an employed population could be enticed to move, but an explanation lies in the labor conditions then prevalent in the South.

About thirty-five percent of the urban Black popu(35) lation in the South was engaged in skilled trades. Some were from the old artisan class of slavery-blacksmiths.

masons, carpenters-which had had a monopoly of certain trades, but they were gradually being pushed out by competition, mechanization, and obsolescence,

- (40) The remaining sixty-five percent, more recently urbanized, worked in newly developed industries---tobacco. lumber, coal and iron manufacture, and railroads. Wages in the South, however, were low, and Black workers were aware, through labor recruiters and the
- (45)Black press, that they could earn more even as unskilled workers in the North than they could as artisans in the South. After the boll weevil infestation, urban Black workers faced competition from the continuing influx of both Black and White rural workers, who were driven
- (50)to undercut the wages formerly paid for industrial jobs.

  Thus, a move north would be seen as advantageous to a group that was already urbanized and steadily employed, and the easy conclusion tying their subsequent economic problems in the North to their rural background comes into question.
- 31. The author indicates explicitly that which of the following records has been a source of information in her investigation?
  - (A) United States Immigration Service reports from 1914 to 1930
  - (B) Payrolls of southern manufacturing firms between 1910 and 1930
  - (C) The volume of cotton exports between 1898 and 1910

- (D) The federal census of 1910
- (E) Advertisements of labor recruiters appearing in southern newspapers after 1910
- 32. In the passage, the author anticipates which of the following as a possible objection to her argument?
- (A) It is uncertain how many people actually migrated during the Great Migration.
- (B) The eventual economic status of the Great Migration migrants has not been adequately traced
- (C) It is not likely that people with steady jobs would have reason to move to another area of the country.
- (D) It is not true that the term "manufacturing and mechanical pursuits" actually encompasses the entire industrial sector.
- (E) Of the Black workers living in southern cities, only those in a small number of trades were threatened by obsolescence.
- 33. According to the passage, which of the following is true of wages in southern cities in 1910?
- (A) They were being pushed lower as a result of increased competition.
- (B) They had begun t to rise so that southern industry could attract rural workers.
- (C) They had increased for skilled workers but decreased for unskilled workers.
- (D) They had increased in large southern cities but decreased in small southern cities.
- (E) They had increased in newly developed industries but decreased in the older trades.
- 34. The author cites each of the following as possible influences in a Black worker's decision to migrate north in the Great Migration EXCEPT
- (A) wage levels in northern cities
- (B) labor recruiters
- (C) competition from rural workers
- (D) voting rights in northern states
- (E) the Black press
- 35. It can be inferred from the passage that the "easy conclusion" mentioned in line 53 is based on which of the following assumptions?
- (A) People who migrate from rural areas to large cities usually do so for economic reasons.
- (B) Most people who leave rural areas to take jobs in cities return to rural areas as soon as it is financially possible for them to do so.
- (C) People with rural backgrounds are less likely to succeed economically in cities than are those with urban backgrounds.
- (D) Most people who were once skilled workers are not willing to work as unskilled workers.
- (E) People who migrate from their birthplaces to other regions of country seldom undertake a second migration.
- 36. The primary purpose of the passage is to

- (A) support an alternative to an accepted methodology
- (B) present evidence that resolves a contradiction
- (C) introduce a recently discovered source of information
- (D) challenge a widely accepted explanation
- (E) argue that a discarded theory deserves new attention

In 1896 a Georgia couple suing for damages in the accidental death of their two year old was told that since the child had made no real economic contribution to the family, there was no liability for damages. In contrast,

(5) less than a century later, in 1979, the parents of a three year old sued in New York for accidental-death damages and won an award of \$750,000.

The transformation in social values implicit in juxtaposing these two incidents is the subject of Viviana

- (10)Zelizer's excellent book, *Pricing the Priceless Child*.

  During the nineteenth century, she argues, the concept of the "useful" child who contributed to the family economy gave way gradually to the present-day notion of the "useless" child who, though producing no income
- (15) for, and indeed extremely costly to, its parents, is yet considered emotionally "priceless." Well established among segments of the middle and upper classes by the mid-1800's, this new view of childhood spread throughout society in the iate-nineteenth and early-twentieth
- (20)centuries as reformers introduced child-labor regulations and compulsory education laws predicated in part on the assumption that a child's emotional value made child labor taboo.

For Zelizer the origins of this transformation were (25)many and complex. The gradual erosion of children's productive value in a maturing industrial economy, the decline in birth and death rates, especially in child mortality, and the development of the companionate family (a family in which members were united by

- (30) explicit bonds of love rather than duty) were all factors critical in changing the assessment of children's worth. Yet "expulsion of children from the 'cash nexus,'... although clearly shaped by profound changes in the economic, occupational, and family structures," Zelizer
- (35)maintains. "was also part of a cultural process 'of sacralization' of children's lives. " Protecting children from the

crass business world became enormously important for late-nineteenth-century middle-class Americans, she suggests; this sacralization was a way of resisting what 10) they perceived as the relentless corruption of human

**(40)**they perceived as the relentless corruption of human values by the marketplace.

In stressing the cultural determinants of a child's worth. Zelizer takes issue with practitioners of the new "sociological economics," who have analyzed such tradi-

- (45)tionally sociological topics as crime, marriage, education, and health solely in terms of their economic determinants. Allowing only a small role for cultural forces in the form of individual "preferences," these sociologists tend to view all human behavior as directed primarily by
- (50)the principle of maximizing economic gain. Zelizer is highly critical of this approach, and emphasizes instead the opposite phenomenon: the power of social values to transform price. As children became more valuable in emotional terms, she argues, their "exchange" or " sur-
- (55) render" value on the market, that is, the conversion of their intangible worth into cash terms, became much greater.
- 37. It can be inferred from the passage that accidental-death damage awards in America during the nineteenth century tended to be based principally on the
- (A) earnings of the person at time of death
- (B) wealth of the party causing the death
- (C) degree of culpability of the party causing the death
- (D) amount of money that had been spent on the person killed
- (E) amount of suffering endured by the family of the person killed
- 38. It can be inferred from the passage that in the early 1800's children were generally regarded by their families as individuals who
- (A) needed enormous amounts of security and affection
- (B) required constant supervision while working
- (C) were important to the economic well-being of a family
- (D) were unsuited to spending long hours in school
- (E) were financial burdens assumed for the good of society
- 39. Which of the following alternative explanations of the change in the cash value of children would be most likely to be put forward by sociological economists as they are described in the passage?
- (A) The cash value of children rose during the nineteenth century because parents began to increase their emotional investment in the upbringing of their children.

- (B) The cash value of children rose during the nineteenth century because their expected earnings over the course of a lifetime increased greatly.
- (C) The cash value of children rose during the nineteenth century because the spread of humanitarian ideals resulted in a wholesale reappraisal of the worth of an individual
- (D) The cash value of children rose during the nineteenth century because compulsory education laws reduced the supply, and thus raised the costs, of available child labor.
- (E) The cash value of children rose during the nineteenth century because of changes in the way negligence law assessed damages in accidental-death cases.
- 40. The primary purpose of the passage is to
- (A) review the literature in a new academic subfield
- (B) present the central thesis of a recent book
- (C) contrast two approaches to analyzing historical change
- (D) refute a traditional explanation of a social phenomenon
- (E) encourage further work on a neglected historical topic
- 41. It can be inferred from the passage that which of the following statements was true of American families over the course of the nineteenth century?
- (A) The average size of families grew considerably
- (B) The percentage of families involved in industrial work declined dramatically.
- (C) Family members became more emotionally bonded to one another.
- (D) Family members spent an increasing amount of time working with each other.
- (E) Family members became more economically dependent on each other.
- 42. Zelizer refers to all of the following as important influences in changing the assessment of children's worth EXCEPT changes in
- (A) the mortality rate
- (B) the nature of industry
- (C) the nature of the family
- (D) attitudes toward reform movements
- (E) attitudes toward the marketplace

Prior to 1975, union efforts to organize public-sector clerical workers, most of whom are women, were somewhat limited. The factors favoring unionization drives seem to have been either the presence of large numbers

- (5) of workers, as in New York City, to make it worth the effort, or the concentration of small numbers in one or two locations, such as a hospital, to make it relatively easy, Receptivity to unionization on the workers, part was also a consideration, but when there were large
- (10) numbers involved or the clerical workers were the only

- unorganized group in a jurisdiction, the multioccupational unions would often try to organize them regardless of the workers' initial receptivity. The strategic reasoning was based, first, on the concern that politi-
- (15)cians and administrators might play off unionized against nonunionized workers, and, second, on the conviction that a fully unionized public work force meant power, both at the bargaining table and in the legislature. In localities where clerical workers were few
- (20)in number, were scattered in several workplaces, and expressed no interest in being organized, unions more often than not ignored them in the pre-1975 period. But since the mid-1970's, a different strategy has emerged. In 1977, 34 percent of government clerical
- (25) workers were represented by a labor organization, compared with 46 percent of government professionals,44 percent of government blue-collar workers, and41 percent of government service workers, Since then, however, the biggest increases in public-sector unioniza-
- (30)tion have been among clerical workers. Between 1977 and 1980, the number of unionized government workers in blue-collar and service occupations increased only about 1.5 percent, while in the white-collar occupations the increase was 20 percent and among clerical workers
- (35)in particular, the increase was 22 percent.
  - What accounts for this upsurge in unionization among clerical workers? First, more women have entered the work force in the past few years, and more of them plan to remain working until retirement age. Conse-
- (40)quently, they are probably more concerned than their predecessors were about job security and economic benefits. Also, the women's movement has succeeded in legitimizing the economic and political activism of women on their own behalf, thereby producing a more positive atti-
- (45)tude toward unions. The absence of any comparable increase in unionization among private-sector clerical workers, however, identifies the primary catalyst-the structural change in the multioccupational public-sector unions themselves. Over the past twenty years, the occu-
- (50)pational distribution in these unions has been steadily shifting from predominantly blue-collar to predominantly white-collar. Because there are far more women in white-collar jobs, an increase in the proportion of

female members has accompanied the occupational shift

- (55) and has altered union policy-making in favor of organizing women and addressing women's issues.
- 43. According to the passage, the public-sector workers who were most likely to belong to unions in 1977 were
- (A) professionals
- (B) managers
- (C) clerical workers
- (D) service workers
- (E) blue-collar workers
- 44. The author cites union efforts to achieve a fully unionized work force (line 13-19) in order to account for why
- (A) politicians might try to oppose public-sector union organizing
- (B) public-sector unions have recently focused on organizing women
- (C) early organizing efforts often focused on areas where there were large numbers of workers
- (D) union efforts with regard to public-sector clerical workers increased dramatically after 1975
- (E) unions sometimes tried to organize workers regardless of the workers' initial interest in unionization
- 45. The author's claim that, since the mid-1970's, a new strategy has emerged in the unionization of public-sector clerical workers (line 23) would be strengthened if the author
- (A) described more fully the attitudes of clerical workers toward labor unions
- (B) compared the organizing strategies employed by private-sector unions with those of public-sector unions
- (C) explained why politicians and administrators sometimes oppose unionization of clerical workers
- (D) indicated that the number of unionized public-sector clerical workers was increasing even before the mid-1970's
- (E) showed that the factors that favored unionization drives among these workers prior to 1975 have decreased in importance
- 46. According to the passage, in the period prior to 1975, each of the following considerations helped determine whether a union would attempt to organize a certain group of clerical workers EXCEPT
- (A) the number of clerical workers in that group
- (B) the number of women among the clerical workers in that group
- (C) whether the clerical workers in that area were concentrated in one workplace or scattered over several workplaces
- (D) the degree to which the clerical workers in that group were interested in unionization

- (E) whether all the other workers in the same jurisdiction as that group of clerical workers were unionized
- 47. The author states that which of the following is a consequence of the women's movement of recent years?
- (A) An increase in the number of women entering the work force
- (B) A structural change in multioccupational public-sector unions
- (C) A more positive attitude on the part of women toward unions
- (D) An increase in the proportion of clerical workers that are women
- (E) An increase in the number of women in administrative positions
- 48. The main concern of the passage is to
- (A) advocate particular strategies for future efforts to organize certain workers into labor unions
- (B) explain differences in the unionized proportions of various groups of public-sector workers
- evaluate the effectiveness of certain kinds of labor unions that represent public-sector workers
- (D) analyzed and explain an increase in unionization among a certain category of workers
- (E) describe and distinguish strategies appropriate to organizing different categories of workers

Milankovitch proposed in the early twentieth century that the ice ages were caused by variations in the Earth's orbit around the Sun. For sometime this theory was considered untestable, largely because there was no suffi-

**(5)**ciently precise chronology of the ice ages with which the orbital variations could be matched.

To establish such a chronology it is necessary to determine the relative amounts of land ice that existed at various times in the Earth's past. A recent discovery

- (10)makes such a determination possible: relative land-ice volume for a given period can be deduced from the ratio of two oxygen isotopes, 16 and 18, found in ocean sediments. Almost all the oxygen in water is oxygen 16, but a few molecules out of every thousand incorporate the
- (15)heavier isotope 18. When an ice age begins, the continental ice sheets grow, steadily reducing the amount of water evaporated from the ocean that will eventually return to it. Because heavier isotopes tend to be left behid when water evaporates from the ocean surfaces,
- (20) the remaining ocean water becomes progressively

- enriched in oxygen 18. The degree of enrichment can be determined by analyzing ocean sediments of the period, because these sediments are composed of calcium carbonate shells of marine organisms, shells that were
- (25) constructed with oxygen atoms drawn from the surrounding ocean. The higher the ratio of oxygen 18 to oxygen 16 in a sedimentary specimen, the more land ice there was when the sediment was laid down.

As an indicator of shifts in the Earth's climate, the (30)isotope record has two advantages. First, it is a global record: there is remarkably little variation in isotope ratios in sedimentary specimens taken from different continental locations. Second, it is a more continuous record than that taken from rocks on land. Because of

- (35) these advantages, sedimentary evidence can be dated with sufficient accuracy by radiometric methods to establish a precise chronology of the ice ages. The dated isotope record shows that the fluctuations in global ice volume over the past several hundred thousand years
- (40)have a pattern: an ice age occurs roughly once every 100,000 years. These data have established a strong connection between variations in the Earth's orbit and the periodicity of the ice ages.

However, it is important to note that other factors,

- (45) such as volcanic particulates or variations in the amount of sunlight received by the Earth, could potentially have affected the climate. The advantage of the Milankovitch theory is that it is testable: changes in the Earth's orbit can be calculated and dated by applying Newton's laws
- (50)of gravity to progressively earlier configurations of the bodies in the solar system. Yet the lack of information about other possible factors affecting global climate does not make them unimportant.
- 49. In the passage, the author is primarily interested in
- (A) suggesting an alternative to an outdated research method
- (B) introducing a new research method that calls an accepted theory into question
- (C) emphasizing the instability of data gathered from the application of a new scientific method
- (D) presenting a theory and describing a new method to test that theory
- (E) initiating a debate about a widely accepted theory

- 50. The author of the passage would be most likely to agree with which of the following statements about the Milankovitch theory?
- (A) It is the only possible explanation for the ice ages.
- (B) It is too limited to provide a plausible explanation for the ice ages, despite recent research findings.
- (C) It cannot be tested and confirmed until further research on volcanic activity is done.
- (D) It is one plausible explanation, though not the only one, for the ice ages.
- (E) It is not a plausible explanation for the ice ages, although it has opened up promising possibilities for future research.
- 51. It can be inferred from the passage that the isotope record taken from ocean sediments would be less useful to researchers if which of the following were true?
- (A) It indicated that lighter isotopes of oxygen predominated at certain times.
- (B) It had far more gaps in its sequence than the record taken from rocks on land.
- (C) It indicated that climate shifts did not occur every 100,000 years.
- (D) It indicated that the ratios of oxygen 16 and oxygen 18 in ocean water were not consistent with those found in fresh water.
- (E) It stretched back for only a million years.
- 52. According to the passage, which of the following is true of the ratios of oxygen isotopes in ocean sediments?
- (A) They indicate that sediments found during an ice age contain more calcium carbonate than sediments formed at other times.
- (B) They are less reliable than the evidence from rocks on land in determining the volume of land ice.
- (C) They can be used to deduce the relative volume of land ice that was present when the sediment was laid down.
- (D) They are more unpredictable during an ice age than in other climatic conditions.
- (E) They can be used to determine atmospheric conditions at various times in the past.
- 53. It can be inferred from the passage that precipitation formed from evaporated ocean water has
- (A) the same isotopic ratio as ocean water
- (B) less oxygen 18 than does ocean water
- (C) less oxygen 18 than has the ice contained in continental ice sheets
- (D) a different isotopic composition than has precipitation formed from water on land
- (E) more oxygen 16 than has precipitation formed from fresh water
- 54. It can be inferred from the passage that calcium carbonate shells
- (A) are not as susceptible to deterioration as rocks
- (B) are less common in sediments formed during an ice age
- (C) are found only in areas that were once covered by land ice

- (D) contain radioactive material that can be used to determine a sediment's isotopic composition
- (E) reflect the isotopic composition of the water at the time the shells were formed

Many United States companies have, unfortunately, made the search for legal protection from import competition into a major line of work. Since 1980 the United States International Trade Commission (ITC)

- (5) has received about 280 complaints alleging damage from imports that benefit from subsidies by foreign governments. Another 340 charge that foreign companies "dumped" their products in the United States at "less than fair value." Even when no unfair practices
- (10) are alleged, the simple claim that an industry has been injured by imports is sufficient grounds to seek relief.
  Contrary to the general impression, this quest for import relief has hurt more companies than it has helped. As corporations begin to function globally, they
- (15)develop an intricate web of marketing, production, and research relationships, The complexity of these relationships makes it unlikely that a system of import relief laws will meet the strategic needs of all the units under the same parent company.
- (20) Internationalization increases the danger that foreign companies will use import relief laws against the very companies the laws were designed to protect. Suppose a United States-owned company establishes an overseas plant to manufacture a product while its competitor
- (25)makes the same product in the United States. If the competitor can prove injury from the imports---and that the United States company received a subsidy from a foreign government to build its plant abroad—the United States company's products will be uncompeti-
- (30)tive in the United States, since they would be subject to duties.

Perhaps the most brazen case occurred when the ITC investigated allegations that Canadian companies were injuring the United States salt industry by dumping

(35)rock salt, used to de-ice roads. The bizarre aspect of the complaint was that a foreign conglomerate with United States operations was crying for help against a United States company with foreign operations. The "United

States" company claiming injury was a subsidiary of a

- (40)Dutch conglomerate, while the "Canadian" companies included a subsidiary of a Chicago firm that was the second-largest domestic producer of rock salt.
- 55. The passage is chiefly concerned with
  - (A) arguing against the increased internationalization of United States corporations
  - (B) warning that the application of laws affecting trade frequently has unintended consequences
  - (C) demonstrating that foreign-based firms receive more subsidies from their governments than United States firms receive from the United States government
  - (D) advocating the use of trade restrictions for "dumped" products but not for other imports
  - (E) recommending a uniform method for handling claims of unfair trade practices
- 56. It can be inferred from the passage that the minimal basis for a complaint to the International Trade Commission is which of the following?
  - (A) A foreign competitor has received a subsidy from a foreign government.
  - (B) A foreign competitor has substantially increased the volume of products shipped to the United States.
  - (C) A foreign competitor is selling products in the United States at less than fair market value.
  - (D) The company requesting import relief has been injured by the sale of imports in the United States.
  - (E) The company requesting import relief has been barred from exporting products to the country of its foreign competitor.
- 57. The last paragraph performs which of the following functions in the passage?
  - (A) It summarizes the discussion thus far and suggests additional areas of research.
  - (B) It presents a recommendation based on the evidence presented earlier.
  - (C) It discusses an exceptional case in which the results expected by the author of the passage were not obtained.
  - (D) It introduces an additional area of concern not mentioned earlier.
  - (E) It cites a specific case that illustrates a problem presented more generally in the previous paragraph.
- 58. The passage warns of which of the following dangers?
  - (A) Companies in the United States may receive no protection from imports unless they actively seek protection from import competition.
  - (B) Companies that seek legal protection from import competition may incur legal costs that far exceed any possible gain.

- (C) Companies that are United States-owned but operate internationally may not be eligible for protection from import competition under the laws of the countries in which their plants operate.
- (D) Companies that are not United States-owned may seek legal protection from import competition under United States import relief laws.
- (E) Companies in the United States that import raw materials may have to pay duties on those materials.
- 59. The passage suggests that which of the following is most likely to be true of United States trade laws?
  - (A) They will eliminate the practice of "dumping" products in the United States.
  - (B) They will enable manufacturers in the United States to compete more profitably outside the United States.
  - (C) They will affect United States trade with Canada more negatively than trade with other nations.
  - (D) Those that help one unit within a parent company will not necessarily help other units in the company.
  - (E) Those that are applied to international companies will accomplish their intended result.
- 60. It can be inferred from the passage that the author believes which of the following about the complaint mentioned in the last paragraph?
  - (A) The ITC acted unfairly toward the complainant in its investigation.
  - (B) The complaint violated the intent of import relief laws.
  - (C) The response of the ITC to the complaint provided suitable relief from unfair trade practices to the complainant.
  - (D) The ITC did not have access to appropriate information concerning the case.
  - (E) Each of the companies involved in the complaint acted in its own best interest.

At the end of the nineteenth century, a rising interest in Native American customs and an increasing desire to understand Native American culture prompted ethnologists to begin recording the life stories of Native Amer-

- (5) ican. Ethnologists had a distinct reason for wanting to hear the stories: they were after linguistic or anthropological data that would supplement their own field observations, and they believed that the personal stories, even of a single individual, could increase their
- (10) understanding of the cultures that they had been observing from without. In addition many ethnologists at the turn of the century believed that Native American manners and customs were rapidly disappearing,

and that it was important to preserve for posterity as (15)much information as could be adequately recorded before the cultures disappeared forever.

There were, however, arguments against this method as a way of acquiring accurate and complete information. Franz Boas, for example, described autobiogra-

- (20) phies as being "of limited value, and useful chiefly for the study of the perversion of truth by memory," while Paul Radin contended that investigators rarely spent enough time with the tribes they were observing, and inevitably derived results too tinged by the investi-
- (25)gator's own emotional tone to be reliable.

Even more importantly, as these life stories moved from the traditional oral mode to recorded written form, much was inevitably lost. Editors often decided what elements were significant to the field research on a

- (30)given tribe. Native Americans recognized that the essence of their lives could not be communicated in English and that events that they thought significant were often deemed unimportant by their interviewers. Indeed, the very act of telling their stories could force
- (35)Native American narrators to distort their cultures, as taboos had to be broken to speak the names of dead relatives crucial to their family stories.

Despite all of this, autobiography remains a useful tool for ethnological research: such personal reminis-

- (40)cences and impressions, incomplete as they may be, are likely to throw more light on the working of the mind and emotions than any amount of speculation from an ethnologist or ethnological theorist from another culture.
- 61. Which of the following best describes the organization of the passage?
  - (A) The historical backgrounds of two currently used research methods are chronicled.
  - (B) The validity of the data collected by using two different research methods is compared.
  - (C) The usefulness of a research method is questioned and then a new method is proposed.
  - (D) The use of a research method is described and the limitations of the results obtained are discussed.
  - (E) A research method is evaluated and the changes necessary for its adaptation to other subject areas are discussed.

- 62. Which of the following is most similar to the actions of nineteenth-century ethnologists in their editing of the life stories of Native Americans?
  - (A) A witness in a jury trial invokes the Fifth Amendment in order to avoid relating personally incriminating evidence.
  - (B) A stockbroker refuses to divulge the source of her information on the possible future increase in a stock's value.
  - (C) A sports announcer describes the action in a team sport with which he is unfamiliar.
  - (D) A chef purposely excludes the special ingredient from the recipe of his prizewinning dessert.
  - (E) A politician fails to mention in a campaign speech the similarities in the positions held by her opponent for political office and by herself.
- 63. According to the passage, collecting life stories can be a useful methodology because
  - (A) life stories provide deeper insights into a culture than the hypothesizing of academics who are not members of that culture
  - (B) life stories can be collected easily and they are not subject to invalid interpretations
  - (C) ethnologists have a limited number of research methods from which to choose
  - (D) life stories make it easy to distinguish between the important and unimportant features of a culture
  - (E) the collection of life stories does not require a culturally knowledgeable investigator
- 64. Information in the passage suggests that which of the following may be a possible way to eliminate bias in the editing of life stories?
  - (A) Basing all inferences made about the culture on an ethnological theory
  - (B) Eliminating all of the emotion-laden information reported by the informant
  - (C) Translating the informant's words into the researcher's language
  - (D) Reducing the number of questions and carefully specifying the content of the questions that the investigator can ask the informant
  - (E) Reporting all of the information that the informant provides regardless of the investigator's personal opinion about its intrinsic value
- 65. The primary purpose of the passage as a whole is to
  - (A) question an explanation
  - (B) correct a misconception
  - (C) critique a methodology
  - (D) discredit an idea
  - (E) clarify an ambiguity

- 66. It can be inferred from the passage that a characteristic of the ethnological research on Native Americans conducted during the nineteenth century was the use of which of the following?
  - (A) Investigators familiar with the culture under study
  - (B) A language other than the informant's for recording life stories
  - (C) Life stories as the ethnologist's primary source of information
  - (D) Complete transcriptions of informants' descriptions of tribal beliefs
  - (E) Stringent guidelines for the preservation of cultural data

All of the cells in a particular plant start out with the same complement of genes. How then can these cells differentiate and form structures as different as roots, stems, leaves, and fruits? The answer is that only a

- (5) small subset of the genes in a particular kind of cell are expressed, or turned on, at a given time. This is accomplished by a complex system of chemical messengers that in plants include hormones and other regulatory molecules. Five major hormones have been identified:
- (10) auxin, abscisic acid, cytokinin, ethylene, and gibberellin. Studies of plants have now identified a new class of regulatory molecules called oligosaccharins.

Unlike the oligosaccharins, the five well-known plant hormones are pleiotropic rather than specific, that is,

- (15)each has more than one effect on the growth and development of plants. The five has so many simultaneous effects that they are not very useful in artificially controlling the growth of crops. Auxin, for instance, stimulates the rate of cell elongation, causes shoots to
- (20) grow up and roots to grow down, and inhibits the growth of lateral shoots. Auxin also causes the plant to develop a vascular system, to form lateral roots, and to produce ethylene.

The pleiotropy of the five well-studied plant

- (25)hormones is somewhat analogous to that of certain hormones in animal. For example, hormones from the hypothalamus in the brain stimulate the anterior lobe of the pituitary gland to synthesize and release many different hormones, one of which stimulates the release
- (30)of hormones from the adrenal cortex. These hormones have specific effects on target organs all over the body. One hormone stimulates the thyroid gland, for example, another the ovarian follicle cells, and so forth.

In other words, there is a hierarchy of hormones.

- (35) Such a hierarchy may also exist in plants. Oligosaccharins are fragments of the cell wall released by enzymes: different enzymes release different oligosaccharins. There are indications that pleiotropic plant hormones may actually function by activating the
- **(40)**enzymes that release these other, more specific chemical messengers from the cell wall.
- 67. According to the passage, the five well-known plant hormones are not useful in controlling the growth of crops because
  - (A) it is not known exactly what functions the hormones perform
  - (B) each hormone has various effects on plants
  - (C) none of the hormones can function without the others
  - (D) each hormone has different effects on different kinds of plants
  - (E) each hormone works on only a small subset of a cell's genes at any particular time
- 68. The passage suggests that the place of hypothalamic hormones in the hormonal hierarchies of animals is similar to the place of which of the following in plants?
  - (A) Plant cell walls
  - (B) The complement of genes in each plant cell
  - (C) A subset of a plant cell's gene complement
  - (D) The five major hormones
  - (E) The oligosaccharins
- 69. The passage suggests that which of the following is a function likely to be performed by an oligosaccharin?
  - (A) To stimulate a particular plant cell to become part of a plant's root system
  - (B) To stimulate the walls of a particular cell to produce other oligosaccharins
  - (C) To activate enzymes that release specific chemical messengers from plant cell walls
  - (D) To duplicate the gene complement in a particular plant cell
  - (E) To produce multiple effects on a particular subsystem of plant cells
- 70. The author mentions specific effects that auxin has on plant development in order to illustrate the
  - (A) point that some of the effects of plant hormones can be harmful
  - (B) way in which hormones are produced by plants
  - (C) hierarchical nature of the functioning of plant hormones
  - (D) differences among the best-known plant hormones
  - (E) concept of pleiotropy as it is exhibited by plant hormones

- 71. According to the passage, which of the following best describes a function performed by oligosaccharins?
  - (A) Regulating the daily functioning of a plant's cells
  - (B) Interacting with one another to produce different chemicals
  - (C) Releasing specific chemical messengers from a plant's cell walls
  - (D) Producing the hormones that cause plant cells to differentiate to perform different functions
  - (E) Influencing the development of a plant's cells by controlling the expression of the cells' genes
- 72. The passage suggests that, unlike the pleiotropic hormones, oligosaccharins could be used effectively to
  - (A) trace the passage of chemicals through the walls of cells
  - (B) pinpoint functions of other plant hormones
  - (C) artificially control specific aspects of the development of crops
  - (D) alter the complement of genes in the cells of plants
  - (E) alter the effects of the five major hormones on plant development

Two recent publications offer different assessment of the career of the famous British nurse Florence Nightingale. A book by Anne Summers seeks to debunk the idealizations and present a reality at odds with Nightingale's heroic reputation. According to Summers, Nightingale's importance during the Crimean War has been exaggerated: not until near the war's end did she become supervisor of the female nurses. Additionally, Summers writes that the contribution of the nurses to the relief of the wounded was at best marginal. The prevailing problems of military medicine were caused by army organizational pratices, and the addition of a few nurses to the medical staff could be no more than symbolic. Nightingale's place in the national pantheon, Summers asserts, is Irgely due to the propagandistic efforts of contemporary newspaper reporters.

By contrast, the editors of a new volume of Nightingale's letters view Nightingale as a person who significantly influenced not only her own age but also subsequenct generations. They highlight her ongoing efforts to reform sanitary conditions after the war. For example, when she leanred that peacetime living conditions in British barracks were so horrible that the death rate of enlisted men far exceeded that of neighboring civilian populations, she succeeded in persuading the government to establish a Royal Commission on the Health of the Army. She used sums raised through public contributions to found a nurses' traning hospital in London. Even in administrative matters, the editors assert, her practical intelligence was formidable: as recently as 1947 the British Army's medical services were still using the cost-accounting system she had devised in the 1860's.

I believe that the evidence of her letters supports continued respect for Nightingale's brilliance and creativity. When counseling a village schoolmaster to encourage children to use their faculties of observation, she sounds like a modern educator. Her insistence on classifying the problems of the needy in order to devise appropriate treatments is similar to the approach of modern social workers. In sum, although Nightingale may not have achieved all of her goals during the Crimean War, her breadth of vision and ability to realize ambitious projects have earned her an eminent place among the ranks of social pioneers.

- 73. The passage is primarily concerned with evaluating
  - (A) the importance of Florence Nightingale's innovations in the field of nursing
  - (B) contrasting approaches to the writing of historical biography
  - (C) contradictory accounts of Florence Nightingale's historical significance
  - (D) the quality of health care in nineteenth-century England
  - (E) the effect of the Crimean War on developments in the field of health care

- 74. According to the passage, the editors of Nightingale's letters credit her with contributing to which of the following?
  - (A) Improving of the survival rate for soldiers in British Army hospitals during the Crimean War
  - (B) The development of a nurses' training curriculum that was far in advance of its day
  - (C) The increase in the number of women doctors practicing in British Army hospitals
  - (D) Establishment of the first facility for training nurses at a major British university
  - (E) The creation of an organization for monitoring the peacetime living conditions of British soldiers
- 75. The passage suggests which of the following about Nightingale's relationship with the British public of her day?
- (A) She was highly respected, her projects receiving popular and governmental support.
- (B) She encountered resistance both from the army establishment and the general public.
- (C) She was supported by the working classes and opposed by the wealthier classes.
- (D) She was supported by the military establishment but had to fight the governmental bureaucracy.
- (E) After intially being received with enthusiams, she was quickly forgotten.
- 76. The passage suggests which of the following about sanitary conditions in Britain after the Crimean War?
- (A) While not ideal, they were superior to those in other parts of the world.
- (B) Compared with conditions before the war, they had deteriorated.
- (C) They were more advanced in rural areas than in the urban centers.
- (D) They were worse in military camps than in the neighboring civilian populations.
- (E) They were uniformly crude and unsatisfactory throughout England.
- 77. Which which of the following statements regarding the differing interpretations of Nightingale's importance would the author most likely agree?
- (A) Summers misunderstood both the importance of Nightingale's achievements during the Crimean War and her subsequent influence on British policy.
- (B) The editors of Nightingale's letters made some valid points about her practical achievements, but they still exaggerated her influence on subsequent generations.
- (C) Although Summers' account of Nightingale's role in the Crimean War may be accurate, she ignored evidence of Nightingales' subsequent achievement that suggests that her reputation as an eminent social reformer is welldeserved.
- (D) The editors of Nightingale's letters mistakenly propagated the outdated idealization of Nightingale that only impedes attempts to arrive at a balance assessment of her true role.
- (E) The evidence of Nightingale's letters supports Summers' conclusions both about Nightingale's activities and about her influence.
- 78. Which of the following is an assumption underlying the author's assessment of Nightingale's creativity?
- (A) Educational philosophy in Nightingale's day did not normally emphasize developing children's ability to observe.
- (B) Nightingale was the first to notice the poor living conditions in British military barracks in peacetime.
- (C) No educator before Nightingale had thought to enlist the help of village schoolmasters in introducing new teaching techniques.
- (D) Until Nightingale began her work, there was no concept of organized help for the needy in nineteenth-century Britain.
- (E) The British Army's medical services had no cost-accounting system until Nightingale devised one in the 1860's.
- 79. In the last paragraph, the author is primarily concerned with
- (A) summarizing the arguments about Nightingale presented in the first two paragraphs
- (B) refuting the view of Nightingale's career presented in the preceding paragraph
- (C) analyzing the weaknesses of the evidence presented elsewhere in the passage

- (D) citing evidence to support a view of Nightingale's career
- (E) correcting a factual error occurring in one of the works under review

A meteor stream is composed of dust particles that have been ejected from a parent comet at a variety of velocities. These particles follow the same orbit as the parent comet, but due to their differing velocities they slowly gain on or fall behind the disintegrating comet until a shroud of dust surrounds the entire cometary orbit. Astronomers have hypothesized that a meteor stream should broaden with time as the dust particles' individual orbits are perturbed by planetary gravitational fields. A recent computer-modeling experiment tested this hypothesis by tracking the influence of planetary gravitation over a projected 5,000-year period on the positions of a group of hypothetical dust particles. In the model, the particles were randomly distributed throughout a computer simulation of the orbit of an actual meteor stream, the Geminid. The researcher found, as expected, that the computer-model stream broadened with time. Coventional theories, however, predicted that the distribution of particles would be increaingly dense toward the center of a meteor stream. Surpringly, the computer-model meteor stream gradually came to resemble a thick-walled, hollow pipe.

Whenever the Earth passes through a meteor stream, a meteor shower occurs. Moving at a little over 1,500,000 miles per day around its orbit, the Earth would take, on average, just over a day to cross the hollow, computer-model Geminid stream if the stream were 5,000 years old. Two brief periods of peak meteor activity during the shower would be observed, one as the Earth entered the thick-walled "pipe" and one as it exited. There is no reason why the Earth should always pass through the stream's exact center, so the time interval between the two bursts of activity would vary from one year to the next.

Has the predicted twin-peaked activity been observed for the actual yearly GEminid meteor shower? The Geminid data between 1970 and 1979 show just such a bifurcation, a secondary burst of meteor activity being clearly visible at an average of 19 hourse (1,200,000 miles) after the first burst. The time intervals between the bursts suggest the actual Geminid stream is about 3,000 years old.

- 80. The primary focus of the passage is on which of the following?
- (A) Comparing two scientific theories and contrasting the predictions that each would make concerning a natural phenomenon
- (B) Describing a new theoretical model and noting that it explains the nature of observations made of a particular natural phenomenon
- (C) Evaluating the results of a particular scientific experiment and suggesting further areas for research
- (D) Explaining how two different natural phenomena are related and demonstrating a way to measure them
- (E) Analyzing recent data derived from observations of an actual phenomenon and constructing a model to explain the data
- 81. According to the passage, which of the following is an accurate statement concerning meteor streams?
- (A) Meteor streams and comets start out with smiliar orbits, but only those of meteor streams are perturbed by planetary gravittion.
- (B) Meteor streams grow as dust particles are attracted by the gravitational fields of comets.
- (C) Meteor streams are composed of dust particles derived from comets.
- (D) Comets may be composed of several kinds of materials, while meteor streams consists only of large dust particles.
- (E) Once formed, meteor streams hasten the further disintegration of comets.
- 82. The author states that the research described in the first paragraph was undertaken in order to
- (A) determine the age of an actual meteor stream
- (B) Identify the various structural features of meteor streams
- (C) explore the nature of a particularly interesting meteor stream
- (D) test the hypothesis that meteor streams become broader as they age
- (E) show that a computer model could help in explaining actual astronomical data

- 83. It can be inferred from the passage that which of the following would most probably be observed during the Earth's passage through a meteor stream if the conventional theories mentioned in line 18 were
- (A) Meteor activity would gradually increase to a single, intense peak, and then gradually decline.
- (B) Meteor activity would be steady throughout the period of the meteor shower.
- (C) Meteor activity would rise to a peak at the beginning and at the end of the meteor shower.
- (D) Random bursts of very high meteor activity would be interspersed with periods of very little activity.
- (E) In years in which the Earth passed through only the outer areas of a meteor stream, meteor activity would be absent.
- 84. According to the passage, why do the dust particles in a meteor stream eventually surround a comet's original orbit?
- (A) They are ejected by the comet at differing velocities.
- (B) Their orbits are uncontrolled by planetary gravitational fields.
- (C) They become part of the meteor stream at different times.
- (D) Their velocity slows over time.
- (E) Their ejection velocity is slower than that of the comet.
- 85. The passage suggests that which of the following is a prediction concerning meteor streams that can be derived from both the conventional theories mentioned in line 18 and the new computer-derived theory?
- (A) Dust particles in a meteor stream will usually be distributed evenly throughout any cross section of the steam.
- (B) The orbits of most meteor streams should cross the orbit of the Earth at some point and give rise to a meteor shower.
- (C) Over time the distribution of dust in a meteor stream will usually become denser at the outside edges of the stream than at the center.
- (D) Meteor showers caused by older by older meteor streams should be, on average, longer in duration than those caused by very young meteor streams.
- (E) The individual dust particles in older meteor streams should be, on average, smaller than those that compose younger meteor streams.
- 86. It can be inferred from the last paragraph of the passage that which of the following must be true of the Earth as it orbits the Sun?
- (A) Most meteor streams it encounters are more than 2,000 years old.
- (B) When passing through a meteor stream, it usually passes near to the stream's center.
- (C) It crosses the Geminid meteor stream once every year.
- (D) It usually takes over a day to cross the actual Geminid meteor stream.
- (E) It accounts of most of the gravitational perturbation affecting the Geminid meteor stream.
- 87. Which of the following is an assumption underlying the last sentence of the passage?
- (A) In each of the years between 1970 and 1979, the Earth took exactly 19 hours to cross the Geminid meteor stream.
- (B) The comet associated with the Geminid meteor stream has totally disintegrated.
- (C) The Geminid meteor stream should continue to exist for at least 5,000 years.
- (D) The Geminid meteor stream has not broadened as rapidly as the conventional theories would have predicted.
- (E) The computer-model Geminid meteor stream provides an accurate representation of the development of the actual Geminid stream.

## **PASSAGE SEVENTEEN**

Most large corporations in the United States were once run by individual capitalists who owned enough stock to dominate the board of directors and dictate company policy. Because putting such large amounts of

(5) stock on the market would only depress its value, they could not sell out for a quick profit and instead had to

- concentrate on improving the long-term productivity of their companies. Today, with few exceptions, the stock of large United States corporations is held by large
- (10) institutions-pension funds, for example-and because these institutions are prohibited by antitrust laws from owning a majority of a company's stock and from actively influencing a company's decision-making, they can enhance their wealth only by buying and selling
- (15) stock in anticipation of fluctuations in its value. A minority shareholder is necessarily a short term trader. As a result, United States productivity is unlikely to improve unless shareholders and the managers of the companies in which they invest are encouraged to
- (20) enhance long-term productivity (and hence long-term profitability), rather than simply to maximize short-term profits.

Since the return of the old-style capitalist is unlikely, today's short-term traders must be remade into

- (25) tomorrow's long-term capitalistic investors. The legal limits that now prevent financial institutions from acquiring a dominant shareholding position in a corporation should be removed, and such institutions encouraged to take a more active role in the operations of the
- (30) companies in which they invest. In addition, any institution that holds twenty percent or more of a company's stock should be forced to give the public one day's notice of the intent to sell those shares. Unless the announced sale could be explained to the public on
- (35) grounds other than anticipated future losses, the value of the stock would plummet and, like the old-time capitalists, major investors could cut their losses only by helping to restore their companies' productivity. Such measures would force financial institutions to become
- (40) capitalists whose success depends not on trading shares at the propitious moment, but on increasing the productivity of the companies in which they invest.
- 88. In the passage, the author is primarily concerned with doing which of the following?
  - (A) Comparing two different approaches to a problem
  - (B) Describing a problem and proposing a solution
  - (C) Defending an established method
  - (D) Presenting data and drawing conclusions from the data
  - (E) Comparing two different analyses of a current situation
- 89. It can be inferred from the passage that which of the following is true of majority shareholders in a corporation?
  - (A) They make the corporation's operational management decisions.
  - (B) They are not allowed to own more than fifty percent of the corporation's stock.
  - (C) They cannot make quick profits by selling their stock in the corporation.
  - (D) They are more interested in profits than in productivity.
  - (E) They cannot sell any of their stock in the corporation without giving the public advance notic.
- 90. According to the passage, the purpose of the requirement suggested in lines 30-33 would be which of the following?
  - (A) To encourage institutional stockholders to sell stock that they believe will decrease in
  - (B) To discourage institutional stockholders from intervening in the operation of a company whose stock they own
  - (C) To discourage short-term profit-taking by institutional stockholders

- (D) To encourage a company's employees to take an active role in the ownership of stock in the company
- (E) To encourage investors to diversify their stock holdings
- 91. The author suggests that which of the following is a true statement about people who typify the "old style capitalist" referred to in line 23?
  - (A) They now rely on outdated management techniques.
  - (B) They seldom engaged in short-term trading of the stock they owned.
  - (C) They did not influence the investment policies of the corporations in which they invested.
  - (D) They now play a much smaller role in the stock market as a result of antitrust legislation.
  - (E) They were primarily concerned with maximizing the short-term profitability of the corporations in which they owned stock.
- 92. It can be inferred that the author makes which of the following assumptions about the businesses once controlled by individual capitalists?
- (A) These businesses were less profitable than are businesses today.
- (B) Improving long-term productivity led to increased profits.
- (C) Each business had only a few stockholders.
- (D) There was no short-term trading in the stock of these businesses.
- (E) Institutions owned no stock in these companies.
- 93. The author suggests that the role of large institutions as stockholders differs from that of the "old-style capitalist" in part because large institutions
- (A) invest in the stock of so many companies that they cannot focus attention on the affairs of any single corporation
- (B) are prohibited by law from owning a majority of a corporation's stock
- (C) are influenced by brokers who advise against long-term ownership of stocks
- (D) are able to put large amounts of stock on the market without depressing the stock's value
- (E) are attracted to the stocks of corporations that demonstrate long-term gains in productivity
- 94. The primary function of the second paragraph of the passage is to
- (A) identify problems
- (B) warn of consequence
- (C) explain effects
- (D) evaluate solutions
- (E) recommend actions

Traditionally, the first firm to commercialize a new technology has benefited from the unique opportunity to shape product definitions, forcing followers to adapt to a standard or invest in an unproven alternative. Today, how-

(5) ever, the largest payoffs may go to companies that lead in developing integrated approaches for successful mass production and distribution.

Producers of the Beta format for videocassette recorders (VCR's), for example, were first to develop the VCR com-

- (10) mercially in 1975, but producers of the rival VHS (Video Home System) format proved to be more successful at forming strategic alliances with other producers and distributors to manufacture and market their VCR format Seeking to maintain exclusive control over VCR distri-
- (15) bution. Beta producers were reluctant to form such alliances and eventually lost ground to VHS in the competition for the global VCR market.

Despite Beta's substantial technological head start and the fact that VHS was neither technically better nor cheaper

(20) than Beta, developers of VHS quickly turned a slight early lead in sales into a dominant position. Strategic alignments with producers of prerecorded tapes reinforced the VHS

- advantage. The perception among consumers that prerecorded tapes were more available in VHS format further
- (25) expanded VHS's share of the market. By the end of the 1980's. Beta was no longer in production.
- 95. The passage is primarily concerned with which of the following?
  - (A) Evaluating two competing technologies
  - (B) Tracing the impact of a new technology by narrating a sequence of events
  - (C) Reinterpreting an event from contemporary business history
  - (D) illustrating a business strategy by means of a case history
  - (E) Proposing an innovative approach to business planning
- 96. According to the passage, today's successful firms, unlike successful firms in the past, may earn the greatest profits by
  - (A) investing in research to produce cheaper versions of existing technology
  - (B) being the first to market a competing technology
  - (C) adapting rapidly to a technological standard previously set by a competing firm
- (D) establishing technological leadership in order to shape product definitions in advance of competing firms.
- (E) emphasizing the development of methods for the mass production and distribution of a new technology.
- 97. According to the passage, consumers began to develop a preference for VCR's in the VHS format because they believed which of the following?
- (A) VCR's in the VHS format were technically better than competing-format VCR's.
- (B) VCR's in the VHS format were less expensive than competing-format VCR's.
- (C) VHS was the first standard format for VCR's.
- (D) VHS prerecorded videotapes were more available than Beta-format tapes.
- (E) VCR's in the Beta format would soon cease to be produced.
- 98. The author implies that one way that VHS producers won control over the VCR market was by
  - (A) carefully restricting access to VCR technology
  - (B) giving up a slight early lead in VCR sales in order to improve long-term prospects.
  - (C) retaining a strict monopoly on the production of prerecorded videotapes.
  - (D) sharing control of the marketing of VHS-format VCR's
- (E) sacrificing technological superiority over Betaformat VCR's in order to remain competitive in price.
- 99. The alignment of producers of VHS-format VCR's with producers of prerecorded videotapes is most similar to which of the following?
- (A) The alignment of an automobile manufacturer with another automobile manufacturer to adopt a standard design for automobile engines.
- (B) The alignment of an automobile manufacturer with an automotive glass company whereby the manufacturer agrees to purchase automobile windshields only from that one glass company
- (C) The alignment of an automobile manufacturer with a petroleum company to ensure the widespread availability of the fuel required by a new type of engine developed by the manufacturer.
- (D) The alignment of an automobile manufacturer with its dealers to adopt a plan to improve automobile design.
- (E) The alignment of an automobile dealer with an automobile rental chain to adopt a strategy for an advertising campaign to promote a new type of automobile
- 100. Which of the following best describes the relation of the first paragraph to the passage as a whole?
  - (A) It makes a general observation to be exemplified.
  - (B) It outlines a process to be analyzed.
  - (C) It poses a question to be answered.
  - (D) It advances an argument to be disputed.

(E) It introduces conflicting arguments to be reconciled.

## Passage 38

Australian researchers have discovered electroreceptors (sensory organs designed to respond to electrical fields) clustered at the tip of the spiny anteater's snout. The researchers made this discovery by exposing small areas of

- (5) the snout to extremely weak electrical fields and recording the transmission of resulting nervous activity to the brain. While it is true that tactile receptors, another kind of sensory organ on the anteater's snout, can also respond to electrical stimuli, such receptors do so only in response to
- ( 10)electrical field strengths about 1,000 times greater than those known to excite electroreceptors.

Having discovered the electroreceptors, researchers are now investigating how anteaters utilize such a sophisticated sensory system. In one behavioral experiment, researchers

- (15)successfully trained an anteater to distinguish between two troughs of water, one with a weak electrical field and the other with none. Such evidence is consistent with researchers' hypothesis that anteaters use electroreceptors to detect electrical signals given off by prey; however,
- ( 20) researchers as yet have been unable to detect electrical signals emanating from termite mounds, where the favorite food of anteaters live. Still, researchers have observed anteaters breaking into a nest of ants at an oblique angle and quickly locating nesting chambers. This ability quickly
- (25)to locate unseen prey suggests, according to the researchers, that the anteaters were using their electroreceptors to locate the nesting chambers.
- 101. According to the passage, which of the following is a characteristic that distinguishes electroreceptors from tactile receptors?
  - (A) The manner in which electroreceptors respond to electrical stimuli
  - (B) The tendency of electroreceptors to be found in clusters
  - (C) The unusual locations in which electroreceptors are found in most species.
  - (D) The amount of electrical stimulation required to excite electroreceptors
- (E) The amount of nervous activity transmitted to the brain by electroreceptors when they are excited
- 102. Which of the following can be inferred about the experiment described in the first paragraph?
- (A) Researchers had difficulty verifying the existence of electroreceptors in the anteater because electroreceptors respond to such a narrow range of electrical field strengths.
- (B) Researchers found that the level of nervous activity in the anteater's brain increased dramatically as the strength of the electrical stimulus was increased.
- (C) Researchers found that some areas of the anteater's snout were not sensitive to a weak electrical stimulus.
- (D) Researchers found that the anteater's tactile receptors were more easily excited by a strong electrical stimulus than were the electro receptors..
- (E) Researchers tested small areas of the anteater's snout in order to ensure that only electroreceptors were responding to the stimulus.
- 103. The author of the passage most probably discusses the function of tactile receptors (lines 7-11) in order to
  - (A) eliminate and alternative explanation of anteaters' response to electrical stimuli
  - (B) highlight a type of sensory organ that has a function identical to that of electroreceptors
  - (C) point out a serious complication in the research on electroreceptors in anteaters.
  - (D) suggest that tactile receptors assist electroreceptors in the detection of electrical signals.

- (E) introduce a factor that was not addressed in the research on electroreceptors in anteaters.
- 104. Which of the following can be inferred about anteaters from the behavioral experiment mentioned in the second paragraph?
- (A) They are unable to distinguish between stimuli detected by their electroreceptors and stimuli detected by their tactile receptors.
- (B) They are unable to distinguish between the electrical signals emanating from termite mounds and those emanating from ant nests.
  - (C) They can be trained to recognize consistently the presence of a particular stimulus.
  - (D) They react more readily to strong than to weak stimuli.
- (E) They are more efficient at detecting stimuli in a controlled environment than in a natural environment.
- 105. The passage suggests that the researchers mentioned in the second paragraph who observed anteaters break into a nest of ants would most likely agree with which of the following statements?
- (A) The event they observed provides conclusive evidence that anteaters use their electroreceptors to locate unseen prey.
- (B) The event they observed was atypical and may not reflect the usual hunting practices of anteaters.
- (C) It is likely that the anteaters located the ants' nesting chambers without the assistance of electroreceptors.
  - (D) Anteaters possess a very simple sensory system for use in locating prey.
- (E) The speed with which the anteaters located their prey is greater than what might be expected on the basis of chance alone.
- 106. Which of the following, if true, would most strengthen the hypothesis mentioned in lines 17-19?
- (A) Researchers are able to train anteaters to break into an underground chamber that is emitting a strong electrical signal.
- (B) Researchers are able to detect a weak electrical signal emanating from the nesting chamber of an ant colony.
- (C) Anteaters are observed taking increasingly longer amounts of time to locate the nesting chambers of ants.
  - (D) Anteaters are observed using various angles to break into nests of ants.
- (E) Anteaters are observed using the same angle used with nests of ants to break into the nests of other types of prey.

When A. Philip Randolph assumed the leadership of the Brotherhood of Sleeping Car Porters, he began a ten-year battle to win recognition from the Pullman Company, the largest private employer of Black people in the United

- (5)States and the company that controlled the railroad industry's sleeping car and parlor service. In 1935 the Brotherhood became the first Black union recognized by a major corporation. Randolph's efforts in the battle helped transform the attitude of Black workers toward unions and
- (10)toward themselves as an identifiable group; eventually, Randolph helped to weaken organized labor's antagonism toward Black workers.

In the Pullman contest Randolph faced formidable obstacles. The first was Black workers' understandable

- ( 15)skepticism toward unions, which had historically barred Black workers from membership. An additional obstacle was the union that Pullman itself had formed, which weakened support among Black workers for an independent entity.
- (20) The Brotherhood possessed a number of advantages,

however, including Randolph's own tactical abilities. In 1928 he took the bold step of threatening a strike against Pullman. Such a threat, on a national scale, under Black leadership, helped replace the stereotype of the Black

- (25)worker as servant with the image of the Black worker as wage earner. In addition, the porters' very isolation aided the Brotherhood. Porters were scattered throughout the country, sleeping in dormitories in Black communities; their segregated life protected the union's internal
- (30) communications from interception. That the porters were a homogeneous group working for a single employer with single labor policy, thus sharing the same grievances from city to city, also strengthened the Brotherhood and encouraged racial identity and solidarity as well. But it was only
- (35) in the early 1930's that federal legislation prohibiting a company from maintaining its own unions with company money eventually allowed the Brotherhood to become recognized as the porters' representative.

Not content with this triumph, Randolph brought the **(40)**Brotherhood into the American Federation of Labor, where it became the equal of the Federation's 105 other unions. He reasoned that as a member union, the Brotherhood would be in a better position to exert pressure on member unions that practiced race restrictions. Such restrictions were eventually found unconstitutional in 1944.

- 107. According to the passage, by 1935 the skepticism of Black workers toward unions was
  - (A) unchanged except among Black employees of railroad-related industries.
- (B) reinforced by the actions of the Pullman Company's union
- (C) mitigated by the efforts of Randolph
- (D) weakened by the opening up of many unions to Black workers.
- (E) largely alleviated because of the policies of the American Federation of Labor.
- 108. In using the word "understandable" (line 14), the author most clearly conveys
- (A) sympathy with attempts by the Brotherhood between 1925 and 1935 to establish an independent union.
- (B) concern that the obstacles faced by Randolph between 1925 and 1935 were indeed formidable
  - (C) ambivalence about the significance of unions to most Black workers in the 1920's.
  - (D) appreciation of the attitude of many Black workers in the 1920's toward unions.
  - (E) regret at the historical attitude of unions toward Black workers.
- 109. The passage suggests which of the following about the response of porters to the Pullman Company's own union?
  - (A) Few porters ever joined this union.
  - (B) Some porters supported this union before 1935.
  - (C) Porters, more than other Pullman employees, enthusiastically supported this union.
  - (D) The porters' response was most positive after 1935.
- (E) The porters' response was unaffected by the general skepticism of Black workers concerning unions.
- 110. The passage suggests that if the grievances of porters in one part of the United States had been different from those of porters in another part of the country, which of the following would have been the case?
- (A) It would have been more difficult for the Pullman Company to have had a single labor policy.
- (B) It would have been more difficult for the Brotherhood to control its channels of communication.
  - (C) It would have been more difficult for the Brotherhood to build its membership.
  - (D) It would have been easier for the Pullman Company's union to attract membership.

- (E) It would have been easier for the Brotherhood to threaten strikes.
- 111. The passage suggests that in the 1920's a company in the United States was able to
  - (A) use its own funds to set up a union
  - (B) require its employees to join the company's own union
  - (C) develop a single labor policy for all its employees with little employee dissent.
  - (D) pressure its employees to contribute money to maintain the company's own union
- (E) use its resources to prevent the passage of federal legislation that would have facilitated the formation of independent unions.
- 112. The passage supplies information concerning which of the following matters related to Randolph?
  - (A) The steps he took to initiate the founding of the Brotherhood
  - (B) His motivation for bringing the Brotherhood into the American Federation of Labor
  - (C) The influence he had on the passage of legislation overturning race restrictions in 1944
- (D) The influence he had on the passage of legislation to bar companies from financing their own unions
- (E) The success he and the Brotherhood had in influencing the policies of the other unions in the American Federation of Labor

Seeking a competitive advantage, some professional service firms(for example, firms providing advertising, accounting, or health care services) have considered offering unconditional guarantees of satisfaction. Such

- (5) guarantees specify what clients can expect and what the firm will do if it fails to fulfill these expectations. Particularly with first-time clients, an unconditional guarantee can be an effective marketing tool if the client is very cautious, the firm's fees are high, the
- (10)negative consequences of bad service are grave, or business is difficult to obtain through referrals and word-of-mouth.

However, an unconditional guarantee can sometimes hinder marketing efforts. With its implication that fail-

- (15)ure is possible, the guarantee may, paradoxically, cause clients to doubt the service firm's ability to deliver the promised level of service. It may conflict with a firm's desire to appear sophisticated, or may even suggest that a firm is begging for business. In legal and health care
- (20) services, it may mislead clients by suggesting that lawsuits or medical procedures will have guaranteed outcomes. Indeed, professional service firms with outstanding reputations and performance to match have little to gain from offering unconditional guarantees. And any firm
- (25) that implements an unconditional guarantee without undertaking a commensurate commitment to quality of service is merely employing a potentially costly marketing gimmick.
- 113. The primary function of the passage as a whole is to
  - (A) account for the popularity of a practice
  - (B) evaluate the utility of a practice
  - (C) demonstrate how to institute a practice
  - (D) weigh the ethics of using a strategy
  - (E) explain the reasons for pursuing a strategy
- 114. All of the following are mentioned in the passage as circumstances in which professional service firms can benefit from offering an unconditional guarantee EXCEPT:

- (A) The firm is having difficulty retaining its clients of long standing.
- (B) The firm is having difficulty getting business through client recommendations.
- (C) The firm charges substantial fees for its services.
- (D) The adverse effects of poor performance by the firm are significant for the client.
- (E) The client is reluctant to incur risk.
- 115. Which of the following is cited in the passage as a goal of some professional service firms in offering unconditional guarantees of satisfaction?
  - (A) A limit on the firm's liability
  - (B) Successful competition against other firms
  - (C) Ability to justify fee increases
  - (D) Attainment of an outstanding reputation in a field
  - (E) Improvement in the quality of the firm's service
- 116. The passage's description of the issue raised by unconditional guarantees for health care or legal services most clearly implies that which of the following is true?
- (A) The legal and medical professions have standards of practice that would be violated by attempts to fulfill such unconditional guarantees.
- (B) The result of a lawsuit of medical procedure cannot necessarily be determined in advance by the professionals handling a client's case.
- (C) The dignity of the legal and medical professions is undermined by any attempts at marketing of professional services, including unconditional guarantees.
- (D) Clients whose lawsuits or medical procedures have unsatisfactory outcomes cannot be adequately compensated by financial settlements alone.
- (E) Predicting the monetary cost of legal or health care services is more difficult than predicting the monetary cost of other types of professional services.
- 117. Which of the following hypothetical situations best exemplifies the potential problem noted in the second sentence of the second paragraph (lines 14-17)?
- (A) A physician's unconditional guarantee of satisfaction encourages patients to sue for malpractice if they are unhappy with the treatment they receive.
- (B) A lawyer's unconditional guarantee of satisfaction makes clients suspect that the lawyer needs to find new clients quickly to increase the firm's income.
- (C) A business consultant's unconditional guarantee of satisfaction is undermined when the consultant fails to provide all of the services that are promised.
- (D) An architect's unconditional guarantee of satisfaction makes clients wonder how often the architect's buildings fail to please clients.
- (E) An accountant's unconditional guarantee of satisfaction leads clients to believe that tax returns prepared by the accountant are certain to be accurate.
- 118. The passage most clearly implies which of the following about the professional service firms mentioned in line 22?
  - (A) They are unlikely to have offered unconditional guarantees of satisfaction in the past.
- (B) They are usually profitable enough to be able to compensate clients according to the terms of an unconditional guarantee.
  - (C) They usually practice in fields in which the outcomes are predictable.
- (D) Their fees are usually more affordable than those charged by other professional service firms.
  - (E) Their clients are usually already satisfied with the quality of service that is delivered.

Although genetic mutations in bacteria and viruses can lead to epidemics, some epidemics are caused by bacteria and viruses that have undergone no significant genetic change. In analyzing the latter, scientists have

(5) discovered the importance of social and ecological factors to epidemics. Poliomyelitis, for example, emerged as an epidemic in the United States in the twentieth century; by then, modern sanitation was able to delay

- exposure to polio until adolescence or adulthood, at
- (10) which time polio infection produced paralysis. Previously, infection had occurred during infancy, when it typically provided lifelong immunity without paralysis. Thus, the hygiene that helped prevent typhoid epidemics indirectly fostered a paralytic polio epidemic. Another
- (15) example is Lyme disease, which is caused by bacteria that are transmitted by deer ticks. It occurred only sporadically during the late nineteenth century but has recently become prevalent in parts of the United States, largely due to an increase in the deer population that
- (20) occurred simultaneously with the growth of the suburbs and increased outdoor recreational activities in the deer's habitat. Similarly, an outbreak of dengue hemorrhagic fever became an epidemic in Asia in the 1950's because of ecological changes that caused *Aedes aegypti*,
- (25) the mosquito that transmits the dengue virus, to proliferate The stage is now set in the United States for a dengue epidemic because of the inadvertent introduction and wide dissemination of another mosquito, *Aedes albopictus*.
- 119. The passage suggests that a lack of modern sanitation would make which of the following most likely to occur?
  - (A) An outbreak of Lyme disease
  - (B) An outbreak of dengue hemorrhagic fever
  - (C) An epidemic of typhoid
  - (D) An epidemic of paralytic polio among infants
  - (E) An epidemic of paralytic polio among adolescents and adults
- 120. According to the passage, the outbreak of dengue hemorrhagic fever in the 1950's occurred for which of the following reasons?
  - (A) The mosquito Aedes aegypti was newly introduced into Asia.
  - (B) The mosquito Aedes aegypti became more numerous.
  - (C) The mosquito Aedes albopictus became infected with the dengue virus.
- (D) Individuals who would normally acquire immunity to the dengue virus as infants were not infected until later in life.
  - (E) More people began to visit and inhabit areas in which mosquitos live and breed.
- 121. It can be inferred from the passage that Lyme disease has become prevalent in parts of the United States because of which of the following?
  - (A) The inadvertent introduction of Lyme disease bacteria to the United States
  - (B) The inability of modern sanitation methods to eradicate Lyme disease bacteria
  - (C) A genetic mutation in Lyme disease bacteria that makes them more virulent
  - (D) The spread of Lyme disease bacteria from infected humans to noninfected humans
  - (E) An increase in the number of humans who encounter deer ticks
- 122. Which of the following can most reasonably be concluded about the mosquito *Aedes albopictus* on the basis of information given in the passage?
  - (A) It is native to the United States.
  - (B) It can proliferate only in Asia.
  - (C) It transmits the dengue virus.
  - (D) It caused an epidemic of dengue hemorrhagic fever in the 1950's.
- (E) It replaced Aedes aegypti in Asia when ecological changes altered Aedes aegypti's habitat.
- 123. Which of the following best describes the organization of the passage?
  - (A) A paradox is stated, discussed and left unresolved.
  - (B) Two opposing explanations are presented, argued, and reconciled.

- (C) A theory is proposed and is then followed by descriptions of three experiments that support the theory.
- (D) A generalization is stated and is then followed by three instances that support the generalization.
- (E) An argument is described and is then followed by three counterexamples that refute the argument.
- 124. Which of the following, if true, would most strengthen the author's assertion about the cause of the Lyme disease outbreak in the United States?
- (A) The deer population was smaller in the late nineteenth century than in the mid-twentieth century.
  - (B) Interest in outdoor recreation began to grow in the late nineteenth century.
  - (C) In recent years the suburbs have stopped growing.
- (D) Outdoor recreation enthusiasts routinely take measures to protect themselves against Lyme disease.
  - (E) Scientists have not yet developed a vaccine that can prevent Lyme disease.

Two modes of argumentation have been used on behalf of women's emancipation in Western societies. Arguments in what could be called the "relational" feminist tradition maintain the doctrine of "equality in

- (5) difference," or equity as distinct for equality. They posit that biological distinctions between the sexes result in a necessary sexual division of labor in the family and throughout society and that women's procreative labor is currently undervalued by society, to
- (10) the disadvantage of women. By contrast, the individualist feminist tradition emphasizes individual human rights and celebrates women's quest for personal autonomy, while downplaying the importance of gender roles and minimizing discussion of childbearing and its attendant (15) responsibilities.

Before the late nineteenth century, these views coexisted within the feminist movement, often within the writings of the same individual. Between 1890 nd 1920, however, relational feminism, which had been the

- (20) dominant strain in feminist thought, and which still predominates among European and non-Western feminists, lost ground in England and the United States. Because the concept of individual rights was already well established in the Anglo-Saxon legal and political tradition,
- (25) individualist feminism came to predominate in English-speaking countries. At the same time, the goals of the two approaches began to seem increasingly irreconcilable. Individualist feminists began to advocate a totally gender-blind system with equal rights for all. Relational
- (30)feminists, while agreeing that equal educational and economic opportunities outside the home should be available for all women, continued to emphasize women's special contributions to society as homemakers and mothers; they demanded special treatment
- (35)including protective legislation for women workers, state-sponsored maternity benefits, and paid compensation for housework.

Relational arguments have a major pitfall: because they underline women's physiological and psychological

(40)distinctiveness, they are often appropriated by political adversaries and used to endorse male privilege. But the individualist approach, by attacking gender roles, denying the significance of physiological difference, and condemning existing familial institutions as hopelessly

- (45)patriarchal, has often simply treated as irrelevant the family roles important to many women. If the individualist framework, with its claim for women's autonomy, could be harmonized with the family-oriented concerns of relational feminists, a more fruitful model for con-
- (50)temporary feminist politics could emerge.
- 125. The author of the passage alludes to the well-established nature of the concept of individual rights in the Anglo-Saxon legal and political tradition in order to
- (A) illustrate the influence of individualist feminist thought on more general intellectual trends in English history
- (B) argue that feminism was already a part of the larger Anglo-Saxon intellectual tradition, even though this has often gone unnoticed by critics of women's emancipation.
- (C) explain the decline in individualist thinking among feminists in non-English-speaking countries
- (D) help account for an increasing shift toward individualist feminism among feminists in English-speaking countries.
- (E) account for the philosophical differences between individualist and relational feminists in English-speaking countries
- 126. The passage suggests that the author of the passage believes which of the following?
- (A) The predominance of individualist feminism in English-speaking countries is a historical phenomenon, the causes of which have not yet been investigated.
- (B) The individualist and relational feminist views are irreconcilable, given their theoretical differences concerning the foundations of society.
- (C) A consensus concerning the direction of future feminist politics will probably soon emerge, given the awareness among feminists of the need for cooperation among women.
- (D) Political adversaries of feminism often misuse arguments predicated on differences between the sexes to argue that the existing social system should be maintained.
- (E) Relational feminism provides the best theoretical framework for contemporary feminist politics, but individualist feminism could contribute much toward refining and strengthening modern feminist thought.
- 127. It can be inferred from the passage that the individualist feminist tradition denies the validity of which of the following causal statements?
- (A) A division of labor in a social group can result in increased efficiency with regard to the performance of group tasks.
- (B) A division of labor in a social group causes inequities in the distribution of opportunities and benefits among group members.
- (C) A division of labor on the basis of gender in a social group is necessitated by the existence of sex-linked biological differences between male and female members of the group.
- (D) Culturally determined distinctions based on gender in a social group foster the existence of differing attitudes and opinions among group members.
- (E) Educational programs aimed at reducing inequalities based on gender among members of a social group can result in a sense of greater well-being for all members of the group.
- 128. According to the passage, relational feminists and individualist feminists agree that
  - (A) individual human rights take precedence over most other social claims
  - (B) the gender-based division of labor in society should be eliminated
  - (C) laws guaranteeing equal treatment for all citizens regardless of gender should be passed
- (D) a greater degree of social awareness concerning the importance of motherhood would be beneficial to society
  - (E) the same educational and economic opportunities should be available to both sexes
- 129. According to the author, which of the following was true of feminist thought in Western societies before 1890?

- (A) Individualist feminist arguments were not found in the thought or writing of non-English-speaking feminists.
- (B) Individualist feminism was a strain in feminist thought, but another strain, relational feminism, predominated.
- (C) Relational and individualist approaches were equally prevalent in feminist thought and writing.
- (D) The predominant view among feminists held that the welfare of women was ultimately less important than the welfare of children.
- (E) The predominant view among feminists held that the sexes should receive equal treatment under the law.
- 130. The author implies that which of the following was true of most feminist thinkers in England and the United States after 1920?
  - (A) They were less concerned with politics than with intellectual issues.
- (B) They began to reach a broader audience and their programs began to be adopted by mainstream political parties.
- (C) They called repeatedly for international cooperation among women's groups to achieve their goals.
- (D) They moderated their initial criticism of the economic systems that characterized their societies.
  - (E) They did not attempt to unite the two different feminist approaches in their thought.

The new school of political history that emerged in the 1960's and 1970's sought to go beyond the traditional focus of political historians on leaders and government institutions by examining directly the political practices of ordinary citizens. Like the old approach, however, this new approach excluded women. The very techniques these historians used to uncover mass political behavior in the nineteenth-century United State – quantitative analyses of election returns, for example – were useless in analyzing the political activities of women, who were denied the vote until 1920.

By redefining "political activity," historian Paula Baker has developed a political history that includes women. She concludes that among ordinary citizens, political activism by women in the nineteenth century prefigured trends in twentieth-century politics. Defining "politics" as "any action taken to affect the course of behavior of government or of the community," Baker concludes that, while voting and holding office were restricted to men, women in the nineteenth century organized themselves into societies committed to social issues such as temperance and poverty. In other words, Baker contends, women activists were early practitioners of nonpartisan, issue-oriented politics and thus were more interested in enlisting lawmakers, regardless of their party affiliation, on behalf of certain issues than in ensuring that one party or another won an election. In the twentieth century, more men drew closer to women's ideas about politics and took up modes of issue-oriented politics that Baker sees women as having pioneered.

- 131. The primary purpose of the passage is to
- (A) enumerate reason why both traditional scholarly methods and newer scholarly methods have limitations
- (B) identify a shortcoming in a scholarly approach and describe an alternative approach
- (C) provide empirical data to support a long-held scholarly assumption
- (D) compare two sholarly publications on the basis of their authors' backgrounds
- (E) attempt to provide a partial answer to a lon-standing scholarly dilemna
- 132. The passage suggests which of the following concerning the techniques used by the new political historians described in the first paragraph of the passage?
- (A) They involved the extensive use of the biographies of political party leaders and political theoreticians.
- (B) They were conceived by political historians who were reacting against the political climates of the 1960s and 1970s
- (C) They were of more use in analyzing the positions of United States political parties in the nineteenth century than in analyzing the positions of those in the twentieth century.

- (D) They were of more use in naalyzing the policial behavior of nineteenth-century voters than in nalyzing the political activities of those who could not vote during that period.
- (E) They were devised as a means of tracing the influence of nineteenth-century political trends on twentieth-century political trends.
- 133. It ban be inferred that the author of the passage quotes Baker directly in the second paragraph primarily in order to
- (A) clarify a position before providing an alternative ot that position
- (B) differentiate between a novel definition and traditional definitions
- (C) provide an example of a point agreed on by different generations of scholars
- (D) provide an example of the prose style of an important historian
- (E) amplify a definition given in the first pargraph
- 134. According to the passage, Paula Baker and the new political historians of the 1960's and 1970's shared which of the following?
- (A) A commitment to interest-group politics
- (B) A idsregard for politica Itheory and ideology
- (C) An interest in the ways in which nineteenth-century politics prefigured contemporary politics
- (D) A reliance on such quatitiative techniques as the analysis of election returns
- (E) An emplasis on the political involvement of ordinary citizens
- 135. Which of the following best describes the structure of the first paragraph of the passage?
- (A) Two scholarly approaches are compared, and a shortcoming common to both is identified.
- (B) Two rival schools of thought are contrasted, and a third is allued to.
- (C) An outmoded scholarly approach is described, and a corrective approach is called for.
- (D) An argument is outlined, and counterargumnts are mentioned.
- (E) A historical era is described in terms of its political trends.
- 136. The information in the passage suggests that a pre1960's political historian would have been most likely to undertake which of the following studies?
- (A) An analysis of voting trends among women voters of the 1920's
- (B) A study of male voters' gradual ideological shift from party politics to issue-oriented politics
- (C) A biography of an influential nineteenth-century minister of foreign affairs
- (D) An analysis of narratives written by previously unrecognized women activitists
- (E) A study of voting trends among naturalized immigrant laborers in a nineteenth-century logging camp

New observations about the age of some globular clusters in our Milky Way galaxy have cast doubt on a long-held theory about how the galaxy was formed. The Milky Way contains about 125 globular clusters (compact groups of anywhere from several tens of thousands to perhaps a million stars) distributed in a roughly spherical halo around the galactic nucleus. The stars in these clusters are believed to have been born during the formation of the galaxy, and so may be considered relics of the original galactic nebula, holding vital clues to the way of the formation took place.

The conventional theory of the formation of the galaxy contends that roughly 12 to 13 billion years ago the Milky Way formed over a relatively short time (about 200 million years) when a spherical cloud of gas collapsed under the pressure of its own gravity into a disc surrounded by a halo. Such a rapid formation of the galaxy would mean that all stars in the halo should be very nearly the same age.

However, the astronomer Michael Bolte has found considerable variation in the ages of globular clusters. One of the clusters studied by Bolte is 2 billions years older than most other clusters in the galaxy, while another is 2 billion years younger. A colleague of Bolte contends that the cluster called Palomar 12 is 5 billion years younger than most other globular clusters.

To explain the age differences among the globular clusters, astronomers are taking a second look at "renegade" theories. One such newly fashionable theory, first put forward by Richard Larson in the early 1970's, argues that the halo of the Milky Way formed over a period of a

billion or more years as hundreds of small gas clouds drifted about, collided, lost orbital energy, and finally collapsed into a centrally condensed elliptical system. Larson's conception of a "lumpy and turbulent" protogalaxy is complemented by computer modeling done in the 1970's by mathematician Alan Toomre, which suggests that closely interacting spiral galaxies could lose enough orbital energy to merge into a single galaxy.

- 137. The passage is primarily concerned with discussing
- (A) the importance of determining the age of globular clusters in assessing when the Milky Way galaxy was formed
- (B) recent changes in the procedure used by astronomers to study the formation of the Milky Way galaxy
- (C) current disputes among astronomers regarding the size and form of the Milky Way galaxy
- (D) the effect of new discoveries regarding globular clusters on theories about the formation of the Milky Way galaxy
- (E) the origin, nature, and significance of groups of stars known as globular clusters
- 138. According to the passage, one way in which Larson's theory and the conventional theory of the formation of the Milky Way galaxy differs is in their assessment of the
- (A) amount of time it took to form the galaxy
- (B) size of the galaxy immediately after its formation
- (C) particular gas involved in the formation of the galaxy
- (D) importnce of the age of globular clusters in determining how the galaxy was formed
- (E) shape of the halo that formed around the galaxy
- 139. Which of the following, if true, would be most useful in supporting the conclusions drawn from recent observations about globular clusters?
- (A) There is firm evidence that the absolute age of the Milky Way galaxy is between 10 and 17 billion years.
- (B) A survey reveals that a galaxy close to the Milky Way galaxy contains globular clusters of ages close to the age of Palomar 12.
- (C) A mathematical model proves that small gas clouds move in regular patterns.
- (D) Space probes indicate that the stars in the Milky Way galaxy are composed of several different types of gas.
- (E) A study of over 1,500 individual stars in the halo of the Milky Way galaxy indicates wide discrepancies in there ages.
- 140. If Bolte and his colleague are both correct, it can be inferred that the globular cluster Paloma 12 is approximately
- (A) 5 billion years younger than any other cluster in the galaxy
- (B) the same age as most other clusters in the galaxy
- (C) 7 billion years younger than another cluster in the galaxy
- (D) 12 billion years younger than most other clusters in the galaxy
- (E) 2 billion years younger than most other clusters in the galaxy
- 141. The passage suggests that Toomre's work complements Larson's theory because it
- (A) specifies more precisely the time frame proposed by Larson
- (B) subtly alters Larson's theory to make it more plausible
- (C) supplements Larson's hypothesis with direct astronomical observations
- (D) provides theoretical support for the ideas suggested by Larson
- (E) expands Larson's theory to make it more widely applicable
- 142. Which of the following most accurately state a finding of Bolte's research, as described in the passage?
- (A) The globular clusters in the Milky Way galaxy are 2 billion years older than predicted by the conventional theory.
- (B) The ages of at least some globular clusters in the Milky Way galaxy differ by at leat 4 billion years.
- (C) One of the globular clusters in the Milky Way galaxy is 5 billion years younger than most others.

- (D) The globular clusters in the Milky Way galaxy are significantly older than the individual stars in the halo.
- (E) Most globular clusters in the Milky Way galaxy are between 11 and 15 billion years old.
- 143. The author of the passage puts the word "renegade" (line 29) in quotation marks most probably in order to
- (A) emphasize the lack of support for the theories in question
- (B) contrast the controversial quality of the theories in question with the respectable character of their formulators
- (C) generate skepticism about the theories in question
- (D) ridicule the scientists who once doubted the theories in question
- (E) indicate that the theories in question are no longer as unconventional as they once seemed

During the 1960's and 1970's, the primary economic development strategy of local governments in the United States was to attract manufacturing industries. Unfortunately, this strategy was usually implemented at another community's expense: many manufacturing facilities were lured away from their moorings elsewhere through tax incentives and slick promotional efforts. Through the transfer of jobs and related revenues that resulted from this practice, one town's triumph could become another town's tragedy.

In the 1980's the strategy shifted from this zero-sum game to one called "high-technology development," in which local governments competed to attract newly formed high-technology manufacturing firms. Although this approach was preferable to victimizing other geographical areas by taking their jobs, it also had its shortcomings: high-tech manufacturing firms employ only a specially trained fraction of the manufacturing workforce, and there simply are not enough high-tech firms to satisfy all geographic areas.

Recently, local governments have increasingly come to recognize the advantages of yet a third strategy: the promotion of homegrown small businesses. Small indigenous businesses are created by a nearly ubiquitous resource, local entrepreneurs. With roots in their communities, these individuals are less likely to be enticed away by incentives offered by another community. Indigenous industry and talent are kept at home, creating an environment that both provides jobs and fosters further entrepreneurship.

- 144. The primary purpose of the passage is to
- (A) advocate more effective strategies for encouraging the developemtn of high-technology enterprises in the United States
- (B) contrast the incentives for economic developemnt offered by local governments with those offered by the private sector
- (C) acknowledge and counter adverse criticism of programs being used to stimulate local economic development
- (D) define and explore promotional efforts used by local governments to attract new industry
- (E) review and evaluate strategies and programs that have been used to stimulate economic development
- 145. The passage suggests which of the following about the majority of United States manufacturing industries before the high-technology development era of the 1980's?
- (A) They lost many of their most innovative personnel to small entrepreneurial enterprises.
- (B) They experienced a major decline in profits during the 1960's and 1970's.
- (C) They could provide real economic benefits to the areas in which they were located.
- (D) They employed workers who had no specialized skills.
- (E) They actively interfered with local entrepreneurial ventures.
- 146. The tone of the passage suggests that the author is most optimistic about the economic development potential of which of the following groups?
- (A) Local governments
- (B) High-technology promoters
- (C) Local entrepreneurs
- (D) Manufacturing-industry managers
- (E) Economic development strategists

- 147. The passage does NOT state which of the following about local entrepreneurs?
- (A) They are found nearly everywhere.
- (B) They encourage further entrepreneurship.
- (C) They attract out-of-town investors.
- (D) They employ local workers.
- (E) They are established in their communities.
- 148. The author of the passage mentions which of the following as an advantage of high-technology development?
- (A) It encourages the modernization of existing manufacturing facilities.
- (B) It promotes healthy competition between rival indutries.
- (C) It encourages the growth of related industries.
- (D) It takes full advantage of the existing workforce.
- (E) It does not advantage one local workforce at the expense of another.

In an attempt to improve the overall performance of clerical workers, many companies have introduced computerized performance monitoring and control systems (CPMCS) that record and report a worker's computer-

- (5) driven activities. However, at least one study has shown that such monitoring may not be having the desired effect. In the study, researchers asked monitored clerical workers and their supervisors how assessments of productivity affected supervisors' ratings of workers' performance. In
- (10)contrast to unmonitored workers doing the same work, who without exception identified the most important element in their jobs as customer service, the monitored workers and their supervisors all responded that productivity was the critical factor in assigning ratings. This finding suggested
- (15) that there should have been a strong correlation between a monitored worker's productivity and the overall rating the worker received. However, measures of the relationship between overall rating and individual elements of performance clearly supported the conclusion that supervisors
- (20) gave considerable weight to criteria such as attendance .accuracy, and indications of customer satisfaction.

It is possible that productivity may be a "hygiene factor." that is, if it is too low, it will hurt the overall rating. But the evidence suggests that beyond the point at

- (25) which productivity becomes "good enough." higher productivity per se is unlikely to improve a rating.
- 149. According to the passage, before the final results of the study were known, which of the following seemed likely?
  - (A) That workers with the highest productivity would also be the most accurate
- (B) That workers who initially achieved high productivity ratings would continue to do so consistently
- (C) That the highest performance ratings would be achieved by workers with the highest productivity
- (D) That the most productive workers would be those whose supervisors claimed to value productivity
- (E) That supervisors who claimed to value productivity would place equal value on customer satisfaction
- 150. It can be inferred that the author of the passage discusses "unmonitored workers" (line 10) primarily in order to

- (A) compare the ratings of these workers with the ratings of monitored workers
- (B) provide an example of a case in which monitoring might be effective
- (C) provide evidence of an inappropriate use of CPMCS
- (D) emphasize the effect that CPMCS may have on workers' perceptions of their jobs
- (E) illustrate the effect that CPMCS may have on workers' ratings
- 151. Which of the following, if true, would most clearly have supported the conclusion referred to in lines 19-21?
  - (A) Ratings of productivity correlated highly with ratings of both accuracy and attendance.
  - (B) Electronic monitoring greatly increased productivity.
- (C) Most supervisors based overall ratings of performance on measures of productivity alone.
- (D) Overall ratings of performance correlated more highly with measures of productivity than the researchers expected.
- (E) Overall ratings of performance correlated more highly with measures of accuracy than with measures of productivity.
- 152. According to the passage, a "hygiene factor" (lines 22-23) is an aspect of a worker's performance that
  - (A) has no effect on the rating of a worker's performance
  - (B) is so basic to performance that it is assumed to be adequate for all workers
  - (C) is given less importance than it deserves in rating a worker's performance
  - (D) if not likely to affect a worker's rating unless it is judged to be inadequate
  - (E) is important primarily because of the effect it has on a worker's rating
- 153. The primary purpose of the passage is to
  - (A) explain the need for the introduction of an innovative strategy
  - (B) discuss a study of the use of a particular method
  - (C) recommend a course of action
  - (D) resolved a difference of opinion
  - (E) suggest an alternative approach

Schools expect textbooks to be a valuable source of information for students. My research suggests, however, that textbooks that address the place of Native Americans within he history of the United States distort history to suit

- (5) a particular cultural value system. In some textbooks, for example, settlers are pictured as more humane, complex, skillful, and wise than Native American. In essence, textbooks stereotype and deprecate the numerous Native American cultures while reinforcing the attitude that the
- (10) European conquest of the New World denotes the superiority of European cultures. Although textbooks evaluete Native American architecture, political systems, and homemaking. I contend that they do it from an ethnocentric,
- (15) European perspective without recognizing that other perspectives are possible.

One argument against my contention asserts that, by nature, textbooks are culturally biased and that I am simply underestimating children's ability to see through these

- (20) biases. Some researchers even claim that by the time students are in high school, they know they cannot take textbooks literally. Yet substantial evidence exists to the contrary. Two researchers, for example, have conducted studies that suggest that children's attitudes about particular
- (25) culture are strongly influenced by the textbooks used in schools. Given this, an ongoing, careful review of how school textbooks depict Native American is certainly warranted.

- 154. Which of the following would most logically be the topic of the paragraph immediately following the passage?
  - (A) Specific ways to evaluate the biases of United States history textbooks
  - (B) The centrality of the teacher's role in United States history courses
  - (C) Nontraditional methods of teaching United States history
  - (D) The contributions of European immigrants to the development of the United States
  - (E) Ways in which parents influence children's political attitudes
- 155. The primary purpose of the passage is to
- (A) describe in detail one research study regarding the impact of history textbooks on children's attitudes and beliefs about certain cultures
  - (B) describe revisions that should be made to United States history textbooks
- (C) discuss the difficulty of presenting an accurate history of the United States
- (D) argue that textbooks used in schools stereotype Native Americans and influence children's attitudes
- (E) summarize ways in which some textbooks give distorted pictures of the political systems developed by various Native American groups
- 156. The author mentions two researchers' studies (lines22-25) most likely in order to
  - (A) suggest that children's political attitudes are formed primarily through textbooks
  - (B) counter the claim that children are able to see through stereotypes in textbooks
- (C) suggest that younger children tend to interpret the messages in textbooks more literally than do older children
  - (D) demonstrate that textbooks carry political messages meant to influence their readers
  - (E) prove that textbooks are not biased in terms of their political presentations
- 157. The author's attitude toward the content of the history textbooks discussed in the passage is best described as one of
  - (A) indifference
  - (B) hesitance
  - (C) neutrality
  - (D) amusement
  - (E) disapproval
- 158. It can be inferred from the passage that the researchers mentioned in line 19 would be most likely to agree with which of the following statements?
- (A) Students form attitudes about cultures other than their own primarily inside the school environment.
  - (B) For the most part, seniors in high school know that textbooks can be biased.
  - (C) Textbooks play a crucial role in shaping the attitudes and beliefs of students.
- (D) Elementary school students are as likely to recognize biases in textbooks as are high school students.
- (E) Students are less likely to give credence to history textbooks than to mathematics textbooks.
- 159. The author implies tha5t which of the following will occur if textbooks are not carefully reviewed?
  - (A) Children will remain ignorant of the European settlers' conquest of the New World.
  - (B) Children will lose their ability to recognize biases in textbooks.
  - (C) Children will form negative stereotypes of Native Americans.
  - (D) Children will develop an understanding of ethnocentrism.
  - (E) Children will stop taking textbooks seriously.

Until recently, scientists did not know of a close vertebrate analogue to the extreme form of altruism abserved in eusocial insects like ants and bees, whereby individuals cooperate, sometimes even sacrificing their own oppor-

(5) tunities to survive and reproduce, for the good of others.

However, such a vertebrate society may exist among underground colonies of the highly social rodent *Heterocephalus glaber*, the naked mole rat.

- A naked mole rat colony, like a beehive, wasp's nest, or (10) termite mound, is ruled by its queen, or reproducing female. Other adult female mole rats neither ovulate nor breed. The queen of the largest member of the colony, and she maintains her breeding status through a mixture of behavioral and, presumably, chemical control. Queens have
- (15) been long-lived in captivity, and when they die or are removed from a colony one sees violent fighting for breeding status among the larger remaining females, leading to a takeover by a new queen.
- Eusocial insect societies have rigid caste systems, each (20)insects's role being defined by its behavior,body shape, and physiology. In naked mole rat societies, on the other hand, differences in behavior are related primarily to reproductive status (reproduction being limited to the queen and a few males), body size, and perhaps age. Smaller nonbreeding
- (25) members, both male and female, seem to participate primarily in gathering food, transporting nest material, and tunneling. Larger nonreaders are active in defending the colony and perhaps in removing dirt from the tunnels.

  Jarvis' work has suggested that differences in growth rates
- (30)may influence the length of time that an individual performs a task, regardless of its age.
  - Cooperative breeding has evolved many times in vertebrates, but unlike naked mole rats, most cooperatively breeding vertebrates (except the wild dog, *Lycaon pictus*)
- (35) are dominated by a pair of breeders rather than by a single breeding female. The division of labor within social groups is less pronounced among other vertebrates than among naked mole rats, colony size is much smaller, and mating by subordinate females may not be totally suppressed,
- (40) whereas in naked mole rat colonies subordinate females are not sexually active, and many never breed.
- 160. Which of the following most accurately states the main idea of the passage?
- (A) Naked mole rat colonies are the only known examples of cooperatively breeding vertebrate societies.
- (B) Naked mole rat colonies exhibit social organization based on a rigid caste system.
- (C) Behavior in naked mole rat colonies may well be a close vertebrate analogue to behavior in eusocial insect societies.
- (D) The mating habits of naked mole rats differ from those of any other vertebrate species.
- (E) The basis for the division of labor among naked mole rats is the same as that among eusocial insects.
- 161. The passage suggests that Jarvis' work has called into question which of the following explanatory variables for naked mole rat behavior?
  - (A) Size
  - (B) Age
  - (C) Reproductive status
  - (D) Rate of growth
  - (E) Previously exhibited behavior

- 162. It can be inferred from the passage that the performance of tasks in naked mole rat colonies differs from task performance in eusocial insect societies in which of the following ways?
  - (A) In naked mole rat colonies, all tasks ate performed cooperatively.
- (B) In naked mole rat colonies, the performance of tasks is less rigidly determined by body shape.
  - (C) In naked mole rat colonies, breeding is limited to the largest animals.
  - (D) In eusocial insect societies, reproduction is limited to a single female.
  - (E) In eusocial insect societies, the distribution of tasks is based on body size.
- 163. According to the passage, which of the following is a supposition rather than a fact concerning the queen in a naked mole rat colony?
  - (A) She is the largest member of the colony.
  - (B) She exerts chemical control over the colony.
  - (C) She mates with more than one male.
  - (D) She attains her status through aggression.
  - (E) She is the only breeding female.
- 164. The passage supports which of the following inferences about breeding among *Lycaon pictus*?
- (A) The largest female in the social group does not maintain reproductive status by means of behavioral control.
  - (B) An individual's ability to breed is related primarily to its rate of growth.
  - (C) Breeding is the only task performed by the breeding female.
  - (D) Breeding in the social group is not cooperative.
  - (E) Breeding is not dominated by a single pair of dogs.
- 165. According to the passage, naked mole rat colonies may differ from all other known vertebrate groups in which of the following ways?
- (A) Naked mole rats exhibit an extreme form of altruism.
- (B) Naked mole rats are cooperative breeders.
- (C) Among naked mole rats, many males are permitted to breed with a single dominant female.
- (D) Among naked mole rats, different tasks are performed at different times in an individual's life
- (E) Among naked mole rats, fighting results in the selection of a breeding female.
- 166. One function of the third paragraph of the passage is to
- (A) state a conclusion about facts presented in an earlier paragraph
- (B) introduce information that is contradicted by information in the fourth paragraph
- (C) qualify the extent to which two previously mentioned groups might be similar
- (D) show the chain of reasoning that led to the conclusions of a specific study
- (E) demonstrate that, of three explanatory factors offered, two may be of equal significance

Joseph Glarthaar's Forged in Battle is not the first excellent study of Black soldiers and their White officers in the Civil War, but it uses more soldiers' letters and diaries—including rare material from Black soldiers—and concen-

- (5) rates more intensely on Black-White relations in Black regiments than do any of its predecessors. Glathaar's title expresses his thesis: loyalty, friendship, and respect among White officers and Black soldiers were fostered by the mutual dangers they faced in combat.
- (10) Glarthaar accurately describes the government's discriminatory treatment of Black soldiers in pay, promotion, medical care, and job assignments, appropriately emphasizing the campaign by Black soldiers and their officers to get the opportunity to fight. That chance remained limited through
- (15) out the war by army policies that kept most Black units

- serving in rear-echelon assignments and working in labor battalions. Thus, while their combat death rate was only one-third that of White units, their mortality rate from disease, a major killer in his war, was twice as great.
- (20) Despite these obstacles, the courage and effectiveness of several Black units in combat won increasing respect from initially skeptical or hostile White soldiers. As one White officer put it, "they have fought their way into the respect of all the army."
- (25) In trying to demonstrate the magnitude of this attitudinal change, however, Glarthaar seems to exaggerate the prewar racism of the White men who became officers in Black regiments. "Prior to the war," he writes of these men, "virtually all of them held powerful racial prejudices."
- (30) While perhaps true of those officers who joined Black units for promotion or other self-serving motives, this statement misrepresents the attitudes of the many abolitionists who became officers in Black regiments. Having spent years fighting against the race prejudice endemic in Ameri-
- (35) can society; they participated eagerly in this military experiment, which they hoped would help African Americans achieve freedom and postwar civil equality. By current standards of racial egalitarianism, these men's paternalism toward African Americans was racist. But to call their
- (40) feelings "powerful racial prejudices" is to indulge in generational chauvinism—to judge past eras by present standards.
- 167. The passage as a whole can best be characterized as which of the following?
  - (A) An evaluation of a scholarly study
  - (B) A description of an attitudinal change
  - (C) A discussion of an analytical defect
  - (D) An analysis of the causes of a phenomenon
  - (E) An argument in favor of revising a view
- 168. According to the author, which of the following is true of Glarthaar's *Forged in Battle* compared with previous studies on the same topic?
  - (A) It is more reliable and presents a more complete picture of the historical events on which it concentrates than do previous studies.
  - (B) It uses more of a particular kind of source material and focuses more closely on a particular aspect of the topic than do previous studies.
- (C) It contains some unsupported generalizations, but it rightly emphasizes a theme ignored by most previous studies.
  - (D) It surpasses previous studies on the same topic in that it accurately describes conditions often neglected by those studies.
  - (E) It makes skillful use of supporting evidence to illustrate a subtle trend that previous studies have failed to detect.
- 169. The author implies that the title of Glatthaar's book refers specifically to which of the following?
- (A) The sense of pride and accomplishment that Black soldiers increasingly felt as a result of their Civil War experiences
  - (B) The civil equality that African Americans achieved after the Civil War, partly as a result of their use of organizational skills honed by combat
  - (C) The changes in discriminatory army policies that were made as a direct result of the performance of Black combat units during the Civil War
  - (D) The improved interracial relations that were formed by the races' facing of common dangers and their waging of a common fight during the Civil War

- (E) The standards of racial egalitarianism that came to be adopted as a result of White Civil War veterans'
  - repudiation of the previous racism
- 170. The passage mentions which of the following as an important theme that receives special emphasis in Glarthaar's book?
  - (A) The attitudes of abolitionist officers in Black units
  - (B) The struggle of Black units to get combat assignments
  - (C) The consequences of the poor medical care received by Black soldiers
  - (D) The motives of officers serving in Black units
  - (E) The discrimination that Black soldiers faced when trying for promotions
- 171. The passage suggests that which of the following was true of Black units' disease mortality rates in the Civil War?
  - (A) They were almost as high as the combat mortality rates of White units.
  - (B) They resulted in part from the relative inexperience of these units when in combat.
  - (C) They were especially high because of the nature of these units' usual duty assignments.
  - (D) They resulted in extremely high overall casualty rates in Black combat units.
- (E) They exacerbated the morale problems that were caused by the army's discriminatory policies.
- 172. The author of the passage quotes the White officer in lines 23-24 primarily in order to provide evidence to support the contention that
  - (A) virtually all White officers initially had hostile attitudes toward Black soldiers
- (B) Black soldiers were often forced to defend themselves from physical attacks initiated by soldiers from White units
- (C) the combat performance of Black units changed the attitudes of White soldiers toward Black soldiers
  - (D) White units paid especially careful attention to the performance of Black units in battle
- (E) respect in the army as a whole was accorded only to those units, whether Black or White, that performed well in battle
- 173. Which of the following best describes the kind of error attributed to Glarthaar in lines 25-28?
- (A) Insisting on an unwarranted distinction between two groups of individuals in order to render an argument concerning them internally consistent
- (B) Supporting an argument in favor of a given interpretation of a situation with evidence that is not particularly relevant to the situation
- (C) Presenting a distorted view of the motives of certain individuals in order to provide grounds for a negative evaluation of their actions
- (D) Describing the conditions prevailing before a given event in such a way that the contrast with those prevailing after the event appears more striking than it actually is
- (E) Asserting that a given event is caused by another event merely because the other event occurred before the given event occurred
- 174. Which of the following actions can best be described as indulging in "generational chauvinism" (lines 40-41) as that practice is defined in the passage?
- (A) Condemning a present-day monarch merely because many monarchs have been tyrannical in the past.
- (B) Clinging to the formal standards of politeness common in one's youth to such a degree that any relaxation of those standards is intolerable
- (C) Questioning the accuracy of a report written by an employee merely because of the employee's gender.
- (D) Deriding the superstitions accepted as "science" in past eras without acknowledging the prevalence of irrational beliefs today.
- (E) Labeling a nineteenth-century politician as "corrupt" for engaging in once-acceptable practices considered intolerable today.

It was once assumed that all living things could be divided into two fundamental and exhaustive categories. Multicellular plants and animals, as well as many unicellular organisms, are eukaryotic—their large, complex cells

- (5) have a well-formed nucles and many organelles. On the other hand, the true bacteria are prokaryotic cell, which are simple and lack a nucleus. The distinction between eukaryotes and bacteria, initially defined in terms of subcellular structures visible with a microscope, was ulti-
- (10) mately carried to the molecular level. Here prokaryotic and eukaryotic cells have many features in common. For instance, they translate genetic information into proteins according to the same type of genetic coding. But even where the molecular processes are the same, the details in
- (15) the two forms are different and characteristic of the respective forms. For example, the amino acid sequences of various enzymes tend to be typically prokaryotic or eukaryotic. The differences between the groups and the similarities within each group made it seem certain to most biologists
- (20) that the tree of life had only two stems. Moreover, arguments pointing out the extent of both structural and functional differences between eukaryotes and true bacteria convinced many biologists that the precursors of the eukaryotes must have diverged from the common
- (25) ancestor before the bacteria arose.

Although much of this picture has been sustained by more recent research, it seems fundamentally wrong in one respect. Among the bacteria, there are organisms that are significantly different both from the cells of eukaryotes and

- (30) from the true bacteria, and it now appears that there are three stems in the tree of life. New techniques for determining the molecular sequence of the RNA of organisms have produced evolutionary information about the degree to which organisms are related, the time since they diverged
- (35) from a common ancestor, and the reconstruction of ancestral versions of genes. These techniques have strongly suggested that although the true bacteria indeed form a large coherent group, certain other bacteria, the archaebacteria, which are also prokaryotes and which resemble true
- (40) bacteria, represent a distinct evolutionary branch that far antedates the common ancestor of all true bacteria.
- 175. The passage is primarily concerned with
- (A) detailing the evidence that has led most biologists to replace the trichotomous picture of living organisms with a dichotomous one
- (B) outlining the factors that have contributed to the current hypothesis concerning the number of basic categories of living organisms
- (C) evaluating experiments that have resulted in proof that the prokaryotes are more ancient than had been expected.
- (D) summarizing the differences in structure and function found among true bacteria, archaebacteria, and eukaryotes
- (E) formulating a hypothesis about the mechanisms of evolution that resulted in the ancestors of the prokaryotes
- 176 According to the passage, investigations of eukaryotic and prokaryotic cells at the molecular level supported the conclusion that
  - (A) most eukaryotic organisms are unicellular
  - (B) complex cells have well-formed nuclei
  - (C) prokaryotes and cukaryotes form two fundamental categories

- (D) subcellular structures are visible with a microscope
- (E) prokaryotic and eukaryotic cells have similar enzymes
- 177. According to the passage, which of the following statements about the two-category hypothesis is likely to be true?
- (A) It is promising because it explains the presence of true bacteria-like organisms such as organelles in eukaryotic cells.
- (B) It is promising because it explains why eukaryotic cells, unlike prokaryotic cells, tend to form multicellular organisms.
  - (C) It is flawed because it fails to account for the great variety among eukaryotic organisms.
- (D) It is flawed because it fails to account for the similarity between prokaryotes and eukaryotes.
  - (E) It is flawed because it fails to recognize an important distinction among prokaryotes.
- 178. It can be inferred from the passage that which of the following have recently been compared in order to clarify the fundamental classifications of living things?
  - (A) The genetic coding in true bacteria and that in other prokaryotes
  - (B) The organelle structures of archaebacteria, true bacteria, and eukaryotes
  - (C) The cellular structures of multicellular organisms and unicellular organisms
- (D) The molecular sequences in eukaryotic RNA, true bacterial RNA, and archaebacterial RNA
- (E) The amino acid sequences in enzymes of various eukaryotic species and those of enzymes in archaebecterial species
- 179. If the "new techniques" mentioned in line 31 were applied in studies of biological classifications other than bacteria, which of the following is most likely?
  - (A) Some of those classifications will have to be reevaluated.
  - (B) Many species of bacteria will be reclassified
  - (C) It will be determined that there are four main categories of living things rather than three.
  - (D) It will be found that true bacteria are much older than eukaryotes.
- (E) It will be found that there is a common ancestor of the eukaryotes, archaebacteria, and true bacteria.
- 180. According to the passage, researchers working under the two-category hypothesis were correct in thinking that
  - (A) prokaryotes form a coherent group
  - (B) the common ancestor of all living things had complex properties
  - (C) eukaryotes are fundamentally different from true bacteria
  - (D) true bacteria are just as complex as eukaryotes
- (E) ancestral versions of eukaryotic genes functioned differently from their modern counterparts.
- 181. All of the following statements are supported by the passage EXCEPT:
  - (A) True bacteria form a distinct evolutionary group.
  - (B) Archaebacteria are prokaryotes that resemble true bacteria.
  - (C) True bacteria and eukaryotes employ similar types of genetic coding.
  - (D) True bacteria and eukaryotes are distinguishable at the subcellular level.
  - (E) Amino acid sequences of enzymes are uniform for eukaryotic and prokaryotic organisms.
- 182. The author's attitude toward the view that living things are divided into three categories is best described as one of
  - (A) tentative acceptance
  - (B) mild skepticism
  - (C) limited denial
  - (D) studious oriticism
  - (E) whole hearted endorsement

Excess inventory, a massive problem for many businesses, has several causes, some of which are unavoidable. Overstocks may accumulate through production overruns or

- errors. Certain styles and colors prove unpopular. With (5) some products—computers and software, toys, and books—last year's models are difficult to move even at huge discounts. Occasionally the competition introduces a better product. But in many cases the public's buying tastes
- simply change, leaving a manufacturer or distributor with (10) thousands (or millions) of items that the fickle public no longer wants.
  - One common way to dispose of this merchandise is to sell it to a liquidator, who buys as cheaply as possible and then resells the merchandise through catalogs, discount
- (15) stores, and other outlets. However, liquidators may pay less for the merchandise than it cost to make it. Another way to dispose of excess inventory is to dump it. The corporation takes a straight cost write-off on its taxes and hauls the merchandise to a landfill. Although it is hard to believe,
- (20) there is a sort of convoluted logic to this approach. It is perfectly legal, requires little time or preparation on the company's part, and solves the problem quickly. The drawback is the remote possibility of getting caught by the news media. Dumping perfectly useful products can turn into a
- (25) public relations nightmare. Children living in poverty are freezing and XYZ Company has just sent 500 new snowsuits to the local dump. Parents of young children are barely getting by and QPS Company dumps 1,000 cases of disposable diapers because they have slight imperfections.
- (30) The managers of these companies are not deliberately wasteful; they are simply unaware of all their alternatives. In 1976 the Internal Revenue Service provided a tangible incentive for businesses to contribute their products to charity. The new tax law allowed corporations to deduct the
- (35)cost of the product donated plus half the difference between cost and fair market selling price, with the proviso that deductions cannot exceed twice cost. Thus, the federal government sanctions—indeed, encourages—an above-cost federal tax deduction for companies that donate inventory to charity.
- 183. The author mentions each of the following as a cause of excess inventory EXCEPT
  - (A) production of too much merchandise
  - (B) inaccurate forecasting of buyers' preferences
  - (C) unrealistic pricing policies
  - (D) products' rapid obsolescence
  - (E) availability of a better product
- 184. The passage suggests that which of the following is a kind of product that a liquidator who sells to discount stores would be unlikely to wish to acquire?
  - (A) Furniture
  - (B) Computers
  - (C) Kitchen equipment
  - (D) Baby-care products
  - (E) Children's clothing
- 185. The passage provides information that supports which of the following statements?
  - (A) Excess inventory results most often from insufficient market analysis by the manufacturer.
  - (B) Products with slight manufacturing defects may contribute to excess inventory.
  - (C) Few manufacturers have taken advantage of the changes in the federal tax laws.
  - (D) Manufacturers who dump their excess inventory are often caught and exposed by the news media.

- (E) Most products available in discount stores have come from manufacturers' excess-inventory stock.
- 186. The author cites the examples in lines 25-29 most probably in order to illustrate
  - (A) the fiscal irresponsibility of dumping as a policy for dealing with excess inventory
  - (B) the waste-management problems that dumping new products creates
  - (C) the advantages to the manufacturer of dumping as a policy
  - (D) alternatives to dumping explored by different companies
  - (E) how the news media could portray dumping to the detriment of the manufacturer's reputation
- 187. By asserting that manufacturers "are simply unaware" (line 31), the author suggests which of the following?
  - (A) Manufacturers might donate excess inventory to charity rather than dump it if they knew about the provision in the federal tax code.
  - (B) The federal government has failed to provide sufficient encouragement to manufacturers to make use of advantageous tax policies.
  - (C) Manufacturers who choose to dump excess inventory are not aware of the possible effects on their reputation of media coverage of such dumping.
  - (D) The manufacturers of products disposed of by dumping are unaware of the needs of those people who would find the products useful.
  - (E) The manufacturers who dump their excess inventory are not familiar with the employment of liquidators to dispose of overstock.
- 188. The information in the passage suggests that which of the following, if true, would make donating excess inventory to charity less attractive to manufacturers than dumping?
  - (A) The costs of getting the inventory to the charitable destination are greater than the above-cost tax deduction.
  - (B) The news media give manufacturers' charitable contributions the same amount of coverage that they give dumping.
  - (C) No straight-cost tax benefit can be claimed for items that are dumped.
  - (D) The fair-market value of an item in excess inventory is 1.5 times its cost.
  - (E) Items end up as excess inventory because of a change in the public's preferences.
- 189. Information in the passage suggests that one reason manufacturers might take advantage of the tax provision mentioned in the last paragraph is that
  - (A) there are many kinds of products that cannot be legally dumped in a landfill
  - (B) liquidators often refuse to handle products with slight imperfections
  - (C) the law allows a deduction in excess of the cost of manufacturing the product
  - (D) media coverage of contributions of excess-inventory products to charity is widespread and favorable
  - (E) no tax deduction is available for products dumped or sold to a liquidator

Historians of women's labor in the United States at first largely disregarded the story of female service workers -women earning wages in occupations such as salesclerk. domestic servant, and office secretary. These historians

- (5) focused instead on factory work, primarily because it seemed so different from traditional, unpaid "women's work" in the home, and because the underlying economic forces of industrialism were presumed to be gender-blind and hence emancipatory in effect. Unfortunately, emanci-
- (10) pation has been less profound than expected, for not even industrial wage labor has escaped continued sex segregation in the workplace.

To explain this unfinished revolution in the status of women, historians have recently begun to emphasize the

(15) way a prevailing definition of femininity often etermines the kinds of work allocated to women, even when such

- allocation is inappropriate to new conditions. For instance, early textile-mill entrepreneurs, in justifying women's employment in wage labor, made much of the assumption
- (20) that women were by nature skillful at detailed tasks and patient in carrying out repetitive chores; the mill owners thus imported into the new industrial order hoary stereotypes associated with the homemaking activities they presumed to have been the purview of women. Because
- (25)women accepted the more unattractive new industrial tasks more readily than did men, such jobs came to be regarded as female jobs.And employers, who assumed that women's "real" aspirations were for marriage and family life.
  - declined to pay women wages commensurate with those of
- (30) men. Thus many lower-skilled, lower-paid, less secure jobs came to be perceived as "female."
  - More remarkable than the origin has been the persistence of such sex segregation in twentieth-century industry. Once an occupation came to be perceived as "female." employers
- (35) showed surprisingly little interest in changing that perception, even when higher profits beckoned. And despite the urgent need of the United States during the Second World War to mobilize its human resources fully, job segregation by sex characterized even the most important
- (40) war industries. Moreover, once the war ended, employers quickly returned to men most of the "male" jobs that women had been permitted to master.
- 190. According to the passage, job segregation by sex in the United States was
  - (A) greatly diminlated by labor mobilization during the Second World War
- (B) perpetuated by those textile-mill owners who argued in favor of women's employment in wage labor
  - (C) one means by which women achieved greater job security
- (D) reluctantly challenged by employers except when the economic advantages were obvious
  - (E) a constant source of labor unrest in the young textile industry
- 191. According to the passage, historians of women's labor focused on factory work as a more promising area of research than service-sector work because factory work
  - (A) involved the payment of higher wages
  - (B) required skill in detailed tasks
  - (C) was assumed to be less characterized by sex segregation
  - (D) was more readily accepted by women than by men
  - (E) fitted the economic dynamic of industrialism better
- 192. It can be inferred from the passage that early historians of women's labor in the United States paid little attention to women's employment in the service sector of the economy because
- (A) the extreme variety of these occupations made it very difficult to assemble meaningful statistics about them
  - (B) fewer women found employment in the service sector than in factory work
- (C) the wages paid to workers in the service sector were much lower than those paid in the industrial sector
- (D) women's employment in the service sector tended to be much more short-term than in factory work
- (E) employment in the service sector seemed to have much in common with the unpaid work associated with homemaking
- 193. The passage supports which of the following statements about the early mill owners mentioned in the second paragraph?

- (A) They hoped that by creating relatively unattractive "female" jobs they would discourage women from losing interest in marriage and family life.
- (B) They sought to increase the size of the available labor force as a means to keep men's to keep men's wages low.
- (C) They argued that women were inherently suited to do well in particular kinds of factory work.
  - (D) They thought that factory work bettered the condition of women by emancipating them from dependence on income earned by men.
  - (E) They felt guilty about disturbing the traditional division of labor in family.
- 194. It can be inferred from the passage that the "unfinished revolution" the author mentions in line 13 refers to the
  - (A) entry of women into the industrial labor market
- (B) recognition that work done by women as homemakers should be compensated at rates comparable to those prevailing in the service sector of the economy
- (C) development of a new definition of femininity unrelated to the economic forces of industrialism
  - (D) introduction of equal pay for equal work in all professions
  - (E) emancipation of women wage earners from gender-determined job allocation
- 195. The passage supports which of the following statements about hiring policies in the United States?
  - (A) After a crisis many formerly "male" jobs are reclassified as "female" jobs.
- (B) Industrial employers generally prefer to hire women with previous experience as homemakers.
- (C) Post-Second World War hiring policies caused women to lose many of their wartime gains in employment opportunity.
- (D) Even war industries during the Second World War were reluctant to hire women for factory work.
- (E) The service sector of the economy has proved more nearly gender-blind in its hiring policies than has the manufacturing sector.
- 196. Which of the following words best expresses the opinion of the author of the passage concerning the notion that women are more skillful than men in carrying out detailed tasks?
  - (A) "patient" (line 21)
  - (B) "repetitive" (line 21)
  - (C) "hoary" (line 22)
  - (D) "homemaking" (line 23)
  - (E) "purview" (line 24)
- 197. Which of the following best describes the relationship of the final paragraph to the passage as a whole?
- (A) The central idea is reinforced by the citation of evidence drawn from twentieth-century history.
- (B) The central idea is restated in such a way as to form a transition to a new topic for discussion.
- (C) The central idea is restated and juxtaposed with evidence that might appear to contradic it.
  - (D) A partial exception to the generalizations of the central idea is dismissed as unimportant.
  - (E) Recent history is cited to suggest that the central idea's validity is gradually diminishing.

According to a recent theory, Archean-age gold-quartz vein systems were formed over two billion years ago from magmatic fluids that originated from molten granitelike bodies deep beneath the surface of the Earth. This theory is

(5) contrary to the widely held view that the systems were deposited from metamorphic fluids, that is, from fluids that

formed during the dehydration of wet sedimentary rocks. he recently developed theory has considerable practical importance. Most of the gold deposits discovered during

- (10) the original gold rushes were exposed at the Earth's surface and were found because they had shed trails of alluvial gold that were easily traced by simple prospecting methods. Although these same methods still lead to an occasional discovery, most deposits not yet discovered have gone
- (15) undetected because they are buried and have no surface expression.

The challenge in exploration is therefore to unravel the subsurface geology of an area and pinpoint the position of buried minerals. Methods widely used today include

- (20) analysis of aerial images that yield a broad geological overview; geophysical techniques that provide data on the magnetic, electrical, and mineralogical properties of the rocks being investigated; and sensitive chemical tests that are able to detect the subtle chemical halos that often
- (25) envelop mineralization. However, none of these hightechnology methods are of any value if the sites to which they are applied have never mineralized, and to maximize the chances of discovery the explorer must therefore pay particular attention to selecting the ground formations most
- (30) likely to be mineralized. Such ground selection relies to varying degrees on conceptual models, which take into account theoretical studies of relevant factors.

These models are constructed primarily from empirical observations of known mineral deposits and from theories

- **35)** of ore-forming processes. The explorer uses the models to identify those geological features that are critical to the formation of the mineralization being modeled, and then tries to select areas for exploration that exhibit as many of the critical features as possible.
- 198. The author is primarily concerned with
- (A) advocating a return to an older methodology
- (B) explaining the importance of a recent theory
- (C) enumerating differences between two widely used methods
- (D) describing events leading to a discovery
- (E) challenging the assumptions on which a theory is based
- 199. According to the passage, the widely held view of Archean- age gold-quartz vein systems is that such systems
  - (A) were formed from metamorphic fluids
  - (B) originated in molten granitelike bodies
  - (C) were formed from alluvial deposits
  - (D) generally have surface expression
  - (E) are not discoverable through chemical tests
- 200. The passage implies that which of the following steps would be the first performed by explorers who wish to maximize their chances of discovering gold?
  - (A) Surveying several sites known to have been formed more than two billion years ago
  - (B) Limiting exploration to sites known to have been formed from metamorphic fluid.
  - (C) Using an appropriate conceptual model to select a site for further exploration
  - (D) Using geophysical methods to analyze rocks over a broad area
  - (E) Limiting exploration to sites where alluvial gold has previously been found
- 201. Which of the following statements about discoveries of gold deposits is supported by information in the passage?

- (A) The number of gold discoveries made annually has increased between the time of the original gold rushes and the present.
- (B) New discoveries of gold deposits are likely to be the result of exploration techniques designed to locate buried mineralization.
- (C) It is unlikely that newly discovered gold deposits will ever yield as much as did those deposits discovered during the original gold rushes.
- (D) Modern explorers are divided on the question of the utility of simple prospecting methods as a source of new discoveries of gold deposits.
- (E) Models based on the theory that gold originated from magmatic fluids have already led to new discoveries of gold deposits.
- 202. It can be inferred from the passage that which of the following is easiest to detect?
  - (A) A gold-quartz vein system originating in magmatic fluids
  - (B) A gold-quartz vein system originating in meamorphic fluids
  - (C) A gold deposit that is mixed with granite
  - (D) A gold deposit that has shed alluvial gold
  - (E) A gold deposit that exhibits chemical halos
- 203. The theory mentioned in line 1 relates to the conceptual models discussed in the passage in which of the following ways?
- (A) It may furnish a valid account of ore-forming processes, and, hence, can support conceptual models that have great practical significance.
- (B) It suggests that certain geological formations, long believed to be mineralized, are in fact mineralized, thus confirming current conceptual models.
- (C) It suggests that there may not be enough similarity across Archean-age gold-quartz vein systems to warrant the formulation of conceptual models.
- (D) It corrects existing theories about the chemical halos of gold deposits, and thus provides a basis for correcting current conceptual models.
- (E) It suggests that simple prospecting methods still have a higher success rate in the discovery of gold deposits than do more modern methods.
- 204. According to the passage, methods of exploring for gold that are widely used today are based on which of the

following facts?

- (A) Most of the Earth's remaining gold deposits are still molten.
- (B) Most of the Earth's remaining gold deposits are exposed at the surface.
- (C) Most of the Earth's remaining gold deposits are buried and have no surface expression.
- (D) Only one type of gold deposit warrants exploration, since the other types of gold deposits are found in regions difficult to reach.
- (E) Only one type of gold deposit warrants exploration, since the other types of gold deposits are unlikely to yield concentrated quantities of gold.
- 205. It can be inferred from the passage that the efficiency of model-based gold exploration depends on which of the

following?

- I. The closeness of the match between the geological features identified by the model as critical and the actual geological features of a given area
- II. The degree to which the model chosen relies on empirical observation of known mineral deposits rather than on theories of ore-forming processes
- III. The degree to which the model chosen is based on an accurate description of the events leading to mineralization
  - (A) I only
  - (B) II only
  - (C) I and II only
  - (D) I and III only
  - (E) I, II and III

#### Passage 33

While there is no blueprint for transforming a largely government-controlled economy into a free one, the experience of the United Kingdom since 1979 clearly

- shows one approach that works: privatization, in which
- (5) state-owned industries are sold to private companies. By 1979, the total borrowings and losses of state-owned industries were running at about t3 billion a year. By selling many of these industries, the government has decreased these borrowings and losses, gained over t34
- (10) billion from the sales, and now receives tax revenues from the newly privatized companies. Along with a dramatically improved overall economy, the government has been able to repay 12.5 percent of the net national debt over a two-year period.
- (15) In fact, privatization has not only rescued individual industries and a whole economy headed for disaster, but has also raised the level of performance in every area. At British Airways and British Gas, for example, productivity per employee has risen by 20 percent. At associated
- (20) British Ports, labor disruptions common in the 1970's and early 1980's have now virtually disappeared. At British Telecom, there is no longer a waiting list—as there always was before privatization—to have a telephone installed. Part of this improved productivity has come about
- (25) because the employees of privatized industries were given the opportunity to buy shares in their own companies. They responded enthusiastically to the offer of shares; at British Aerospace, 89 percent of the eligible work force bought shares; at Associated British Ports, 90 percent; and at
- (30) British Telecom, 92 percent. When people have a personal stake in something, they think about it, care about it, work to make it prosper. At the National Freight Consortium, the new employee-owners grew so concerned about their company's profits that during wage negotiations they
- (35) actually pressed their union to lower its wage demands. Some economists have suggested that giving away free shares would provide a needed acceleration of the privatization process. Yet they miss Thomas Paine's point that "what we obtain too cheap we esteem too lightly." In
- (40) order for the far-ranging benefits of individual ownership to be achieved by owners, companies, and countries, employees and other individuals must make their own decisions to buy, and they must commit some of their own resources to the choice.
- 206. According to the passage, all of the following were benefits of privatizing state-owned industries in the United Kingdom EXCEPT:
  - (A) Privatized industries paid taxes to the government.
  - (B) The government gained revenue from selling state-owned industries.
  - (C) The government repaid some of its national debt.
  - (D) Profits from industries that were still state-owned increased.
  - (E) Total borrowings and losses of state-owned industries decreased.
- 207. According to the passage, which of the following resulted in increased productivity in companies that have been privatized?
  - (A) A large number of employees chose to purchase shares in their companies.
  - (B) Free shares were widely distributed to individual shareholders.
  - (C) The government ceased to regulate major industries.
  - (D) Unions conducted wage negotiations for employees.
  - (E) Employee-owners agreed to have their wages lowered.
- 208. It can be inferred from the passage that the author considers labor disruptions to be
  - (A) an inevitable problem in a weak national economy

- (B) a positive sign of employee concern about a company
- (C) a predictor of employee reactions to a company's offer to sell shares to them
- (D) a phenomenon found more often in state-owned industries than in private companies
- (E) a deterrence to high performance levels in an industry
- 209. The passage supports which of the following statements about employees buying shares in their own companies?
- (A) At three different companies, approximately nine out of ten of the workers were eligible to buy shares in their companies.
- (B) Approximately 90% of the ellgible workers at three different companies chose o buy shares in their companies.
  - (C) The opportunity to buy shares was discouraged by at least some labor unions.
- (D) Companies that demonstrated the highest productivity were the first to allow their employees the opportunity to buy shares.
  - (E) Eligibility to buy shares was contingent on employees' agreeing to increased work loads.
- 210. Which of the following statements is most consistent with the principle described in lines 30-32?
- (A) A democratic government that decides it is inappropriate to own a particular industry has in no way abdicated its responsibilities as guardian of the public interest.
- (B) The ideal way for a government to protect employee interests is to force companies to maintain their share of a competitive market without government subsidies.
- (C) The failure to harness the power of self-interest is an important reason that state-owned industries perform poorly.
- (D) Governments that want to implement privatization programs must try to eliminate all resistance to the free-market system.
- (E) The individual shareholder will reap only a minute share of the gains from whatever sacrifices he or she makes to achieve these gains.
- 211. Which of the following can be inferred from the passage about the privatization process in the United Kingdom?
  - (A) It depends to a potentially dangerous degree on individual ownership of shares.
- (B) It conforms in its most general outlines to Thomas Palne's prescription for business ownership.
  - (C) It was originally conceived to include some giving away of free shares.
  - (D) It has been successful, even though privatization has failed in other countries.
  - (E) It is taking place more slowly than some economists suggest is necessary.
- 212. The quotation in line 39 is most probably used to
  - (A) counter a position that the author of the passage believes is incorrect
  - (B) state a solution to a problem described in the previous sentence
- (C) show how opponents of the viewpoint of the author of the passage have supported their arguments
  - (D) point out a paradox contained in a controversial viewpoint
  - (E) present a historical maxim to challenge the principle introduced in the third paragraph

Coral reefs are one of the most fragile, biologically complex, and diverse marine ecosystem on Earth. This ecosystem is one of the fascinating paradoxes of the biosphere: how do clear, and thus nutrient-poor, waters sup-

- (5) port such prolific and productive communities? Part of the answer lies within the tissues of the corals themselves. Symbiotic cells of algae known as zooxanthellae carry out photosynthesis using the metabolic wastes of the coral thereby producing food for themselves, for their corals,
- (10) hosts, and even for other members of the reef community. This symbiotic process allows organisms in the reef community to use sparse nutrient resources efficiently.

  Unfortunately for coral reefs, however, a variety of

human activities are causing worldwide degradation of

- (15) shallow marine habitats by adding nutrients to the (water. Agriculture, slash-and-burn land clearing, sewage disposal and manufacturing that creates waste by-products all increase nutrient loads in these waters. Typical symptoms of reef decline are destabilized herbivore populations and
- (20)an increasing abundance of algae and filter-feeding animals.

Declines in reef communities are consistent with observations that nutrient input is increasing in direct proportion to growing human populations, thereby threatening reef com-

- (25) munities sensitive to subtle changes in nutrient input to their waters.
- 213. The passage is primarily concerned with
  - (A) describing the effects of human activities on algae in coral reefs
  - (B) explaining how human activities are posing a threat to coral reef communities
  - (C) discussing the process by which coral reefs deteriorate in nutrient-poor waters
  - (D) explaining how coral reefs produce food for themselves
  - (E) describing the abundance of algae and filter-feeding animals in coral reef areas
- 214. The passage suggests which of the following about coral reef communities?
- (A) Coral reef communities may actually be more likely to thrive in waters that are relatively low in nutrients.
  - (B) The nutrients on which coral reef communities thrive are only found in shallow waters.
- (C) Human population growth has led to changing ocean temperatures, which threatens coral reef communities.
- (D) The growth of coral reef communities tends to destabilize underwater herbivore populations.
- (E) Coral reef communities are more complex and diverse than most ecosystems located on dry land.
- 215. The author refers to "filter-feeding animals" (line 20) in order to
  - (A) provide an example of a characteristic sign of reef deterioration
  - (B) explain how reef communities acquire sustenance for survival
  - (C) identify a factor that helps herbivore populations thrive
  - (D) indicate a cause of decreasing nutrient input in waters that reefs inhabit
  - (E) identify members of coral reef communities that rely on coral reefs for nutrients
- 216. According to the passage, which of the following is a factor that is threatening the survival of coral reef communities?
  - (A) The waters they inhabit contain few nutrient resources.
  - (B) A decline in nutrient input is disrupting their symbiotic relationship with zooxanthellae
- (C) The degraded waters of their marine habitats have reduced their ability to carry out photosynthesis
  - (D) They are too biologically complex to survive in habitats with minimal nutrient input.
  - (E) Waste by-products result in an increase in nutrient input to reef communities.
- 217. It can be inferred from the passage that the author describes coral reef communities as paradoxical most likely for which of the following reasons?
- (A) They are thriving even though human activities have depleted the nutrients in their environment.
  - (B) They are able to survive in spite of an overabundance of algae inhabiting their waters.
  - (C) They are able to survive in an environment with limited food resources.
  - (D) Their metabolic wastes contribute to the degradation of the waters that they inhabit.
  - (E) They are declining even when the water surrounding them remains clear.

Two divergent definitions have dominated sociologists' discussions of the nature of ethnicity. The first emphasizes

- the primordial and unchanging character of ethnicity. In this view, people have an essential need for belonging that
- (5) is satisfied by membership in groups based on shared ancestry and culture. A different conception of ethnicity de-emphasizes the cultural component and defines ethnic groups as interest groups. In this view, ethnicity serves as a way of mobilizing a certain population behind issues
- (10) relating to its economic position. While both of these definitions are useful, neither fully captures the dynamic and changing aspects of ethnicity in the United States. Rather, ethnicity is more satisfactorily conceived of as a process in which preexisting communal bonds and common
- (15) cultural attributes are adapted for instrumental purposes according to changing real-life situations.
  - One example of this process is the rise of participation by Native American people in the broader United States political system since the Civil Rights movement of the
- (20)1960's. Besides leading Native Americans to participate more actively in politics (the number of Native American legislative officeholders more than doubled), this movement also evoked increased interest in tribal history and traditional culture. Cultural and instrumental components of
- (25 )ethnicity are not mutually exclusive, but rather reinforce one another.

The Civil Rights movement also brought changes in the uses to which ethnicity was put by Mexican American people. In the 1960's, Mexican Americans formed

- (30) community-based political groups that emphasized ancestral heritage as a way of mobilizing constituents. Such emerging issues as immigration and voting rights gave Mexican American advocacy groups the means by which to promote ethnic solidarity. Like European ethnic groups in the
- (35) nineteenth-century United States, late-twentieth-century Mexican American leaders combined ethnic with contemporary civic symbols. In 1968 Henry Censors, then mayor of San Antonio, Texas, cited Mexican leader Benito Juarez as a model for Mexican Americans in their fight for con-
- (40) temporary civil rights. And every year, Mexican Americans celebrate Cinco de Mayo as fervently as many Irish American people embrace St. Patrick's Day (both are major holidays in the countries of origin), with both holidays having been reinvented in the context of the United States and linked to ideals, symbols, and heroes of the United States

- 218. Which of the following best states the main idea of the passage?
- (A) In their definitions of the nature of ethnicity, sociologists have underestimated the power of the primordial human need to belong.
- (B) Ethnicity is best defined as a dynamic process that combines cultural components with shared political and economic interests.
- (C) In the United States in the twentieth century, ethnic groups have begun to organize in order to further their political and economic interests.
- (D) Ethnicity in the United States has been significantly changed by the Civil Rights movement.
- (E) The two definitions of ethnicity that have dominated sociologists discussions are incompatible and should be replaced by an entirely new approach.
- 219. Which is the following statements about the first two definitions of ethnicity discussed in the first paragraph is supported by the passage?
- (A) One is supported primarily by sociologists, and the other is favored by members of ethnic groups.
- (B) One emphasizes the political aspects of ethnicity, and the other focuses on the economic aspects.
- (C) One is the result of analysis of United States populations, and the other is the result of analysis of European populations.
- (D) One focuses more on the ancestral components of ethnicity than does the other.
- (E) One focuses more on immigrant groups than does the other.
- 220. The author of the passage refers to Native American people in the second paragraph in order to provide an example of
  - (A) the ability of membership in groups based on shared ancestry and culture to satisfy an essential human need.
- (B) how ethnic feelings have both motivated and been strengthened by political activity
- (C) how the Civil Rights movement can help promote solidarity among United States ethnic groups
- (D) how participation in the political system has helped to improve a group's economic situation
- (E) the benefits gained from renewed study of ethnic history and culture
- 221. The passage supports which of the following statements about the Mexican American community?
  - (A) In the 1960's the Mexican American community began to incorporate the customs of another ethnic group in the United States into the observation of its own ethnic holidays.
  - (B) In the 1960's Mexican American community groups promoted ethnic solidarity primarily in order to effect economic change

- (C) In the 1960's leader of the Mexican American community concentrated their efforts on promoting a renaissance of ethnic history and culture
- (D) In the 1960's members of the Mexican American community were becoming increasingly concerned about the issue of voting rights.
- (E) In the 1960's the Mexican American community had greater success in mobilizing constituents than did other ethnic groups in the United States.
- 222. Which of the following types of ethnic cultural expression is discussed in the passage?
  - (A) The retelling of traditional narratives
  - (B) The wearing of traditional clothing
  - (C) The playing of traditional music
- (D) The celebration of traditional holidays
- (E) The preparation of traditional cuisine
- 223. Information in the passage supports which of the following statements about many European ethnic groups in the nineteenth-century United States?
  - (A) They emphasized economic interests as a way of mobilizing constituents behind certain issues.
- (B) They conceived of their own ethnicity as being primordial in nature.
- (C) They created cultural traditions that fused United States symbols with those of their countries of origin.
- (D) They de-emphasized the cultural components of their communities in favor of political interests.
- (E) They organized formal community groups designed to promote a renaissance of ethnic history and culture.
- 224. The passage suggests that in 1968 Henry Cisneros most likely believed that
  - (A) many Mexican American would respond positively to the example of Benito Juarez.
  - (B) many Mexican American were insufficiently educated in Mexican history
- (C) the fight for civil fights in the United States had many strong parallels in both Mexican and rish history.
- (D) the quickest way of organizing community-based groups was to emulate the tactics of Benito Juarez
- (E) Mexican Americans should emulate the strategies of Native American political leaders.

## Passage 50

The fact that superior service can generate a competitive advantage for a company does not mean that every attempt at improving service will create such an advantage. Investments in service, like those in production and distribution,

(5) must be balanced against other types of investments on the basis of direct, tangible benefits such as cost reduction and

- increased revenues. If a company is already effectively on a par with its competitors because it provides service that avoids a damaging reputation and keeps customers from
- (10) leaving at an unacceptable rate, then investment in higher service levels may be wasted, since service is a deciding factor for customers only in extreme situations.

This truth was not apparent to managers of one regional bank, which failed to improve its competitive position

- (15) despite its investment in reducing the time a customer had to wait for a teller. The bank managers did not recognize the level of customer inertia in the consumer banking industry that arises from the inconvenience of switching banks. Nor did they analyze their service improvement to
- (20) determine whether it would attract new customers by producing a new standard of service that would excite customers or by proving difficult for competitors to copy. The only merit of the improvement was that it could easily be described to customers.
- 225. The primary purpose of the passage is to
  - (A) contrast possible outcomes of a type of business investment
  - (B) suggest more careful evaluation of a type of business investment
- (C) illustrate various ways in which a type of business investment could fail to enhance revenues
  - (D) trace the general problems of a company to a certain type of business investment
- (E) criticize the way in which managers tend to analyze the costs and benefits of business investments
- 226. According to the passage, investments in service are comparable to investments in production and distribution in terms of the
  - (A) tangibility of the benefits that they tend to confer
  - (B) increased revenues that they ultimately produce
  - (C) basis on which they need to be weighed
  - (D) insufficient analysis that managers devote to them
  - (E) degree of competitive advantage that they are likely to provide
- 227. The passage suggests which of the following about service provided by the regional bank prior to its investment in enhancing that service?
  - (A) It enabled the bank to retain customers at an acceptable rate
- (B) It threatened to weaken the bank's competitive position with respect to other regional banks
- (C) It had already been improved after having caused damage to the bank's reputation in the past.
  - (D) It was slightly superior to that of the bank's regional competitors.

- (E) It needed to be improved to attain parity with the service provided by competing banks.
- 228. The passage suggests that bank managers failed to consider whether or not the service improvement mentioned in line 19
  - (A) was too complicated to be easily described to prospective customers
  - (B) made a measurable change in the experiences of customers in the bank's offices
  - (C) could be sustained if the number of customers increased significantly
  - (D) was an innovation that competing banks could have imitated
- (E) was adequate to bring the bank's general level of service to a level that was comparable with that of its competitors
- 229. The discussion of the regional bank (line 13-24) serves which of the following functions within the passage as a whole?
- (A) It describes an exceptional case in which investment in service actually failed to produce a competitive advantage.
- (B) It illustrates the pitfalls of choosing to invest in service at a time when investment is needed more urgently in another area.
- (C) It demonstrates the kind of analysis that managers apply when they choose one kind of service investment over another
- (D) It supports the argument that investments in certain aspects of service are more advantageous than investments in other aspects of service.
- (E) It provides an example of the point about investment in service made in the first paragraph.
- 230. The author uses the word "only" in line 23 most likely in order to
  - (A) highlight the oddity of the service improvement
  - (B) emphasize the relatively low value of the investment in service improvement
  - (C) distinguish the primary attribute of the service improvement from secondary attributes
  - (D) single out a certain merit of the service improvement from other merits
  - (E) point out the limited duration of the actual service improvement

A recent study has provided clues to predator-prey dynamics in the late Pleistocene era. Researchers compared the number of tooth fractures in present-day carnivores with tooth fractures in carnivores that lived 36,000 to 10,000 years ago and that were preserved in the Rancho La Brea tar pits in Los Angeles. The breakage frequencies in the extinct species were strikingly higher than those in the present-day species.

In considering possible explanations for this finding, the researchers dismissed demographic bias because older individuals were not overrepresented in the fossil samples. They rejected preservational bias because a total absence of breakage in two extinct species demonstrated that the fractures were not the result of abrasion within the pits. They ruled out local bias because breakage data obtained from other Pleistocene sites were similar to the La Brea data. The explanation they consider most plausible is behavioral differences between extinct and present-day carnivores-in particular, more contact between the teeth of predators and the bones of prey due to more thorough consumption of carcasses by the extinct species. Such

thorough carcass consumption implies to the researchers either that prey availability was low, at least seasonally, or that there was intense competition over kills and a high rate of carcass theft due to relatively high predator densities.

- 231. The primary purpose of the passage is to
- (A) present several explanations for a well-known fact
- (B) suggest alternative method of resolving a debate
- (C) argue in favor of a controversial theory
- (D) question the methodology used in a study
- (E) discuss the implications of a research finding
- 232. The passage suggests that, compared with Pleistocene carnivores in other areas, Pleistocene carnivores in the La Brea area
- (A) included the same species, in approximately the same proportions
- (B) had a similar frequency of tooth fractures
- (C) populated the La Brea more densely
- (D) consumed their preys more thoroughly
- (E) found it harder to obtain sufficiency prey
- 233. According to the passage, the researchers believes that the high frequency of tooth breakage in carnivores found at La Brea was caused primarily by
- (A) the aging process in individual carnivores
- (B) contact between the fossils in the pits
- (C) poor preservation of the fossils after they were removed from the pits
- (D) the impact of carnivores' teeth against the bones of their prey
- (E) the impact of carnivores' teeth against the bones of other carnivores during fights over kills 234. The researchers' conclusion concerning the absence of demographic bias would be most seriously undermined if it were found that
- (A) the older as individual carnivore is, the more likely it is to have a large number of tooth fractures
- (B) the average age at death of a present-day carnivores is greater than was the average age at death of a Pleistocene carnivore
- (C) in Pleistocene carnivore species, older individuals consumed carcasses as thoroughly as did younger individuals
- (D) the methods used to determine animals' ages in fossils samples tend to misidentify many older individuals as younger individuals
- (E) data concerning the ages of fossil samples cannot provide reliable information about behavioral differences between extinct carnivores and present-day carnivores
- 235. The passage suggests that if the researchers had not found that two extinct carnivore species were free of tooth breakage, the researchers would have concluded that
- (A) the difference in breakage frequencies could have been the result of damage to the fossile remains in the La Brea pits

- (B) the fossils in other Pleistocene sites could have higher breakage frequencies than do the fossils in the La Brea pits
- (C) Pleistocene carnivore species probably behaved very similarly to one another with respect to consumption of carcass
- (D) all Pleistocene carnivores species differed behaviorally from present-day carnivore species.
- (E) predator desities during the Pleistocene era were extremely high

During the nineteenth-century, occupational information about women that was provided by the United States census-a population count conducted each decade-became more detailed and precise in response to social changes. Through 1840, simple enumeration by household mirrored a home-based agricultural economy and hierarchical social order: the head of the household (presumed male or absent) was specified by name, whereas other household members were only indicated by the total number of persons counted in various categories, including occupational categories. Like farms, most enterprises were family-run, so that the census measured economic activity as an attribute of the entire household, rather than of individuals.

The 1850 census, partly responding to antislavery and women's rights movements, initiated the collection of specific information about each individual in a household. Not until 1870 was occupational information analyzed by gender: the census superintendent reported 1.8 million women employed outside the home in "gainful and reputable occupations." In addition, he arbitrarily attributed to each family one woman "keeping house." Overlap between the two groups was not calculated until 1890, when the rapid entry of women into the paid labor force and social issues arising from industrialization were causing women's advocates and women statisticians to press for more thorough and accurate accounting of women's occupations and wages.

- 236. The primary purpose of the passage is to
- (A) explain and critique the methods used by early statisticians
- (B) compare and contrast a historical situation with a current-day one
- (C) describe and explain a historical change
- (D) discuss historical opposition to an established institution
- (E) trace the origin of a contemporary controversy
- 237. Each of the following aspects of nineteenth-century United States censuses is mentioned in the passage EXCEPT the
- (A) year in which data on occupations began to be analyzed by gender
- (B) year in which specific information began to be collected on individuals in addition to the head of the household
- (C) year in which overlap between women employed outside the home and women keeping house was first calculated
- (D) way in which the 1890 census measured women's income levels and educational backgrounds
- (E) way in which household members were counted in the 1840 census

- 238. It can be inferred from the passage that the 1840 United States census provided a count of which of the following?
- (A) Women who worked exclusively in the home
- (B) People engaged in nonfarming occupations
- (C) People engaged in social movements
- (D) Women engaged in family-run enterprises
- (E) Men engaged in agriculture
- 239. The author uses the adjective "simple" in line 5 most probably to emphasize that the
- (A) collection of census information became progressively more difficult throughout the nineteenth-century
- (B) technology for tabulating census information was rudimentary during the first half of the nineteenth century
- (C) home-based agricultural economy of the early nineteenth century was easier to analyze than the later industrial economy
- (D) economic role of women was better defined in the early nineteenth century than in the late nineteenth century
- (E) information collected by early-nineteen-century censuses was limited in its amount of detail
- 240. The passage suggests which of the following about the "women's advocates and women statisticians" mentioned in lines 27-28?
- (A) They wanted to call attention to the lack of pay for women who worked in the home.
- (B) They believed that previous census information was inadequate and did not reflect certain economic changes in the United States.
- (C) They had begun to press for changes in census-taking methods as part of their participation in the antislavery movement.
- (D) They thought that census statistics about women would be more accurate if more women were employed as census officials.
- (E) They had conducted independent studies that disputed the official statistics provided by previous United States censuses.

The modern multinational corporation is described as having originated when the owner-managers of nineteenth-century British firms carrying on international trade were replaced by teams of salaried managers organized into hierarchies. Increases in the volume of transactions in such firms are commonly believed to have necessitated this structural change. Nineteenth-century inventions like the steamship and the telegraph, by facilitating coordination of managerial activities, are described as key factors. Sixteenth-and seventeenth-century chartered trading companies, despite the international scope of their activities, are usually considered irrelevant to this discussion: the volume of their transactions is assumed to have been too low and the communications and transport of their day too primitive to make comparisons with modern multinationals interesting.

In reality, however, early trading companies successfully purchased and outfitted ships, built and operated offices and warehouses, manufactured trade goods for use abroad, maintained trading posts and production facilities overseas, procured goods for import, and

sold those goods both at home and in other countries. The large volume of transactions associated with these activities seems to have necessitated hierarchical management structures well before the advent of modern communications and transportation. For example, in the Hudson's Bay Company, each far-flung trading outpost was managed by a salaried agent, who carried out the trade with the Native Americans, managed day-to-day operations, and oversaw the post's workers and servants. One chief agent, answerable to the Court of Directors in London through the correspondence committee, was appointed with control over all of the agents on the bay.

The early trading companies did differ strikingly from modern multinationals in many respects. They depended heavily on the national governments of their home countries and thus characteristically acted abroad to promote national interests. Their top managers were typically owners with a substantial minority share, whereas senior managers' holdings in modern multinationals are usually insignificant. They operated in a pre-industrial world, grafting a system of capitalist international trade onto a pre-modern system of artisan and peasant production. Despite these differences, however, early trading companies organized effectively in remarkably modern ways and merit further study as analogues of more modern structures.

## 241. The author's main point is that

- (A) modern multinationals originated in the sixteenth and seventeenth centuries with the establishment of chartered trading companies
- (B) the success of early chartered trading companies, like that of modern multinationals, depended primarily on their ability to carry out complex operations
- (C) early chartered trading companies should be more seriously considered by scholars studying the origins of modern multinationals
- (D) scholars are quite mistaken concerning the origins of modern multinationals
- (E) the management structures of early chartered trading companies are fundamentally the same as those of modern multinationals
- 242. According to the passage, early chartered trading companies are usually described as
- (A) irrelevant to a discussion of the origins of the modern multinational corporation
- (B) interesting but ultimately too unusually to be good subjects for economic study
- (C) analogues of nineteenth-century British trading firms
- (D) rudimentary and very early forms of the modern multinational corporation
- (E) important national institutions because they existed to further the political aims of the governments of their home countries
- 243. It can be inferred from the passage that the author would characterize the activities engaged in by early chartered trading companies as being
- (A) complex enough in scope to require a substantial amount of planning and coordination on the part of management
- (B) too simple to be considered similar to those of a modern multinational corporation
- (C) as intricate as those carried out by the largest multinational corporations today
- (D) often unprofitable due to slow communications and unreliable means of transportation

- (E) hampered by the political demands imposed on them by the governments of their home countries
- 244. The author lists the various activities of early chartered trading companies in order to
- (A) analyze the various ways in which these activities contributed to changes in managemnt structure in such companies
- (B) demonstrate that the volume of business transactions of such companies exceeded that of exceeded that of earlier firms
- (C) refute the view that the volume of business undertaken by such companies was relatively low
- (D) emphasize the international scope of these companies' operations
- (E) support the argument that such firms coordinated such activities by using available means of communication and transport
- 245. With which of the following generalizations regarding management structures would the author of the passage most probably agree?
- (A) Hierarchical management structures are the most efficient management structures possible in a modern context.
- (B) Firms that routinely have a high volume of business transactions find it necessary to adopt hierarchical managemnt structures.
- (C) Hierarchical management structures cannot be successfully implemented without modern communications and transportation.
- (D) Modern multinational firms with a relatively small volume of business transactions usually do not have hierarchically organized management structures.
- (E) Companies that adopt hierarchical management structures usually do so in order to facilitate expansion into foreign trade.
- 246. The passage suggests that modern multinationals differ from early chartered trading companies in that
- (A) the top managers of modern multinationals own stock in their own companies rather than simply receiving a salary
- (B) modern multinationals depend on a system of capitalist international trade rather than on less modern trading systems
- (C) modern multinationals have operations in a number of different foreign counties rather than merely in one or two
- (D) the operations of modern multinationals are highly profitable despite the more stringent environmental and safety regulations of modern governments
- (E) the overseas operations of modern multinationals are not governed by the national interests of their home countries
- 247. The author mentions the artisan and peasant production systems of early chartered trading companies as an example of
- (A) an area of operations of these companies that was unhampered by rudimentary systems of communications and transport

- (B) a similarity that allows fruitful comparison of these companies with modern multinationals
- (C) a positive achievement of these companies in the face of various difficulties
- (D) a system that could not have emerged in the absence of management hierarchies
- (E) a characteristic that distinguishes these companies from modern multinationals
- 248. The passage suggests that one of the reasons that early chartered trading companies deserve comparison with early modern multinationals is
- (A) the degree to which they both depended on new technology
- (B) the similar nature of their management structures
- (C) similarities in their top managements' degree of ownership in the company
- (D) their common dependence on polical stability abroad in order to carry on foreign operations
- (E) their common tendency to revolutionize systems of production

In an unfinished but highly suggestive series of essays, the late Sarah Eisentein has focused attention on the evolution of working women's values from the turn of the century to the First World War. Eisenstein argues that turn-of-the-century women neither wholly accepted nor rejected what she calls the dominant "ideology of domesticity," but rather took this and other available ideologies-feminism, socialism, trade unionism-and modified or adapted them in light of their won experiences and needs. In thus maintaining that wages-work helped to produce a new "consciousness" among women, Eisenstein to some extent challenges the recent, controversial proposal by Leslie Tentler that for women the work experience only served to reinforce the attractiveness of the dominant ideology. According to the Tentler, the degrading conditions under which many female wage earners worked made them view the family as a source of power and esteem available nowhere else in their social world. In contrast, Eisenstein's study insists that wage-work had other implications for women's identities and consciousness. Most importantly, her work aims to demonstrate that wage-work enabled women to become aware of themselves as a distinct social group capable of defining their collective circumstance. Eisenstein insists that as a group working-class women were not able to come to collective consciousness of their situation until they began entering the labor force, because domestic work tended to isolate them from one another.

Unfortunately, Eisenstein's unfinished study does not develop these ideas in sufficient depth or detail, offering tantalizing hints rather than an exhaustive analysis. Whatever Eisenstein's overall plan may have been, in its current form her study suffers from the limited nature of the sources she depended on. She use the speeches and writings of reformers and labor organizers, who she acknowledges were far from representative, as the voice of the typical woman worker. And there is less than adequate attention given to the differing values of immigrant groups that made up a significant proportion of the population under investigation. While raising important questions, Eisenstein's essays do not provide definitive answer, and it remains for others to take up the challenges they offer.

249. The primary purpose of the passage is to

(A) criticize a scholar's assumptions and methodology

- (B) evaluate an approach to women's study
- (C) compare two sociological theories
- (D) correct a misconception about feminist theory
- (E) defend an unpopular ideology
- 250. It can be inferred from the passage that, in Eisenstein's view, working women at the turn of the century had which of the following attitudes toward the dominant ideology of their time?
- (A) They resented the dominant ideology as degrading.
- (B) They preferred the dominant ideology to other available ideologies.
- (C) They began to view the dominant ideology to other available ideologies.
- (D) They accepted some but not all aspects of the dominant ideology.
- (E) They believed that the dominant ideology isolated them from one another.
- 251. Which of the following best describes the organization of the first paragraph of the passage?
- (A) A chronological account of a historical development is presented, and then future developments are predicted.
- (B) A term is defined according to several different schools of thought, and then a new definition is formulated.
- (C) A theory is presented, an alternative viewpoint is introduced, and then the reasoning behind the initial theory is summarized.
- (D) A tentative proposal is made, reasons for and against it are weighed, and then a modified version of the proposal is offered.
- (E) A controversy is described, its historical implications are assessed, and then a compromise is suggested.
- 252. Which of the following would the author of the passage be most likely to approve as a continuation of Eisenstein's study?
- (A) An oral history of promotion women labor organizers
- (B) An analysis of letters and diaries written by typical female wage earners at the turn of the century
- (C) An assessment of what different social and political groups defined as the dominant ideology in the early twentieth century
- (D) A theoretical study of how socialism and feminism influenced one another at the turn of the century
- (E) A documentary account of labor's role in the introduction of women into the labor force

Neotropical coastal mangrove forests are usually "zonal," with certain mangrove species found predominantly in the seaward portion of the habitat and other mangrove species on the more landward portions of the coast. The earliest research on mangrove forests produced descriptions of species distribution from shore to land, without exploring the causes of the distributions.

The idea that zonation is caused by plant succession was first expressed by J. H. Davis in a study of Florida mangrove forests. According to Davis' scheme, the shoreline is being extended in a seaward direction because of the "land-building" role of mangroves, which, by trapping sediments over time, extend the shore. As a habitat gradually becomes more inland as the shore extends, the "land-building" species are replaced. This continuous process of accretion and succession would be interrupted only by hurricanes or storm flushings.

Recently the universal application of Davis's succession paradigm has been challenged. It appears that in areas where weak currents and weak tidal energies allow the accumulation of sediments, mangroves will follow land formation and accelerate the rate of soil accretion; succession will proceed according to Davis's scheme. But on stable coastlines, the distribution of mangrove species results in other patterns of zonation; "land building" does not occur.

To find a principle that explains the various distribution patterns, several researchers have looked to salinity and its effects on mangrove. While mangroves can develop in fresh water, they can also thrive in salinities as high as 2.5 times that of seawater. However, those mangrove species found in freshwater habitats do well only in the absence of competition, thus suggesting that salinity tolerance is a critical factor in competitive success among mangrove species. Research suggests that mangroves will normally dominate highly saline regions, although not because they require salt. Rather, they are metabolically efficient (and hence grow well) in portions of an environment whose high salinity excludes plants adapted to lower salinities. Tides create different degrees of salinity along a coastline. The characteristic mangrove species of each zone should exhibit a higher metabolic efficiency at that salinity than will any potential invader, including other species of mangrove.

- 253. The primary of the purpose of the passage is to
- (A) refute the idea that the zonation exhibited in mangrove forests is caused by adoption to salinity
- (B) describe the pattern of zonation typically found in Florida mangrove forests
- (C) argue that Davis' succession paradigm cannot be successfully applied to Florida mangrove forests
- (D) discuss hypotheses that attempt to explain the zonation of coastal mangrove forests
- (E) establish that plants that do well in saline forest environments require salt to achieve maximum metabolic efficiency
- 254. According to the passage, the earliest research on mangrove forest produced which of the following?
- (A) Data that implied random patterns of mangrove species distribution
- (B) Descriptions of species distributions suggesting zonation
- (C) Descriptions of the development of mangrove forests over time
- (D) Reclassification of species formerly thought to be identical
- (E) Data that confirmed the "land-building" role of mangroves

- 255. It can be inferred from the passage that Davis' paradigm does NOT apply to which of the following?
- (A) The shoreline of Florida mangrove forests first studies by Davis
- (B) A shoreline in an area with weak currents
- (C) A shoreline in an area with weak idal energy
- (D) A shoreline extended by "land-building" species of mangrove
- (E) A shoreline in which few sediments can accumulate
- 256. Information in the passage indicates that the author would most probably regard which of following statements as INCORRECT?
- (A) Coastal mangrove forests are usually zonal.
- (B) Hurricanes interrupt the process of accretion and succession that extends existing shorelines.
- (C) Species of plants that thrive in a saline habitat require salt to flourish.
- (D) Plants with the highest metabolic efficiency in a given habitat tend to exclude other plants from that habitat.
- (E) Shoreline in areas with weak currents and trides are more likely to be extended through the process of accumulation of sediment than are shorelines with strong currents and tides.

Modern manufacturers, who need reliable sources of materials and technologically advanced components to operate profitably, face an increasingly difficult choice between owning the producers of these items (a practice known as backward integration) and buying from independent producers. Manufacturers who integrate may reap short-term rewards, but they often restrict their future capacity for innovative product development.

Backward integration removes the need for some purchasing and marketing functions, centralizers overhead, and permits manufacturers to eliminate duplicated efforts in research and development. Where components are commodities (ferrous metals or petroleum, for example), backward integration almost certainly boosts profits. Nevertheless, because product innovation means adopting the most technologically advanced and cost-effective ways of making components, backward integration may entail a serious risk for a technologically active company-for example, a producer of sophisticated consumer electronics.

A company that decides to make rather than buy important parts can lock itself into an outdated technology. Independent suppliers may be unwilling to share innovations with assemblers with whom they are competing. Moreover, when an assembler sets out to master the technology of producing advanced components, the resulting demands on its resources may compromise its ability to assemble these components successfully into end products. Long-term contracts with suppliers can achieve many of the same cost benefits as backward integration without compromising a company's ability to innovate.

However, moving away from backward integration is not a complete solution either. Developing innovative technologies requires independent suppliers of components to invest huge sums in research and development. The resulting low profit margins on the sale of

components threaten the long-term financial stability of these firms. Because the ability of end-product assemblers to respond to market opportunities depends heavily on suppliers of components, assemblers are often forced to integrate by purchasing the suppliers of components just to keep their suppliers in business.

- 257. According to the passage, all of the following are benefits associated with backward integration EXCEPT:
- (A) improvement in the management of overhead expenses
- (B) enhancement of profit margins on sales of components
- (C) simplification of purchasing and marketing operations
- (D) reliability of a source of necessary components
- (E) elimination of unnecessary research efforts
- 258. According to passage, when an assembler buys a firm that makes some important component of the end product that the assembler produces, independent suppliers of the same component may
- (A) withhold technological innovations from the assembler
- (B) experience improved profit margins of on sales of their products
- (C) lower their prices to protect themselves from competition
- (D) suffer financial difficulties and go out of business
- (E) stop developing new versions of the component
- 259. Which of the following best describes the way the last paragraph functions in the context of the passage?
- (A) The last in a series of arguments supporting the central argument of the passage is presented.
- (B) A viewpoint is presented which qualifies one presented earlier in the passage.
- (C) Evidence is presented in support of the argument developed in the preceding paragraph.
- (D) Questions arising from the earlier discussion are identified as points of departure for further study of the topic.
- (E) A specific example is presented to illustrate the main elements of argument presented in the earlier paragraphs.
- 260. According to the passage, which of the following relationships between profits and investments in research and development holds true for producers of technologically advanced components?
- (A) Modest investments are required and the profit margins on component sales are low.
- (B) Modest investments are required but the profit margins on component sales are quite high.
- (C) Despite the huge investments that are required, the profit margins on components sales are high.
- (D) Because huge investments are required, the profit margins on component sales are low.
- (E) Long-term contractual relationships with purchasers of components ensure a high ratio of profits to investment costs.

Homeostasis, an animal's maintenance of certain internal variables within an acceptable range, particularly in extreme physical environments, has long interested biologists. The desert rat and the camel in the most water-deprived environments, and marine vertebrates in an all-water environment, encounter the same regulatory problem: maintaining adequate internal fluid balance.

For desert rats and camels, the problem is conservation of water in an environment where standing water is nonexistent, temperature is high, and humidity is low. Despite these handicaps, desert rats are able to maintain the osmotic pressure of their blood, as well as their total boy-water content, at approximately the same levels as other rats. One countermeasure is behavioral: these rats stay in burrows during the hot part of the day, thus avoiding loss of fluid through panting or sweating, which are regulatory mechanisms for maintaining internal body temperature by evaporative cooling. Also, desert rats' kidneys can excrete a urine having twice as high a salt content as sea water.

Marine vertebrates experience difficulty with their water balance because though there is no shortage of seawater to drink, they must drink a lot of it to maintain their internal fluid balance. But the excess salts from the seawater must be discharged somehow, and the kidneys of most marine vertebrates are unable to excrete a urine in which the salts are more concentrated than in seawater. Most of these animals have special salt-secreting organs outside the kidney that enable them to eliminate excess salt.

- 261. Which of the following most accurately states the purpose of the passage?
- (A) To compare two different approaches to the study of homeostasis
- (B) To summarize the findings of several studies regarding organisms' maintenance of internal variables in extreme environments
- (C) To argue for a particular hypothesis regarding various organisms' conservation of water in desert environments
- (D) To cite examples of how homeostasis is achieved by various organisms
- (E) To defend a new theory regarding the maintenance of adequate fluid balance
- 262. According to the passage, the camel maintains internal fluid balance in which of the following ways?
- I. By behavioral avoidance of exposure to conditions that lead to fluid loss
- II. By an ability to tolerate high body temperatures
- III. By reliance on stored internal fluid supplies
- (A) I only
- (B) II only
- (C) I and II only
- (D) II and III only
- (E) I, II, and III

- 263. It can be inferred from the passage that some mechanisms that regulate internal body temperature, like sweating and panting, can lead to which of the following?
- (A) A rise in the external body temperature
- (B) A drop in the body's internal fluid level
- (C) A decrease in the osmotic pressure of the blood
- (D) A decrease in the amount of renal water loss
- (E) A decrease in the urine's salt content
- 264. It can be inferred from the passage that the author characterizes the camel's kidney as "entirely unexceptional" (line 24) primarily to emphasize that it
- (A) functions much as the kidney of a rat functions
- (B) does not aid the camel in coping with the exceptional water loss resulting from the extreme conditions of its environment
- (C) does not enable the camel to excrete as much salt as do the kidneys of marine vertebrates
- (D) is similar in structure to the kidneys of most mammals living in water-deprived environments
- (E) requires the help of other organs in eliminating excess salt

In the seventeenth-century Florentine textile industry, women were employed primarily in low-paying, low-skill jobs. To explain this segregation of labor by gender, economists have relied on the useful theory of human capital. According to this theory, investment in human capital-the acquisition of difficult job-related skills-generally benefits individuals by making them eligible to engage in well-paid occupations. Women's role as child bearers, however, results in interruptions in their participation in the job market (as compared with men's) and thus reduces their opportunities to acquire training for highly skilled work. In addition, the human capital theory explains why there was a high concentration of women workers in certain low-skill jobs, such as weaving, but not in others, such as combing or carding, by positing that because of their primary responsibility in child rearing women took occupations that could be carried out in the home.

There were, however, differences in pay scales that cannot be explained by the human capital theory. For example, male construction workers were paid significantly higher wage than female taffeta weavers. The wage difference between these two low-skill occupations stems from the segregation of labor by gender: because a limited number of occupations were open to women, there was a large supply of workers in their fields, and this "overcrowding" resulted in women receiving lower wages and men receiving higher wages.

- 265. The passage suggests that combing and carding differ from weaving in that combing and carding are
- (A) low-skill jobs performed by primarily by women employees
- (B) low-skill jobs that were not performed in the home
- (C) low-skill jobs performed by both male and female employees
- (D) high-skill jobs performed outside the home
- (E) high-skill jobs performed by both male and female employees

266. Which of the following, if true, would most weaken the explanation provided by the human capital theory for women's concentration in certain occupations in seventeenth-century Florence?

- (A) Women were unlikely to work outside the home even in occupations whose house were flexible enough to allow women to accommodate domestic tasks as well as paid labor.
- (B) Parents were less likely to teach occupational skills to their daughters than they were to their sons.
- (C) Women's participation in the Florentine paid labor force grew steadily throughout the sixteenth and seventeenth centuries.
- (D) The vast majority of female weavers in the Florenine wool industry had children.
- (E) Few women worked as weavers in the Florentine silk industry, which was devoted to making cloths that required a high degree of skill to produce.

267. The author of the passage would be most likely to describe the explanation provided by the human capital theory for the high concentration of women in certain occupations in the seventeenth-century Florence textile industry as

- (A) well founded though incomplete
- (B) difficult to aciculate
- (C) plausible but poorly substantiated
- (D) seriously flawed
- (E) contrary to recent research

Maps made by non-Native Americans to depict Native American land tenure, resources and population distributions appeared almost as early as Europeans' first encounters with Native Americans and took many form: missionaries' field sketches, explorers' drawings, and surveyors' maps, as well as maps rendered in connection with treaties involving land transfers. Most existing maps of Native American lands are reconstructions that are based largely on archaeology, oral reports, and evidence gathered from observers' accounts in letter, diaries, and official reports; accordingly, the accuracy of these maps is especially dependent on the mapmakers' own interpretive abilities.

Many existing maps also reflect the 150-year role of the Bureau of Indian Affairs (BIA) in administering tribal lands. Though these maps incorporate some information gleaned directly from Native Americans, rarely has Native American cartography contributed to this official record, which has been compiled, surveyed, and authenticated by non-Native American tribes and their migrations and cultural features, as well as territoriality and contemporary trust lands, reflects the origins of the data, the mixed purposes for which the maps have been prepared, and changes both I United States government policy and in non-Native Americans' attitudes toward an understanding of Native Americans.

268. Which of the following best describes the content of the passage?

(A) A chronology of the development of different methods for mapping Native Americans

- (B) A discussion of how the mapmaking techniques of Native Americans differed from those of Europeans
- (C) An argument concerning the present-day uses to which historical maps of Native American lands are put
- (D) An argument concerning the nature of information contained in maps of Native American lands
- (E) A proposal for improving the accuracy of maps of Native American lands
- 269. The passage mentions each of the following as a factor affecting current maps of Native American lands EXCEPT
- (A) United States government policy
- (B) non-Native Americans' perspective on Native Americans
- (C) origins of the information utilized to produce the maps
- (D) changes in ways that tribal lands are used
- (E) the reason for producing the maps
- 270. The passage suggests which of the following about most existing maps of Native American lands?
- (A) They do not record the migrations of Native American tribes.
- (B) They have been preserved primarily because of their connection with treaties involving land transfers.
- (C) They tend to reflect archaeological evidence that has become outdated.
- (D) They tend to be less accurate when they are based on oral reports than when they are based on written documents.
- (E) They are not based primarily on the mapmakers' firsthand oberservations of Native American lands.
- 271. All of the following are examples of the type of evidence used in creating "Most existing maps" (line 7-8) EXCEPT
- (A) a nineteenth-century government report on population distribution of a particular tribe
- (B) taped conversations with people who lived on Native America tribal lands in the early twentieth century
- (C) aerial photographs of geological features of lands inhabited by Native Americans
- (D) findings from a recently excavated site once inhabited yb a certain Native American people
- (E) a journal kept by a non-Native American explorer who traveled in Native American territory in the early nineteenth century

(This passage was written in 1984.)

It is now possible to hear a recording of Caruso's singing that is far superior to any made during his lifetime. A decades-old way-cylinder recording of this great operatic tenor has been digitized, and the digitized signal has been processed by computer to remove the extraneous sound, or "noise," introduced by the now "ancient" wax-cylinder recording process.

Although this digital technique needs improvements, it represents a new and superior way of recording and processing sound which overcomes many of the limitations of analog recording. In analog recording systems, the original sound is represented as a continuous waveform created by variations in the sound's amplitude over time. When analog playback systems reproduce this waveform, however, they invariably introduce distortions. First, the waveform produced during playback differs somewhat from the original waveform. Second, the medium that stores the analog recording creates noise during playback which gets added to the recorded sounds.

Digital recordings, by contrast, reduce the original sound to a series of discrete numbers that represent the sound's waveform. Because the digital playback system "reads" only numbers, any noise and distortion that may accumulate during storage and manipulation of the digitized signal will have little effect: as long as the numbers remain recognizable, the original waveform will be reconstructed with little loss in quality. However, because the waveform is continuous, while its digital representation is composed of discrete numbers, it is impossible for digital systems to avoid some distortion. One kind of distortion, called "sampling error," occurs if the sound is sample (i.e., its amplitude is measured) too infrequently, so that the amplitude changes more than one quantum (the smallest change in amplitude measured by the digital system) between samplings. In effect, the sound is changing too quickly for the system to record it accurately. A second form of distortion is "quantizing error," which arises when the amplitude being measured is not a whole number of quanta, forcing the digital recorder to round off. Over the long term, these errors are random, and the noise produced (a background buzzing) is similar to analog noise except that it only occurs when recorded sounds are being reproduced.

- 272. Which of the following best describes the relationship of the first paragraph to the passage as a whole?
- (A) The first paragraph introduces a general thesis that is elaborated on in detail elsewhere in the passage.
- (B) The first paragraph presents a concrete instance of a problem that is discussed elsewhere in the passage.
- (C) The first paragraph describes a traditional process that is contrasted unfavorably with a newer process described elsewhere in the passage.
- (D) The first paragraph presents a dramatic example of the potential of a process that is described elsewhere in the passage.
- (E) The first paragraph describes a historic incident that served as the catalyst for developments described elsewhere in the passage.
- 273. According the passage, one of the ways in which analog recording systems differ from digital recording systems is that analog systems
- (A) can be used to reduce background noise in old recordings
- (B) record the original sound as a continuous waveform
- (C) distort the original sound somewhat
- (D) can avoid introducing extraneous and nonmusical sounds

- (E) can reconstruct the original waveform with little loss inequality
- 274. Which of the following statements about the numbers by which sound is represented in a digital system can be inferred from the passage?
- (A) They describe the time interval between successive sounds in a passage of music.
- (B) They model large changes in the amplitude of the initial sound with relatively poor precision.
- (C) They are slightly altered each time they are read by the playback apparatus.
- (D) They are not readily altered by distortion and noise accumulated as the digital signal is stored and manipulated.
- (E) They are stored in the recording medium in small groups that can be read simultaneously by the playback apparatus.
- 275. Which of the following can be inferred from the passage about the digital approach to the processing of sound?
- (A) It was developed in competition with wax-cylinder recording technology.
- (B) It has resulted in the first distortion-free playback system.
- (C) It has been extensively applied to nonmusical sounds.
- (D) It cannot yet process music originally recorded on analog equipment.
- (E) It is not yet capable of reprocessing old recordings in a completely distortion-free manner.

The function of capital markets is to facilitate an exchange of funds among all participants, and yet in practice we find that certain participants are not on a par with others. Members of society have varying degrees of market strength in terms of information they bring to a transaction, as well as of purchasing power and creditworthiness, as defined by lenders.

For example, within minority communities, capital markets do not properly fulfill their functions; they do not provide access to the aggregate flow of funds in the United States. The financial system does not generate the credit or investment vehicles needed for underwriting economic development in minority areas. The problem underlying this dysfunction is found in a rationing mechanism affecting both the available alternatives for investment and the amount of financial resources. This creates a distributive mechanism penalizing members of minority groups because of their socioeconomic differences from others. The existing system expresses definite socially based investment preferences that result from the previous allocation of income and that influence the allocation of resources for the present and future. The system tends to increase the inequality of income distribution. And, in the United States economy, a greater inequality of income distribution leads to a greater concentration of capital in certain types of investment.

Most traditional financial-market analysis studies ignore financial markets' deficiencies in allocation because of analysts' inherent preferences for the simple model of perfect competition. Conventional financial analysis pays limited attention to issues of market structure and dynamics, relative costs of information, and problems of income distribution. Market participants are viewed as acting as entirely independent and homogeneous

individuals with perfect foresight about capital-market behavior. Also, it is assumed that each individual in the community at large has the same access to the market and the same opportunity to transact and to express the preference appropriate to his or her individual interest. Moreover, it is assumed that transaction costs for various types of financial instruments (stocks, bonds, etc.) are equally known and equally divided among all community members.

## 276. The main point made by the passage is that

- (A) financial markets provide for an optimum allocation of resources among all competing participants by balancing supply and demand
- (B) the allocation of financial resources takes place among separate individual participants, each of whom has access to the market
- (C) the existence of certain factors adversely affecting members of minority groups shows that financial markets do not function as conventional theory says they function
- (D) investments in minority communities can be made by the use of various alternative financial instruments, such as stocks and bonds
- (E) since transaction costs for stocks, bonds, and other other financial instruments are not equally apportioned among all minority-group members, the financial market is subject to criticism
- 277. The passage states that traditional studies of the financial market overlook imbalances in the allocation of financial resources because
- (A) an optimum allocation of resources is the final result of competition among participants
- (B) those performing the studies choose an oversimplified description of the influences on competition
- (C) such imbalances do not appear in the statistics usually compiled to measure the market's behavior
- (D) the analysts who study the market are unwilling to accept criticism of their methods as biased
- (E) socioeconomic difference form the basis of a rationing mechanism that puts minority groups at a disadvantage

## 278. The author's main point is argued by

- (A) giving examples that support a conventional generalization
- (B) showing that the view opposite to the author's is self-contradictory
- (C) criticizing the presuppositions of a proposed plan
- (D) showing that omissions in a theoretical description make it inapplicable in certain cases
- (E) demonstrating that an alternative hypothesis more closely fits the data
- 279. A difference in which of the following would be an example of inequality in transaction costs as alluded to in lines 40-43?
- (A) Maximum amounts of loans extended by a bank to businesses in different areas
- (B) Fees charged to large and small investors for purchasing stocks
- (C) Prices of similar goods offered in large and small stores in an area

- (D) Stipends paid to different attorneys for preparing legal suits for damages
- (E) Exchange rates in dollars for currencies of different countries
- 280. Which of the following can be inferred about minority communities on the basis of the passage?
- (A) They provide a significant portion of the funds that become available for investment in the financial market.
- (B) They are penalized by the tax system, which increases the inequality of the distribution of income between investors and wage earners.
- (C) They do no receive the share of the amount of funds available for investment that would be expected according to traditional financial-market analysis.
- (D) They are not granted governmental subsidies to assist in underwriting the cost of economic development
- (E) They provide the same access to alternative sources of credit to finance businesses as do majority communities.
- 281. According to the passage, a questionable assumption of the conventional theory about the operation of financial markets is that
- (A) creditworthiness as determined by lenders is a factor determining market access
- (B) market structure and market dynamics depend on income distribution
- (C) a scarcity of alternative sources of funds would result from taking socioeconomic factors into consideration
- (D) those who engage in financial-market transactions are perfectly well informed about the market
- (E) inequalities in income distribution are increased by the functioning of the financial market
- 282. According to the passage, analysts have conventionally tended to view those who participate in financial market as
- (A) judging investment preferences in terms of the good of society as a whole
- (B) influencing the allocation of funds through prior ownership of certain kinds of assets
- (C) varying in market power with respect to one another
- (D) basing judgments about future events mainly on chance
- (E) having equal opportunities to engage in transactions

(The following is based on material written in 1996.)

The Montreal Protocol on Substances that Deplete the Ozone Layer, signed in 1987 by more than 150 nations, has attained its short-term goals: it has decreased the rate of increase in amounts of most ozone-depleting chemicals reaching the atmosphere and has even reduced the atmospheric levels of some of them. The projection that the ozone layer will substantially recover from ozone depletion by 2050 is based on the assumption that the protocol's regulations will be strictly followed. Yet there is considerable evidence of violations, particularly in the form of the release of ozone-depleting chlorofluorocarbons (CFC's), which are commonly used in the refrigeration, heating, and air conditioning industries. These violation reflect industry attitudes; for example, in the United States, 48 percents of respondents in a recent survey of subscribers to Air Conditioning, Heating, and Refrigeration News, and

industry trade journal, said that they did not believe that CFC's damage the ozone layer. Moreover, some in the industry apparently do not want to pay for CFC substitutes, which can run five times the cost of CFC's. Consequently, a black market in imported illicit CFC's has grown. Estimates of the contraband CFC trade range from 10,000 to 22,000 tons a year, with most of the CFC's originating in India and China, whose agreements under the Protocol still allow them to produce CFC's. In fact, the United States Customs Service reports that CFC-12 is a contraband problem second only to illicit drugs.

- 283. According to the passage, which of the following best describes most ozone-depleting chemicals in 1996 as compared to those in 1987?
- (A) The levels of such chemicals in the atmosphere had decreased.
- (B) The number of such chemicals that reached the atmosphere had declined.
- (C) The amounts of such chemicals released had increased but the amounts that reached the atmosphere had decreased.
- (D) The rate of increase in amounts of such chemicals reaching the atmosphere had decreased.
- (E) The rate at which such chemicals were being reduced in the atmosphere had slowed.
- 284. The author of the passage compares the smuggling of CFC's to the illicit drug trade most likely for which of the following reasons?
- (A) To qualify a previous claim
- (B) To emphasize the extent of a problem
- (C) To provide an explanation for an earlier assertion
- (D) To suggest that the illicit CFC trade, likely the illicit drug trade, will continue to increase
- (E) To suggest that the consequences of a relatively little-knows problem are as serious as those of a well-known one
- 285. The passage suggests which of the following about the illicit trade in CFC's?
- (A) It would cease if manufacturers in India and China stopped producing CFC's.
- (B) Most people who participate in such trade do not believe that CFC's deplete the ozone layer.
- (C) It will probably surpass illicit drugs as the largest contraband problem faced by the United States Custom Services.
- (D) It is fostered by people who do not want to pay the price of CFC substitutes.
- (E) It has grown primarily because of the expansion of the refrigeration, heating, and air-conditioning industries in foreign countries.