

# REVIEW

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THE OFFICIAL GUIDE FOR  
GMAT® REVIEW, 11TH EDITION

- The -  
**OFFICIAL**  
Guide

- Real questions from past GMAT® tests
- NEW diagnostic section helps you assess where to focus your test-prep efforts
- NEW organization of questions in order of difficulty saves study time

## 7.0 Reading Comprehension

Reading comprehension questions appear in the Verbal section of the GMAT® exam. The Verbal section uses multiple-choice questions to measure your ability to read and comprehend written material, to reason and evaluate arguments, and to correct written material to conform to standard written English. Because the Verbal section includes content from a variety of topics, you may be generally familiar with some of the material; however, neither the passages nor the questions assume knowledge of the topics discussed. Reading comprehension questions are intermingled with critical reasoning and sentence correction questions throughout the Verbal section of the exam.

You will have 75 minutes to complete the Verbal section, or an average of about 1½ minutes to answer each question. Keep in mind, however, that you will need time to read the written passages—and that time is not factored into the 1½ minute average. You should therefore plan to proceed more quickly through the reading comprehension questions in order to give yourself enough time to read the passages thoroughly.

Reading comprehension questions begin with written passages up to 350 words long. The passages discuss topics from the social sciences, humanities, the physical or biological sciences, and such business-related fields as marketing, economics, and human resource management. The passages are accompanied by questions that will ask you to interpret the passage, apply the information you gather from the reading, and make inferences (or informed assumptions) based on the reading. For these questions, you will see a split computer screen. The written passage will remain visible on the left side as each question associated with that passage appears in turn on the right side. You will see only one question at a time, however. The number of questions associated with each passage may vary.

As you move through the reading comprehension practice questions, try to determine a process that works best for you. You might begin by reading a passage carefully and thoroughly, though some test takers prefer to skim the passages the first time through, or even to read the first question before reading the passage. You may want to reread any sentences that present complicated ideas or introduce terms that are new to you. Read each question and series of answers carefully. Make sure you understand exactly what the question is asking and what the answer choices are.

If you need to, you may go back to the passage and read any parts that are relevant to answering the question. Specific portions of the passages may be highlighted in the related questions.

The following pages describe what reading comprehension questions are designed to measure; present the directions that will precede questions of this type; and describe the various question types. This chapter also provides test-taking strategies, sample questions, and detailed explanations of all the questions. The explanations further illustrate the ways in which reading comprehension questions evaluate basic reading skills.

## 7.1 What Is Measured

Reading comprehension questions measure your ability to understand, analyze, and apply information and concepts presented in written form. All questions are to be answered on the basis of what is stated or implied in the reading material, and no specific prior knowledge of the material is required.

The GMAT® reading comprehension questions evaluate your ability to do the following:

- **Understand words and statements.**  
Although the questions do not test your vocabulary (they will not ask you to define terms), they do test your ability to interpret special meanings of terms as they are used in the reading passages. The questions will also test your understanding of the English language. These questions may ask about the overall meaning of a passage.
- **Understand logical relationships between points and concepts.**  
This type of question may ask you to determine the strong and weak points of an argument or evaluate the relative importance of arguments and ideas in a passage.
- **Draw inferences from facts and statements.**  
The inference questions will ask you to consider factual statements or information presented in a reading passage and, on the basis of that information, reach conclusions.
- **Understand and follow the development of quantitative concepts as they are presented in written material.**  
This may involve the interpretation of numerical data or the use of simple arithmetic to reach conclusions about material in a passage.

There are six kinds of reading comprehension questions, each of which tests a different skill. The reading comprehension questions ask about the following areas.

### Main idea

Each passage is a unified whole—that is, the individual sentences and paragraphs support and develop one main idea or central point. Sometimes you will be told the central point in the passage itself, and sometimes it will be necessary for you to determine the central point from the overall organization or development of the passage. You may be asked in this kind of question to—

- recognize a correct restatement, or paraphrasing, of the main idea of a passage;
- identify the author's primary purpose or objective in writing the passage; or
- assign a title that summarizes, briefly and pointedly, the main idea developed in the passage.

### Supporting ideas

These questions measure your ability to comprehend the supporting ideas in a passage and differentiate them from the main idea. The questions also measure your ability to differentiate ideas that are *explicitly stated* in a passage from ideas that are *implied* by the author but that are not explicitly stated. You may be asked about—

- facts cited in a passage;
- the specific content of arguments presented by the author in support of his or her views; or
- descriptive details used to support or elaborate on the main idea.

Whereas questions about the main idea ask you to determine the meaning of a passage *as a whole*, questions about supporting ideas ask you to determine the meanings of individual sentences and paragraphs that *contribute* to the meaning of the passage as a whole. In other words, these questions ask for the main point of *one small part* of the passage.

### Inferences

These questions ask about ideas that are not explicitly stated in a passage but are *implied* by the author. Unlike questions about supporting details, which ask about information that is directly stated in a passage, inference questions ask about ideas or meanings that must be inferred from information that is directly stated. Authors can make their points in indirect ways, suggesting ideas without actually stating them. Inference questions measure your ability to understand an author's intended meaning in parts of a passage where the meaning is only suggested. These questions do not ask about meanings or implications that are remote from the passage; rather, they ask about meanings that are developed indirectly or implications that are specifically suggested by the author.

To answer these questions, you may have to—

- logically take statements made by the author one step beyond their literal meanings;
- recognize an alternative interpretation of a statement made by the author; or
- identify the intended meaning of a word used figuratively in a passage.

If a passage explicitly states an effect, for example, you may be asked to infer its cause. If the author compares two phenomena, you may be asked to infer the basis for the comparison. You may be asked to infer the characteristics of an old policy from an explicit description of a new one. When you read a passage, therefore, you should concentrate not only on the explicit meaning of the author's words, but also on the more subtle meaning implied by those words.

### Applying information to a context outside the passage itself

These questions measure your ability to discern the relationships between situations or ideas presented by the author and other situations or ideas that might parallel those in the passage. In this kind of question, you may be asked to—

- identify a hypothetical situation that is comparable to a situation presented in the passage;
- select an example that is similar to an example provided in the passage;
- apply ideas given in the passage to a situation not mentioned by the author; or
- recognize ideas that the author would probably agree or disagree with on the basis of statements made in the passage.

Unlike inference questions, application questions use ideas or situations *not* taken from the passage. Ideas and situations given in a question are *like* those given in the passage, and they parallel ideas and situations in the passage; therefore, to answer the question, you must do more than recall what you read. You must recognize the essential attributes of ideas and situations presented in the passage when they appear in different words and in an entirely new context.

### Logical structure

These questions require you to analyze and evaluate the organization and logic of a passage. They may ask you—

- how a passage is constructed—for instance, does it define, compare or contrast, present a new idea, or refute an idea?
- how the author persuades readers to accept his or her assertions;
- the reason behind the author's use of any particular supporting detail;
- to identify assumptions that the author is making;
- to assess the strengths and weaknesses of the author's arguments; or
- to recognize appropriate counterarguments.

These questions measure your ability not only to comprehend a passage but also to evaluate it critically. However, it is important for you to realize that logical structure questions do not rely on any kind of formal logic, nor do they require you to be familiar with specific terms of logic or argumentation. You can answer these questions using only the information in the passage and careful reasoning.

### About the style and tone

Style and tone questions ask about the expression of a passage and about the ideas in a passage that may be expressed through its diction—the author's choice of words. You may be asked to deduce the author's attitude to an idea, a fact, or a situation from the words that he or she uses to describe it. You may also be asked to select a word that accurately describes the tone of a passage—for instance, "critical," "questioning," "objective," or "enthusiastic."

To answer this type of question, you will have to consider the language of the passage as a whole: It takes more than one pointed, critical word to make the tone of an entire passage "critical."

Sometimes, style and tone questions ask what audience the passage was probably intended for or what type of publication it probably appeared in. Style and tone questions may apply to one small part of the passage or to the passage as a whole. To answer them, you must ask yourself what meanings are contained in the words of a passage beyond the literal meanings. Did the author use certain words because of their emotional content, or because a particular audience would expect to hear them? Remember, these questions measure your ability to discern meaning expressed by the author through his or her choice of words.

## 7.2 Test-Taking Strategies for Reading Comprehension Questions

### 1. Do not expect to be completely familiar with any of the material presented in reading comprehension passages.

You may find some passages easier to understand than others, but all passages are designed to present a challenge. If you have some familiarity with the material presented in a passage, do not let this knowledge influence your choice of answers to the questions. Answer all questions on the basis of what is *stated or implied* in the passage itself.

**2. Analyze each passage carefully, because the questions require you to have a specific and detailed understanding of the material.**

You may find it easier to do the analysis first, before moving to the questions. Or, you may find that you prefer to skim the passage the first time and read more carefully once you understand what a question asks. You may even want to read the question before reading the passage. You should choose the method most suitable for you.

**3. Focus on key words and phrases, and make every effort to avoid losing the sense of what is discussed in the passage.**

Keep the following in mind:

- Note how each fact relates to an idea or an argument.
- Note where the passage moves from one idea to the next.
- Separate main ideas from supporting ideas.
- Determine what conclusions are reached and why.

**4. Read the questions carefully, making certain that you understand what is asked.**

An answer choice that accurately restates information in the passage may be incorrect if it does not answer the question. If you need to, refer back to the passage for clarification.

**5. Read all the choices carefully.**

Never assume that you have selected the best answer without first reading all the choices.

**6. Select the choice that answers the question best in terms of the information given in the passage.**

Do not rely on outside knowledge of the material to help you answer the questions.

**7. Remember that comprehension—not speed—is the critical success factor when it comes to reading comprehension questions.**

### 7.3 The Directions

These are the directions that you will see for reading comprehension questions when you take the GMAT® test. If you read them carefully and understand them clearly before going to sit for the exam, you will not need to spend too much time reviewing them once you are at the test center and the exam is under way.

The questions in this group are based on the content of a passage. After reading the passage, choose the best answer to each question. Answer all questions following the passage on the basis of what is *stated or implied in the passage*.

## 7.4 Reading Comprehension Sample Questions

The questions in this group are based on the content of a passage. After reading the passage, choose the best answer to each question. Answer all questions following the passage on the basis of what is stated or implied in the passage.

- Line Until recently, scientists did not know of a close vertebrate analogue to the extreme form of altruism observed in eusocial insects like ants and bees, whereby individuals cooperate, sometimes even (5) sacrificing their own opportunities 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.
- (10) A naked mole rat colony, like a beehive, wasp's nest, or termite mound, is ruled by its queen, or reproducing female. Other adult female mole rats neither ovulate nor breed. The queen is the largest member of the colony, and she maintains her (15) breeding status through a mixture of behavioral and, presumably, chemical control. Queens have 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 (20) females, leading to a takeover by a new queen.
- Eusocial insect societies have rigid caste (25) systems, each insect'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 members, both male and female, seem to participate primarily in gathering food, (30) transporting nest material, and tunneling. Larger nonbreeders are active in defending the colony and perhaps in removing dirt from the tunnels. Jarvis's work has suggested that differences in growth rates may influence the length of time that an individual (35) 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*) are dominated by a pair of breeders rather than by a single breeding female. (40) 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, whereas in naked mole rat colonies subordinate females are not sexually active, and many never breed.

**Questions 1–7 refer to the passage above.**

- 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.
- The passage suggests that Jarvis's 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

3. 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 are 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.
4. 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.
5. 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.
6. 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.
7. 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

Line 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.

(5) (10) 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 (15) 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 (20) 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.

(25) 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.

**Questions 8–12 refer to the passage above.**

8. The primary purpose of the passage is to
- present several explanations for a well-known fact
  - suggest alternative methods for resolving a debate
  - argue in favor of a controversial theory
  - question the methodology used in a study
  - discuss the implications of a research finding
9. According to the passage, compared with Pleistocene carnivores in other areas, Pleistocene carnivores in the La Brea area
- included the same species, in approximately the same proportions
  - had a similar frequency of tooth fractures
  - populated the La Brea area more densely
  - consumed their prey more thoroughly
  - found it harder to obtain sufficient prey
10. According to the passage, the researchers believe that the high frequency of tooth breakage in carnivores found at La Brea was caused primarily by
- the aging process in individual carnivores
  - contact between the fossils in the pits
  - poor preservation of the fossils after they were removed from the pits
  - the impact of carnivores' teeth against the bones of their prey
  - the impact of carnivores' teeth against the bones of other carnivores during fights over kills

11. The researchers' conclusion concerning the absence of demographic bias would be most seriously undermined if it were found that
- (A) the older an 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 carnivore 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 fossil 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
12. According to the passage, 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 fossil 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 carcasses
  - (D) all Pleistocene carnivore species differed behaviorally from present-day carnivore species
  - (E) predator densities during the Pleistocene era were extremely high

Line 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 once excavated. Yet (5) 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.

(10) I would like to make an outrageous suggestion that would at one stroke provide funds for archaeology and reduce the amount of illegal digging. I would propose that scientific archaeological expeditions and governmental (15) authorities sell excavated artifacts on the open market. Such sales would provide substantial funds for the excavation and preservation of archaeological sites and the publication of results. At the same time, they would break the illegal (20) excavator's grip on the market, thereby decreasing the inducement to engage in illegal activities.

You might object that professionals excavate to acquire knowledge, not money. Moreover, ancient (25) 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 artistic merit or scientific value. But, you might reply, everything that comes out of the ground has scientific value. Here we part company. (30) Theoretically, you may be correct in claiming that every artifact has potential scientific value. Practically, you are wrong.

I refer to the thousands of pottery vessels and (35) 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 known as (40) l'melekh handles have been found in abundance —more than 4,000 examples so far.

The basements of museums are simply not (45) large enough to store the artifacts that are likely to be discovered in the future. There is not enough money even to catalog 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 sale, each could be (50) 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 (55) digging 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 (60) who excavated it?

Questions 13–15 refer to the passage above.

13. 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 cataloging duplicate artifacts
14. 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 cataloged in museum collections
15. 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 uncataloged and thus cannot be located once they are put in storage.

Line 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  
 (5) 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  
 (10) 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  
 (15) 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  
 (20) 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  
 (25) 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  
 (30) more thorough and accurate accounting of women's occupations and wages.

**Questions 16–20 refer to the passage above.**

16. 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
  
17. 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
  
18. 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

19. The author uses the adjective “simple” in line 6 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 nineteenth-century censuses was limited in its amount of detail
20. The passage suggests which of the following about the “women’s advocates and women statisticians” mentioned in lines 28–29?
- (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.

Line      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, however, the largest payoffs may go to companies that lead in developing integrated approaches for successful mass production and distribution.

(5)      Producers of the Beta format for videocassette recorders (VCRs), for example, were first to develop the VCR commercially 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 distribution, Beta producers were reluctant to form such alliances and eventually lost ground to VHS in the competition for the global VCR market.

(10)     Despite Beta's substantial technological head start and the fact that VHS was neither technically better nor cheaper than Beta, developers of VHS quickly turned a slight early lead in sales into a dominant position. Strategic alignments with

(15)     producers of prerecorded tapes reinforced the VHS advantage. The perception among consumers that prerecorded tapes were more available in VHS format further expanded VHS's share of the market. By the end of the 1980's, Beta was no longer in

(20)     production.

(25)    

(30)    

**Questions 21–26 refer to the passage above.**

21. 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
  
22. 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
  
23. According to the passage, consumers began to develop a preference for VCRs in the VHS format because they believed which of the following?
  - (A) VCRs in the VHS format were technically better than competing format VCRs.
  - (B) VCRs in the VHS format were less expensive than competing format VCRs.
  - (C) VHS was the first standard format for VCRs.
  - (D) VHS prerecorded videotapes were more available than Beta format tapes.
  - (E) VCRs in the Beta format would soon cease to be produced.

24. The author implies that one way that VHS producers won control over the VCR market was by
- carefully restricting access to VCR technology
  - giving up a slight early lead in VCR sales in order to improve long-term prospects
  - retaining a strict monopoly on the production of prerecorded videotapes
  - sharing control of the marketing of VHS format VCRs
  - sacrificing technological superiority over Beta format VCRs in order to remain competitive in price
25. The alignment of producers of VHS format VCRs with producers of prerecorded videotapes is most similar to which of the following?
- The alignment of an automobile manufacturer with another automobile manufacturer to adopt a standard design for automobile engines
  - 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
  - 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
  - The alignment of an automobile manufacturer with its dealers to adopt a plan to improve automobile design
  - 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
26. Which of the following best describes the relation of the first paragraph to the passage as a whole?
- It makes a general observation to be exemplified.
  - It outlines a process to be analyzed.
  - It poses a question to be answered.
  - It advances an argument to be disputed.
  - It introduces conflicting arguments to be reconciled.

Line 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 (5) 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 (10) 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 (15) 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 (20) 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 (25) 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 (30) 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.

**Questions 27–31 refer to the passage above.**

27. The primary purpose of the passage is to
  - (A) advocate more effective strategies for encouraging the development of high-technology enterprises in the United States
  - (B) contrast the incentives for economic development 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
  
28. 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.
  
29. 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

30. 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.
31. 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 industries.
  - (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.

Line In 1988 services moved ahead of manufacturing as the main product of the United States economy. But what is meant by “services”? Some economists define a service as something (5) that is produced and consumed simultaneously: for example, a haircut. The broader, classical definition is that a service is an intangible something that cannot be touched or stored. Yet electric utilities can store energy, and computer programmers (10) save information electronically. Thus, the classical definition is hard to sustain.

The United States government’s definition is more practical: services are the residual category that includes everything that is not agriculture or (15) industry. Under this definition, “services” includes activities as diverse as engineering and driving a bus. However, besides lacking a strong conceptual framework, this definition fails to recognize the distinction between service industries and service (20) occupations. It categorizes workers based on their company’s final product rather than on the actual work the employees perform. Thus, the many service workers employed by manufacturers—bookkeepers or janitors, for example—would (25) fall under the industrial rather than the services category. Such ambiguities reveal the arbitrariness of this definition and suggest that, although practical for government purposes, it does not accurately reflect the composition of the current (30) United States economy.

**Questions 32–36 refer to the passage above.**

32. The author of the passage is primarily concerned with
  - (A) discussing research data underlying several definitions
  - (B) arguing for the adoption of a particular definition
  - (C) exploring definitions of a concept
  - (D) comparing the advantages of several definitions
  - (E) clarifying some ambiguous definitions
  
33. In comparing the United States government’s definition of services with the classical definition, the author suggests that the classical definition is
  - (A) more pragmatic
  - (B) more difficult to apply
  - (C) less ambiguous
  - (D) more widely used
  - (E) more arbitrary
  
34. The passage suggests which of the following about service workers in the United States?
  - (A) The number of service workers may be underestimated by the definition of services used by the government.
  - (B) There were fewer service workers than agricultural workers before 1988.
  - (C) The number of service workers was almost equal to the number of workers employed in manufacturing until 1988.
  - (D) Most service workers are employed in service occupations rather than in service industries.
  - (E) Most service workers are employed in occupations where they provide services that do not fall under the classical definition of services.

35. The author of the passage mentions which of the following as one disadvantage of the United States government's definition of services?
- (A) It is less useful than the other definitions mentioned in the passage.
  - (B) It is narrower in scope than the other definitions mentioned in the passage.
  - (C) It is based on the final product produced rather than on the type of work performed.
  - (D) It does not recognize the diversity of occupations within the service industries.
  - (E) It misclassifies many workers who are employed in service industries.
36. The author refers to "service workers employed by manufacturers" (lines 23–24) primarily in order to point out
- (A) a type of worker not covered by the United States government's system of classifying occupations
  - (B) a flaw in the United States government's definition of services
  - (C) a factor that has influenced the growth of the service economy in the United States
  - (D) a type of worker who is classified on the basis of work performed rather than on the basis of the company's final product
  - (E) the diversity of the workers who are referred to as service workers

Line     Although numbers of animals in a given region may fluctuate from year to year, the fluctuations are often temporary and, over long periods, trivial. Scientists have advanced three theories of population control to account for this relative constancy.

(5)     The first theory attributes a relatively constant population to periodic climatic catastrophes that decimate populations with such frequency as to prevent them from exceeding some particular limit.

(10)    In the case of small organisms with short life cycles, climatic changes need not be catastrophic: normal seasonal changes in photoperiod (daily amount of sunlight), for example, can govern population growth. This theory — the density-independent view — asserts that climatic factors exert the same regulatory effect on population regardless of the number of individuals in a region.

(15)    A second theory argues that population growth is primarily density-dependent — that is, the rate of growth of a population in a region decreases as the number of animals increases. The mechanisms that manage regulation may vary. For example, as numbers increase, the food supply would probably diminish, which would increase mortality.

(20)    In addition, as Lotka and Volterra have shown, predators can find prey more easily in high-density populations. Other regulators include physiological control mechanisms: for example, Christian and Davis have demonstrated how the crowding that

(25)    results from a rise in numbers may bring about hormonal changes in the pituitary and adrenal glands that in turn may regulate population by lowering sexual activity and inhibiting sexual maturation. There is evidence that these effects

(30)    may persist for three generations in the absence of the original provocation. One challenge for density-dependent theorists is to develop models that would allow the precise prediction of the effects of crowding.

(35)    A third theory, proposed by Wynne-Edwards and termed “epideictic,” argues that organisms have evolved a “code” in the form of social or epideictic behavior displays, such as winter-roosting aggregations or group vocalizing; such codes

(40)    provide organisms with information on population size in a region so that they can, if necessary, exercise reproductive restraint. However, Wynne-Edwards’s theory, linking animal social behavior and

(45)    population control, has been challenged, with some justification, by several studies.

**Questions 37–42 refer to the passage above.**

37. The primary purpose of the passage is to
- argue against those scientists who maintain that animal populations tend to fluctuate
  - compare and contrast the density-dependent and epideictic theories of population control
  - provide examples of some of the ways in which animals exercise reproductive restraint to control their own numbers
  - suggest that theories of population control that concentrate on the social behavior of animals are more open to debate than are theories that do not
  - summarize a number of scientific theories that attempt to explain why animal populations do not exceed certain limits
38. It can be inferred from the passage that proponents of the density-dependent theory of population control have not yet been able to
- use their theory to explain the population growth of organisms with short life cycles
  - reproduce the results of the study of Christian and Davis
  - explain adequately why the numbers of a population can increase as the population's rate of growth decreases
  - make sufficiently accurate predictions about the effects of crowding
  - demonstrate how predator populations are themselves regulated

39. Which of the following, if true, would best support the density-dependent theory of population control as it is described in the passage?
- (A) As the number of foxes in Minnesota decreases, the growth rate of this population of foxes begins to increase.
- (B) As the number of woodpeckers in Vermont decreases, the growth rate of this population of woodpeckers also begins to decrease.
- (C) As the number of prairie dogs in Oklahoma increases, the growth rate of this population of prairie dogs also begins to increase.
- (D) After the number of beavers in Tennessee decreases, the number of predators of these beavers begins to increase.
- (E) After the number of eagles in Montana decreases, the food supply of this population of eagles also begins to decrease.
40. According to the Wynne-Edwards theory as it is described in the passage, epideictic behavior displays serve the function of
- (A) determining roosting aggregations
- (B) locating food
- (C) attracting predators
- (D) regulating sexual activity
- (E) triggering hormonal changes
41. The challenge posed to the Wynne-Edwards theory by several studies is regarded by the author with
- (A) complete indifference
- (B) qualified acceptance
- (C) skeptical amusement
- (D) perplexed astonishment
- (E) agitated dismay
42. Which of the following statements would provide the most logical continuation of the final paragraph of the passage?
- (A) Thus Wynne-Edwards's theory raises serious questions about the constancy of animal population in a region.
- (B) Because Wynne-Edwards's theory is able to explain more kinds of animal behavior than is the density-dependent theory, epideictic explanations of population regulation are now widely accepted.
- (C) The results of one study, for instance, have suggested that group vocalizing is more often used to defend territory than to provide information about population density.
- (D) Some of these studies have, in fact, worked out a systematic and complex code of social behavior that can regulate population size.
- (E) One study, for example, has demonstrated that birds are more likely to use winter-roosting aggregations than group vocalizing in order to provide information on population size.

Line In recent years, teachers of introductory courses in Asian American studies have been facing a dilemma nonexistent a few decades ago, when hardly any texts in that field were available. Today, (5) excellent anthologies and other introductory texts exist, and books on individual Asian American nationality groups and on general issues important for Asian Americans are published almost weekly. Even professors who are experts in the field find (10) it difficult to decide which of these to assign to students; nonexperts who teach in related areas and are looking for writings for and by Asian Americans to include in survey courses are in an even worse position.

(15) A complicating factor has been the continuing lack of specialized one-volume reference works on Asian Americans, such as biographical dictionaries or desktop encyclopedias. Such works would enable students taking Asian American studies (20) courses (and professors in related fields) to look up basic information on Asian American individuals, institutions, history, and culture without having to wade through mountains of primary source material. In addition, given such works, Asian (25) American studies professors might feel more free to include more challenging Asian American material in their introductory reading lists, since good reference works allow students to acquire on their own the background information necessary to interpret (30) difficult or unfamiliar material.

**Questions 43–47 refer to the passage above.**

43. The author of the passage is primarily concerned with doing which of the following?
- (A) Recommending a methodology  
(B) Describing a course of study  
(C) Discussing a problem  
(D) Evaluating a past course of action  
(E) Responding to a criticism
44. The “dilemma” mentioned in line 3 can best be characterized as being caused by the necessity to make a choice when faced with a
- (A) lack of acceptable alternatives  
(B) lack of strict standards for evaluating alternatives  
(C) preponderance of bad alternatives as compared to good  
(D) multitude of different alternatives  
(E) large number of alternatives that are nearly identical in content

45. The passage suggests that the factor mentioned in lines 15–18 complicates professors' attempts to construct introductory reading lists for courses in Asian American studies in which of the following ways?
- (A) By making it difficult for professors to identify primary source material and to obtain standard information on Asian American history and culture
- (B) By preventing professors from identifying excellent anthologies and introductory texts in the field that are both recent and understandable to students
- (C) By preventing professors from adequately evaluating the quality of the numerous texts currently being published in the field
- (D) By making it more necessary for professors to select readings for their courses that are not too challenging for students unfamiliar with Asian American history and culture
- (E) By making it more likely that the readings professors assign to students in their courses will be drawn solely from primary sources
46. The passage implies that which of the following was true of introductory courses in Asian American studies a few decades ago?
- (A) The range of different textbooks that could be assigned for such courses was extremely limited.
- (B) The texts assigned as readings in such courses were often not very challenging for students.
- (C) Students often complained about the texts assigned to them in such courses.
- (D) Such courses were offered only at schools whose libraries were rich in primary sources.
- (E) Such courses were the only means then available by which people in the United States could acquire knowledge of the field.

47. According to the passage, the existence of good one-volume reference works about Asian Americans could result in
- (A) increased agreement among professors of Asian American studies regarding the quality of the sources available in their field
- (B) an increase in the number of students signing up for introductory courses in Asian American studies
- (C) increased accuracy in writings that concern Asian American history and culture
- (D) the use of introductory texts about Asian American history and culture in courses outside the field of Asian American studies
- (E) the inclusion of a wider range of Asian American material in introductory reading lists in Asian American studies

Line 1 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 wages 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.

**Questions 48–50 refer to the passage above.**

48. The passage suggests that combing and carding differ from weaving in that combing and carding are
- low-skill jobs performed primarily by women employees
  - low-skill jobs that were not performed in the home
  - low-skill jobs performed by both male and female employees
  - high-skill jobs performed outside the home
  - high-skill jobs performed by both male and female employees
49. 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?
- Women were unlikely to work outside the home even in occupations whose hours were flexible enough to allow women to accommodate domestic tasks as well as paid labor.
  - Parents were less likely to teach occupational skills to their daughters than they were to their sons.
  - Women's participation in the Florentine paid labor force grew steadily throughout the sixteenth and seventeenth centuries.
  - The vast majority of female weavers in the Florentine wool industry had children.
  - 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.

50. 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 Florentine textile industry as
- (A) well founded though incomplete
  - (B) difficult to articulate
  - (C) plausible but poorly substantiated
  - (D) seriously flawed
  - (E) contrary to recent research

(This passage was adapted from an article written in 1992.)

Line Some observers have attributed the dramatic growth in temporary employment that occurred in the United States during the 1980's to increased participation in the workforce by certain groups, such as first-time or reentering workers, who supposedly prefer such arrangements. However, statistical analyses reveal that demographic changes in the workforce did not correlate with variations in the total number of temporary workers. Instead, these analyses suggest that factors affecting employers account for the rise in temporary employment. One factor is product demand: temporary employment is favored by employers who are adapting to fluctuating demand for products while at the same time seeking to reduce overall labor costs. Another factor is labor's reduced bargaining strength, which allows employers more control over the terms of employment. Given the analyses, which reveal that growth in temporary employment now far exceeds the level explainable by recent workforce entry rates of groups said to prefer temporary jobs, firms should be discouraged from creating excessive numbers of temporary positions. Government policymakers should consider mandating benefit coverage for temporary employees, promoting pay equity between temporary and permanent workers, assisting labor unions in organizing temporary workers, and encouraging firms to assign temporary jobs primarily to employees who explicitly indicate that preference.

**Questions 51–57 refer to the passage above.**

51. The primary purpose of the passage is to
  - (A) present the results of statistical analyses and propose further studies
  - (B) explain a recent development and predict its eventual consequences
  - (C) identify the reasons for a trend and recommend measures to address it
  - (D) outline several theories about a phenomenon and advocate one of them
  - (E) describe the potential consequences of implementing a new policy and argue in favor of that policy
  
52. According to the passage, which of the following is true of the "factors affecting employers" that are mentioned in lines 9–10?
  - (A) Most experts cite them as having initiated the growth in temporary employment that occurred during the 1980's.
  - (B) They may account for the increase in the total number of temporary workers during the 1980's.
  - (C) They were less important than demographic change in accounting for the increase of temporary employment during the 1980's.
  - (D) They included a sharp increase in the cost of labor during the 1980's.
  - (E) They are more difficult to account for than are other factors involved in the growth of temporary employment during the 1980's.

53. The passage suggests which of the following about the use of temporary employment by firms during the 1980's?
- (A) It enabled firms to deal with fluctuating product demand far more efficiently than they did before the 1980's.  
(B) It increased as a result of increased participation in the workforce by certain demographic groups.  
(C) It was discouraged by government-mandated policies.  
(D) It was a response to preferences indicated by certain employees for more flexible working arrangements.  
(E) It increased partly as a result of workers' reduced ability to control the terms of their employment.
54. The passage suggests which of the following about the workers who took temporary jobs during the 1980's?
- (A) Their jobs frequently led to permanent positions within firms.  
(B) They constituted a less demographically diverse group than has been suggested.  
(C) They were occasionally involved in actions organized by labor unions.  
(D) Their pay declined during the decade in comparison with the pay of permanent employees.  
(E) They did not necessarily prefer temporary employment to permanent employment.
55. The first sentence in the passage suggests that the observers mentioned in line 1 would be most likely to predict which of the following?
- (A) That the number of new temporary positions would decline as fewer workers who preferred temporary employment entered the workforce  
(B) That the total number of temporary positions would increase as fewer workers were able to find permanent positions  
(C) That employers would have less control over the terms of workers' employment as workers increased their bargaining strength  
(D) That more workers would be hired for temporary positions as product demand increased  
(E) That the number of workers taking temporary positions would increase as more workers in any given demographic group entered the workforce
56. In the context of the passage, the word "excessive" (line 23) most closely corresponds to which of the following phrases?
- (A) Far more than can be justified by worker preferences  
(B) Far more than can be explained by fluctuations in product demand  
(C) Far more than can be beneficial to the success of the firms themselves  
(D) Far more than can be accounted for by an expanding national economy  
(E) Far more than can be attributed to increases in the total number of people in the workforce
57. The passage mentions each of the following as an appropriate kind of governmental action EXCEPT
- (A) getting firms to offer temporary employment primarily to a certain group of people  
(B) encouraging equitable pay for temporary and permanent employees  
(C) facilitating the organization of temporary workers by labor unions  
(D) establishing guidelines on the proportion of temporary workers that firms should employ  
(E) ensuring that temporary workers obtain benefits from their employers

Line 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  
(5) Trade Commission (ITC) 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 (10) “less than fair value.” Even when no unfair practices 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 (15) for import relief has hurt more companies than it has helped. As corporations begin to function globally, they develop an intricate web of marketing, production, and research relationships. The complexity of these relationships makes it unlikely that a system (20) of import relief laws will meet the strategic needs of all the units under the same parent company.

Internationalization increases the danger that (25) 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 makes the same product in the United States. If the competitor can prove injury from the imports—and that the United (30) States company received a subsidy from a foreign government to build its plant abroad—the United States company’s products will be uncompetitive in the United States, since they would be subject to duties.

(35) Perhaps the most brazen case occurred when the ITC investigated allegations that Canadian companies were injuring the United States salt industry by dumping rock salt, used to de-ice roads. The bizarre aspect of the complaint was that a (40) 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 Dutch conglomerate, while the “Canadian” (45) companies included a subsidiary of a Chicago firm that was the second-largest domestic producer of rock salt.

**Questions 58–63 refer to the passage above.**

58. The passage is chiefly concerned with
- arguing against the increased internationalization of United States corporations
  - warning that the application of laws affecting trade frequently has unintended consequences
  - demonstrating that foreign-based firms receive more subsidies from their governments than United States firms receive from the United States government
  - advocating the use of trade restrictions for “dumped” products but not for other imports
  - recommending a uniform method for handling claims of unfair trade practices
59. 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 foreign competitor has received a subsidy from a foreign government.
  - A foreign competitor has substantially increased the volume of products shipped to the United States.
  - A foreign competitor is selling products in the United States at less than fair market value.
  - The company requesting import relief has been injured by the sale of imports in the United States.
  - The company requesting import relief has been barred from exporting products to the country of its foreign competitor.

60. The last paragraph performs which of the following functions in the passage?
- (A) It summarizes the discussion thus far and suggests additional areas for 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.
61. 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.
62. 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.
63. 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.

Line 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 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 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 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, 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 to quickly locate unseen prey suggests, according to the researchers, that the anteaters were using their electroreceptors to locate the nesting chambers.

**Questions 64–69 refer to the passage above.**

64. According to the passage, which of the following is a characteristic that distinguishes electroreceptors from tactile receptors?
- The manner in which electroreceptors respond to electrical stimuli
  - The tendency of electroreceptors to be found in clusters
  - The unusual locations in which electroreceptors are found in most species
  - The amount of electrical stimulation required to excite electroreceptors
  - The amount of nervous activity transmitted to the brain by electroreceptors when they are excited
65. Which of the following can be inferred about the experiment described in the first paragraph?
- Researchers had difficulty verifying the existence of electroreceptors in the anteater because electroreceptors respond to such a narrow range of electrical field strengths.
  - Researchers found that the level of nervous activity in the anteater's brain increased dramatically as the strength of the electrical stimulus was increased.
  - Researchers found that some areas of the anteater's snout were not sensitive to a weak electrical stimulus.
  - Researchers found that the anteater's tactile receptors were more easily excited by a strong electrical stimulus than were the electroreceptors.
  - Researchers tested small areas of the anteater's snout in order to ensure that only electroreceptors were responding to the stimulus.

66. The author of the passage most probably discusses the function of tactile receptors (lines 8–13) in order to
- eliminate an alternative explanation of anteaters' response to electrical stimuli
  - highlight a type of sensory organ that has a function identical to that of electroreceptors
  - point out a serious complication in the research on electroreceptors in anteaters
  - suggest that tactile receptors assist electroreceptors in the detection of electrical signals
  - introduce a factor that was not addressed in the research on electroreceptors in anteaters
67. Which of the following can be inferred about anteaters from the behavioral experiment mentioned in the second paragraph?
- They are unable to distinguish between stimuli detected by their electroreceptors and stimuli detected by their tactile receptors.
  - They are unable to distinguish between the electrical signals emanating from termite mounds and those emanating from ant nests.
  - They can be trained to recognize consistently the presence of a particular stimulus.
  - They react more readily to strong than to weak stimuli.
  - They are more efficient at detecting stimuli in a controlled environment than in a natural environment.
68. 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?
- The event they observed provides conclusive evidence that anteaters use their electroreceptors to locate unseen prey.
  - The event they observed was atypical and may not reflect the usual hunting practices of anteaters.
  - It is likely that the anteaters located the ants' nesting chambers without the assistance of electroreceptors.
  - Anteaters possess a very simple sensory system for use in locating prey.
  - The speed with which the anteaters located their prey is greater than what might be expected on the basis of chance alone.
69. Which of the following, if true, would most strengthen the hypothesis mentioned in lines 21–23?
- Researchers are able to train anteaters to break into an underground chamber that is emitting a strong electrical signal.
  - Researchers are able to detect a weak electrical signal emanating from the nesting chamber of an ant colony.
  - Anteaters are observed taking increasingly longer amounts of time to locate the nesting chambers of ants.
  - Anteaters are observed using various angles to break into nests of ants.
  - Anteaters are observed using the same angle used with nests of ants to break into the nests of other types of prey.

Line (1) Milankovitch proposed in the early twentieth century that the ice ages were caused by variations in the Earth's orbit around the Sun. For some time this theory was considered untestable, (5) largely because there was no sufficiently 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 (10) existed at various times in the Earth's past. A recent discovery 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 (15) all the oxygen in water is oxygen 16, but a few molecules out of every thousand incorporate the heavier isotope 18. When an ice age begins, the continental ice sheets grow, steadily reducing the amount of water evaporated from the ocean that (20) will eventually return to it. Because heavier isotopes tend to be left behind when water evaporates from the ocean surfaces, the remaining ocean water becomes progressively enriched in oxygen 18. The degree of enrichment can be determined (25) by analyzing ocean sediments of the period, because these sediments are composed of calcium carbonate shells of marine organisms, shells that were constructed with oxygen atoms drawn from the surrounding ocean. The higher the ratio of (30) 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 isotope record has two advantages. First, it is (35) 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 these advantages, (40) 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 (45) thousand years 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 (50) factors, 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 (55) calculated and dated by applying Newton's laws 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. (60)

**Questions 70–75 refer to the passage above.**

70. In the passage, the author is primarily interested in
- suggesting an alternative to an outdated research method
  - introducing a new research method that calls an accepted theory into question
  - emphasizing the instability of data gathered from the application of a new scientific method
  - presenting a theory and describing a new method to test that theory
  - initiating a debate about a widely accepted theory
71. The author of the passage would be most likely to agree with which of the following statements about the Milankovitch theory?
- It is the only possible explanation for the ice ages.
  - It is too limited to provide a plausible explanation for the ice ages, despite recent research findings.
  - It cannot be tested and confirmed until further research on volcanic activity is done.
  - It is one plausible explanation, though not the only one, for the ice ages.
  - It is not a plausible explanation for the ice ages, although it has opened up promising possibilities for future research.

72. 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.
73. 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.
74. 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
75. 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

Line It was once believed that the brain was independent of metabolic processes occurring elsewhere in the body. In recent studies, however, we have discovered that the production and release (5) in brain neurons of the neurotransmitter serotonin (neurotransmitters are compounds that neurons use to transmit signals to other cells) depend directly on the food that the body processes.

Our first studies sought to determine whether (10) the increase in serotonin observed in rats given a large injection of the amino acid tryptophan might also occur after rats ate meals that change tryptophan levels in the blood. We found that, immediately after the rats began to eat, parallel (15) elevations occurred in blood tryptophan, brain tryptophan, and brain serotonin levels. These findings suggested that the production and release of serotonin in brain neurons were normally coupled with blood-tryptophan increases. In later studies we (20) found that injecting insulin into a rat's bloodstream also caused parallel elevations in blood and brain tryptophan levels and in serotonin levels. We then decided to see whether the secretion of the animal's own insulin similarly affected serotonin production.

(25) We gave the rats a carbohydrate-containing meal that we knew would elicit insulin secretion. As we had hypothesized, the blood tryptophan level and the concentrations of tryptophan and of serotonin in the brain increased after the meal.

(30) Surprisingly, however, when we added a large amount of protein to the meal, brain tryptophan and serotonin levels fell. Since protein contains tryptophan, why should it depress brain tryptophan levels? The answer lies in the mechanism that (35) provides blood tryptophan to the brain cells. This same mechanism also provides the brain cells with other amino acids found in protein, such as tyrosine and leucine. The consumption of protein increases blood concentration of the other amino acids much (40) more, proportionately, than it does that of tryptophan. The more protein is in a meal, the lower is the ratio of the resulting blood-tryptophan concentration to the concentration of competing amino acids, and the more slowly is tryptophan provided to the brain.

(45) Thus the more protein in a meal, the less serotonin subsequently produced and released.

**Questions 76–84 refer to the passage above.**

76. Which of the following titles best summarizes the contents of the passage?
- (A) Neurotransmitters: Their Crucial Function in Cellular Communication  
 (B) Diet and Survival: An Old Relationship Reexamined  
 (C) The Blood Supply and the Brain: A Reciprocal Dependence  
 (D) Amino Acids and Neurotransmitters: The Connection between Serotonin Levels and Tyrosine  
 (E) The Effects of Food Intake on the Production and Release of Serotonin: Some Recent Findings
77. According to the passage, the speed with which tryptophan is provided to the brain cells of a rat varies with the
- (A) amount of protein present in a meal  
 (B) concentration of serotonin in the brain before a meal  
 (C) concentration of leucine in the blood rather than on the concentration of tyrosine in the blood after a meal  
 (D) concentration of tryptophan in the brain before a meal  
 (E) number of serotonin-containing neurons
78. According to the passage, when the authors began their first studies, they were aware that
- (A) they would eventually need to design experiments that involved feeding rats high concentrations of protein  
 (B) tryptophan levels in the blood were difficult to monitor with accuracy  
 (C) serotonin levels increased after rats were fed meals rich in tryptophan  
 (D) there were many neurotransmitters whose production was dependent on metabolic processes elsewhere in the body  
 (E) serotonin levels increased after rats were injected with a large amount of tryptophan

79. According to the passage, one reason that the authors gave rats carbohydrates was to
- (A) depress the rats' tryptophan levels
  - (B) prevent the rats from contracting diseases
  - (C) cause the rats to produce insulin
  - (D) demonstrate that insulin is the most important substance secreted by the body
  - (E) compare the effect of carbohydrates with the effect of proteins
80. According to the passage, the more protein a rat consumes, the lower will be the
- (A) ratio of the rat's blood-tryptophan concentration to the amount of serotonin produced and released in the rat's brain
  - (B) ratio of the rat's blood-tryptophan concentration to the concentration in its blood of the other amino acids contained in the protein
  - (C) ratio of the rat's blood-tyrosine concentration to its blood-leucine concentration
  - (D) number of neurotransmitters of any kind that the rat will produce and release
  - (E) number of amino acids the rat's blood will contain
81. The authors' discussion of the "mechanism that provides blood tryptophan to the brain cells" (lines 34–35) is meant to
- (A) stimulate further research studies
  - (B) summarize an area of scientific investigation
  - (C) help explain why a particular research finding was obtained
  - (D) provide supporting evidence for a controversial scientific theory
  - (E) refute the conclusions of a previously mentioned research study
82. According to the passage, an injection of insulin was most similar in its effect on rats to an injection of
- (A) tyrosine
  - (B) leucine
  - (C) blood
  - (D) tryptophan
  - (E) protein
83. It can be inferred from the passage that which of the following would be LEAST likely to be a potential source of aid to a patient who was not adequately producing and releasing serotonin?
- (A) Meals consisting almost exclusively of protein
  - (B) Meals consisting almost exclusively of carbohydrates
  - (C) Meals that would elicit insulin secretion
  - (D) Meals that had very low concentrations of tyrosine
  - (E) Meals that had very low concentrations of leucine
84. It can be inferred from the passage that the authors initially held which of the following hypotheses about what would happen when they fed large amounts of protein to rats?
- (A) The rats' brain serotonin levels would not decrease.
  - (B) The rats' brain tryptophan levels would decrease.
  - (C) The rats' tyrosine levels would increase less quickly than would their leucine levels.
  - (D) The rats would produce more insulin.
  - (E) The rats would produce neurotransmitters other than serotonin.

Line In 1955 Maurice Duverger published *The Political Role of Women*, the first behavioralist, multinational comparison of women's electoral participation ever to use election data and survey data together. His study analyzed women's patterns of voting, political candidacy, and political activism in four European countries during the first half of the twentieth century. Duverger's research findings were that women voted somewhat less frequently than men (the difference narrowing the longer women had the vote) and were slightly more conservative.

Duverger's work set an early standard for the sensitive analysis of women's electoral activities. Moreover, to Duverger's credit, he placed his findings in the context of many of the historical processes that had shaped these activities. However, since these contexts have changed over time, Duverger's approach has proved more durable than his actual findings. In addition, Duverger's discussion of his findings was hampered by his failure to consider certain specific factors important to women's electoral participation at the time he collected his data: the influence of political regimes, the effects of economic factors, and the ramifications of political and social relations between women and men. Given this failure, Duverger's study foreshadowed the enduring limitations of the behavioralist approach to the multinational study of women's political participation.

**Questions 85–90 refer to the passage above.**

85. The primary purpose of the passage is to
- evaluate a research study
  - summarize the history of a research area
  - report new research findings
  - reinterpret old research findings
  - reconcile conflicting research findings
86. According to the passage, Duverger's study was unique in 1955 in that it
- included both election data and survey data
  - gathered data from sources never before used in political studies
  - included an analysis of historical processes
  - examined the influence on voting behavior of the relationships between women and men
  - analyzed not only voting and political candidacy but also other political activities
87. Which of the following characteristics of a country is most clearly an example of a factor that Duverger, as described in the passage, failed to consider in his study?
- A large population
  - A predominantly Protestant population
  - A predominantly urban population
  - A one-party government
  - Location in the heart of Europe

88. The author implies that Duverger's actual findings are
- (A) limited because they focus on only four countries
  - (B) inaccurate in their description of the four countries in the early 1950's
  - (C) out-of-date in that they are inapplicable in the four countries today
  - (D) flawed because they are based on unsound data
  - (E) biased by Duverger's political beliefs
89. The passage implies that, in comparing four European countries, Duverger found that the voting rates of women and men were most different in the country in which women
- (A) were most politically active
  - (B) ran for office most often
  - (C) held the most conservative political views
  - (D) had the most egalitarian relations with men
  - (E) had possessed the right to vote for the shortest time
90. The author implies that some behavioralist research involving the multinational study of women's political participation that followed Duverger's study did which of the following?
- (A) Ignored Duverger's approach
  - (B) Suffered from faults similar to those in Duverger's study
  - (C) Focused on political activism
  - (D) Focused on the influences of political regimes
  - (E) Focused on the political and social relations between women and men

Line 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, less than a century later, in (5) 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 (10) in juxtaposing these two incidents is the subject of Viviana 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 (15) way gradually to the present-day notion of the "useless" child who, though producing no income for, and indeed extremely costly to, its parents, is yet considered emotionally "priceless." Well established among segments of the middle and (20) upper classes by the mid-1800's, this new view of childhood spread throughout society in the late nineteenth and early twentieth centuries as reformers introduced child labor regulations and compulsory education laws predicated in part on (25) the assumption that a child's emotional value made child labor taboo.

For Zelizer the origins of this transformation were many and complex. The gradual erosion (30) 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 explicit bonds of love rather than duty) were all factors critical in changing the assessment of children's (35) worth. Yet "expulsion of children from the 'cash nexus,' . . . although clearly shaped by profound changes in the economic, occupational, and family structures," Zelizer maintains, "was also part of a cultural process of 'sacralization' of children's (40) 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 (45) what 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 traditionally 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 (50) view all human behavior as directed primarily by 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 (55) more valuable in emotional terms, she argues, their "exchange" or "surrender" value on the market, that is, the conversion of their intangible worth into cash terms, became much greater.

**Questions 91–96 refer to the passage above.**

91. 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
92. 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

93. 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?
- The cash value of children rose during the nineteenth century because parents began to increase their emotional investment in the upbringing of their children.
  - The cash value of children rose during the nineteenth century because their expected earnings over the course of a lifetime increased greatly.
  - 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.
  - 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.
  - The cash value of children rose during the nineteenth century because of changes in the way negligence law assessed damages in accidental-death cases.
94. The primary purpose of the passage is to
- review the literature in a new academic subfield
  - present the central thesis of a recent book
  - contrast two approaches to analyzing historical change
  - refute a traditional explanation of a social phenomenon
  - encourage further work on a neglected historical topic

95. 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?
- The average size of families grew considerably.
  - The percentage of families involved in industrial work declined dramatically.
  - Family members became more emotionally bonded to one another.
  - Family members spent an increasing amount of time working with each other.
  - Family members became more economically dependent on each other.
96. Zelizer refers to all of the following as important influences in changing the assessment of children's worth EXCEPT changes in
- the mortality rate
  - the nature of industry
  - the nature of the family
  - attitudes toward reform movements
  - attitudes toward the marketplace