

**DECEMBER 2009
FULL-LENGTH LSAT**

Time—35 minutes

23 Questions

Directions: Each group of questions in this section is based on a set of conditions. In answering some of the questions, it may be useful to draw a rough diagram. Choose the response that most accurately and completely answers each question and blacken the corresponding space on your answer sheet.

Questions 1–5

A law firm has seven departments—family law, health law, injury law, labor law, probate, securities, and tax law. The firm is to occupy a building with three floors—the bottom floor, the middle floor, and the top floor. Each floor can accommodate up to four departments, and no department is to be on more than one floor. Assignment of departments to floors is subject to the following constraints:

Probate must be on the same floor as tax law.

Health law must be on the floor immediately above injury law.

Labor law must occupy an entire floor by itself.

1. Which one of the following could be the assignment of departments to floors?
 - (A) top floor: labor law
middle floor: injury law, probate, tax law
bottom floor: family law, health law, securities
 - (B) top floor: family law, health law, probate
middle floor: injury law, securities, tax law
bottom floor: labor law
 - (C) top floor: health law, probate, tax law
middle floor: family law, injury law, securities
bottom floor: labor law
 - (D) top floor: health law, probate, tax law
middle floor: injury law, securities
bottom floor: family law, labor law
 - (E) top floor: family law, health law, probate, tax law
middle floor: labor law
bottom floor: injury law, securities
2. If injury law and probate are both assigned to the middle floor, which one of the following could be true?
 - (A) Family law is assigned to the middle floor.
 - (B) Health law is assigned to the middle floor.
 - (C) Labor law is assigned to the top floor.
 - (D) Securities is assigned to the bottom floor.
 - (E) Tax law is assigned to the top floor.
3. Which one of the following CANNOT be the assignment for any of the floors?
 - (A) family law, health law, probate, and tax law
 - (B) family law, injury law, probate, and tax law
 - (C) family law, probate, securities, and tax law
 - (D) health law, probate, securities, and tax law
 - (E) injury law, probate, securities, and tax law
4. If family law is assigned to the same floor as securities, which one of the following could be true?
 - (A) Exactly one department is assigned to the middle floor.
 - (B) Exactly four departments are assigned to the middle floor.
 - (C) Exactly two departments are assigned to the bottom floor.
 - (D) Exactly three departments are assigned to the bottom floor.
 - (E) Exactly four departments are assigned to the bottom floor.
5. If probate is assigned to the middle floor along with exactly two other departments, then which one of the following must be true?
 - (A) Family law is assigned to the floor immediately above health law.
 - (B) Family law is assigned to the floor immediately below labor law.
 - (C) Family law is assigned to the same floor as securities.
 - (D) Probate is assigned to the same floor as health law.
 - (E) Probate is assigned to the same floor as injury law.

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Questions 6–10

A museum curator is arranging seven photographs—*Fence*, *Gardenias*, *Hibiscus*, *Irises*, *Katydid*, *Lotus*, and *Magnolia*—on a gallery wall in accordance with the photographer’s requirements. The photographs are to be hung along the wall in a row, in seven positions sequentially numbered from first to seventh. The photographer’s requirements are as follows:

Gardenias must be immediately before *Katydid*.

Hibiscus must be somewhere before *Katydid* but cannot be the first photograph.

Irises and *Lotus* must be next to one another.

Magnolia must be one of the first three photographs.

Fence must be either first or seventh.

6. Which one of the following could be the positions, from first to seventh, in which the photographs are hung?
 - (A) *Fence*, *Hibiscus*, *Gardenias*, *Magnolia*, *Katydid*, *Irises*, *Lotus*
 - (B) *Hibiscus*, *Magnolia*, *Gardenias*, *Katydid*, *Irises*, *Lotus*, *Fence*
 - (C) *Irises*, *Lotus*, *Magnolia*, *Hibiscus*, *Gardenias*, *Katydid*, *Fence*
 - (D) *Lotus*, *Magnolia*, *Irises*, *Hibiscus*, *Gardenias*, *Katydid*, *Fence*
 - (E) *Magnolia*, *Fence*, *Hibiscus*, *Gardenias*, *Katydid*, *Lotus*, *Irises*
7. If *Irises* is immediately before *Gardenias*, which one of the following could be true?
 - (A) *Gardenias* is fourth.
 - (B) *Hibiscus* is fourth.
 - (C) *Irises* is third.
 - (D) *Lotus* is second.
 - (E) *Magnolia* is third.

8. Where each photograph is hung is fully determined if which one of the following is true?
 - (A) *Gardenias* is fourth.
 - (B) *Hibiscus* is second.
 - (C) *Irises* is second.
 - (D) *Lotus* is first.
 - (E) *Magnolia* is third.
9. If *Magnolia* is second, which one of the following CANNOT be true?
 - (A) *Hibiscus* is third.
 - (B) *Hibiscus* is fourth.
 - (C) *Hibiscus* is fifth.
 - (D) *Gardenias* is fourth.
 - (E) *Gardenias* is sixth.
10. Which one of the following, if substituted for the condition that *Hibiscus* must be hung somewhere before *Katydid* but cannot be the first photograph, would have the same effect in determining the arrangement of the photographs?
 - (A) If *Fence* is seventh, *Hibiscus* is second.
 - (B) *Gardenias* is somewhere after *Hibiscus*, and either *Fence* or *Magnolia* is first.
 - (C) *Hibiscus* must be somewhere between the first and sixth photographs.
 - (D) Unless *Hibiscus* is second, it must be somewhere between *Magnolia* and *Gardenias*.
 - (E) *Katydid* is somewhere after *Hibiscus*, which must be somewhere after *Fence*.

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Questions 11–16

Alicia will take exactly four courses this semester. She must choose from the following seven courses—Geography, Japanese, Macroeconomics, Psychology, Russian, Statistics (which is offered twice, once each on Tuesdays at 9 A.M. and 3 P.M.), and World History. No one is allowed to take any course more than once per semester. Because of university requirements and time conflicts, the following restrictions apply to Alicia’s choices:

She must take Japanese if she does not take Russian.
 She cannot take Japanese if she takes Macroeconomics.
 She cannot take World History if she takes Statistics at 9 A.M.
 She must take Statistics at 9 A.M. if she takes Psychology.
 She must take either Geography or World History but cannot take both.

11. Which one of the following could be the list of the four courses Alicia takes?
 (A) Geography, Japanese, Psychology, Russian
 (B) Geography, Macroeconomics, Psychology, Statistics
 (C) Geography, Japanese, Macroeconomics, Russian
 (D) Geography, Psychology, Russian, Statistics
 (E) Macroeconomics, Psychology, Russian, Statistics
12. Which one of the following could be an accurate list of three of the courses Alicia takes?
 (A) Geography, Statistics, World History
 (B) Japanese, Macroeconomics, Statistics
 (C) Japanese, Psychology, World History
 (D) Psychology, Russian, World History
 (E) Russian, Statistics, World History
13. Which courses Alicia takes is fully determined if she takes Russian and which one of the following?
 (A) World History
 (B) Statistics
 (C) Psychology
 (D) Macroeconomics
 (E) Japanese
14. Alicia could take Statistics at either of the available times if she takes which one of the following pairs of courses?
 (A) Geography and Japanese
 (B) Geography and Psychology
 (C) Japanese and World History
 (D) Psychology and Russian
 (E) Russian and World History
15. If Alicia takes Statistics at 3 P.M. and Geography, then which one of the following courses must she also take?
 (A) Japanese
 (B) Macroeconomics
 (C) Psychology
 (D) Russian
 (E) World History
16. Suppose that Alicia must take Statistics if she takes Psychology, but rather than being restricted to taking Statistics at 9 A.M. she can take it at either 9 A.M. or at 3 P.M. If all the other restrictions remain the same, then which one of the following could be the list of the four courses Alicia takes?
 (A) Psychology, Russian, Statistics, World History
 (B) Macroeconomics, Psychology, Statistics, World History
 (C) Macroeconomics, Psychology, Russian, World History
 (D) Geography, Psychology, Russian, World History
 (E) Geography, Macroeconomics, Russian, World History

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Questions 17–23

An organization will hold its first six annual meetings in exactly six cities—Los Angeles, Montreal, New York, Toronto, Vancouver, and Washington—using each city only once. The following conditions govern the order in which the cities are used:

Los Angeles must be used in some year after the year in which Toronto is used.

Vancouver must be used either immediately before or immediately after Washington.

The meeting in Toronto must be separated from the meeting in Montreal by meetings in exactly two other cities.

The meeting in Vancouver must be separated from the meeting in Los Angeles by meetings in exactly two other cities.

17. Which one of the following lists the cities in an order in which they could be used for the meetings, from the first year through the sixth?

- (A) Toronto, Vancouver, Washington, Montreal, Los Angeles, New York
- (B) Vancouver, Washington, Montreal, Los Angeles, New York, Toronto
- (C) Vancouver, Washington, Toronto, New York, Los Angeles, Montreal
- (D) Washington, Montreal, Vancouver, New York, Toronto, Los Angeles
- (E) Washington, Vancouver, New York, Toronto, Los Angeles, Montreal

18. Which one of the following must be true?

- (A) Toronto is used in the first year.
- (B) Montreal is used in the fourth year.
- (C) Toronto is used at some time before Montreal is used.
- (D) New York is used either immediately before or immediately after Vancouver.
- (E) The meeting in New York is separated from the meeting in Washington by meetings in exactly two other cities.

19. There is exactly one possible order in which the cities are used if which one of the following is true?

- (A) Los Angeles is used in the fifth year.
- (B) Montreal is used in the sixth year.
- (C) New York is used in the fifth year.
- (D) Vancouver is used in the first year.
- (E) Washington is used in the second year.

20. Which one of the following is a complete and accurate list of the years in which Washington could be used?

- (A) 1, 3, 5
- (B) 2, 3, 4, 5
- (C) 2, 3, 4, 6
- (D) 1, 2, 4, 6
- (E) 1, 2, 3, 4, 5, 6

21. If Montreal is used in the first year, which one of the following CANNOT be true?

- (A) Washington is used in the third year.
- (B) Vancouver is used in the third year.
- (C) Toronto is used in the fourth year.
- (D) New York is used in the fifth year.
- (E) Los Angeles is used in the third year.

22. Which one of the following could be true?

- (A) Los Angeles is used in the first year.
- (B) New York is used in the second year.
- (C) Montreal is used in the third year.
- (D) Vancouver is used in the fourth year.
- (E) Toronto is used in the sixth year.

23. Which one of the following must be false?

- (A) Los Angeles is used either immediately before or immediately after New York.
- (B) Los Angeles is used either immediately before or immediately after Washington.
- (C) New York is used either immediately before or immediately after Toronto.
- (D) Toronto is used either immediately before or immediately after Vancouver.
- (E) Toronto is used either immediately before or immediately after Washington.

S T O P

IF YOU FINISH BEFORE TIME IS CALLED, YOU MAY CHECK YOUR WORK ON THIS SECTION ONLY.
DO NOT WORK ON ANY OTHER SECTION IN THE TEST.

Time—35 minutes

26 Questions

Directions: The questions in this section are based on the reasoning contained in brief statements or passages. For some questions, more than one of the choices could conceivably answer the question. However, you are to choose the **best** answer; that is, the response that most accurately and completely answers the question. You should not make assumptions that are by commonsense standards implausible, superfluous, or incompatible with the passage. After you have chosen the best answer, blacken the corresponding space on your answer sheet.

1. On the Caribbean island of Guadeloupe, a researcher examined 35 patients with atypical Parkinson's disease and compared their eating habits to those of 65 healthy adults. She found that all of the patients with atypical Parkinson's regularly ate the tropical fruits soursop, custard apple, and pomme cannelle, whereas only 10 of the healthy adults regularly ate these fruits. From this, she concluded that eating these fruits causes atypical Parkinson's.

Which one of the following, if true, most strengthens the researcher's reasoning?

- (A) For many of the atypical Parkinson's patients, their symptoms stopped getting worse, and in some cases actually abated, when they stopped eating soursop, custard apple, and pomme cannelle.
- (B) Of the healthy adults who did not regularly eat soursop, custard apple, and pomme cannelle, most had eaten each of these fruits on at least one occasion.
- (C) In areas other than Guadeloupe, many people who have never eaten soursop, custard apple, and pomme cannelle have contracted atypical Parkinson's.
- (D) The 10 healthy adults who regularly ate soursop, custard apple, and pomme cannelle ate significantly greater quantities of these fruits, on average, than did the 35 atypical Parkinson's patients.
- (E) Soursop, custard apple, and pomme cannelle contain essential vitamins not contained in any other food that is commonly eaten by residents of Guadeloupe.

2. Price: A corporation's primary responsibility is to its shareholders. They are its most important constituency because they take the greatest risks. If the corporation goes bankrupt, they lose their investment.

Albrecht: Shareholders typically have diversified investment portfolios. For employees, however, the well-being of the corporation for which they have chosen to work represents their very livelihood. The corporation's primary responsibility should be to them.

On the basis of their statements, Price and Albrecht are committed to disagreeing about whether

- (A) corporations have a responsibility to their shareholders
- (B) corporations are responsible for the welfare of their employees
- (C) means should be provided for a corporation's investors to recoup their losses if the corporation goes bankrupt
- (D) a corporation's shareholders have more at stake than anyone else does in the corporation's success or failure
- (E) the livelihood of some of the shareholders depends on the corporation's success

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3. Despite the enormous number of transactions processed daily by banks nowadays, if a customer's bank account is accidentally credited with a large sum of money, it is extremely unlikely that the error will not be detected by the bank's internal audit procedures.

Which one of the following, if true, most strongly supports the claim above?

- (A) Banks initially process all transactions using one set of computer programs, but then use a different set of programs to double-check large transactions.
- (B) Recent changes in banking standards require that customers present identification both when making deposits into their accounts and when making withdrawals from their accounts.
- (C) Banks are required by law to send each customer a monthly statement detailing every transaction of the previous month.
- (D) The average ratio of bank auditors to customer accounts has slowly increased over the past 100 years.
- (E) The development of sophisticated security software has rendered bank computers nearly impervious to tampering by computer hackers.

4. Scientist: While studying centuries-old Antarctic ice deposits, I found that several years of relatively severe atmospheric pollution in the 1500s coincided with a period of relatively high global temperatures. So it is clear in this case that atmospheric pollution did cause global temperatures to rise.

The reasoning in the scientist's argument is most vulnerable to criticism on the grounds that the argument

- (A) presumes, without providing justification, that a rise in global temperatures is harmful
- (B) draws a general conclusion based on a sample that is likely to be unrepresentative
- (C) inappropriately generalizes from facts about a specific period of time to a universal claim
- (D) takes for granted that the method used for gathering data was reliable
- (E) infers, merely from a claim that two phenomena are associated, that one phenomenon causes the other

5. Gilbert: This food label is mistaken. It says that these cookies contain only natural ingredients, but they contain alphahydroxy acids that are chemically synthesized by the cookie company at their plant.

Sabina: The label is not mistaken. After all, alphahydroxy acids also are found occurring naturally in sugarcane.

Which one of the following, if true, would most strengthen Sabina's argument?

- (A) The cookie company has recently dropped alphahydroxy acids from its cookie ingredients.
- (B) Not all chemicals that are part of the manufacturing process are ingredients of the cookies.
- (C) The label was printed before the cookie company decided to switch from sugarcane alphahydroxy acids to synthesized ones.
- (D) Many other foods advertising all natural ingredients also contain some ingredients that are chemically synthesized.
- (E) All substances except those that do not occur naturally in any source are considered natural.

6. Although Jaaks is a respected historian, her negative review of Yancey's new book on the history of coastal fisheries in the region rests on a mistake. Jaaks's review argues that the book inaccurately portrays the lives of fishery workers. However, Yancey used the same research methods in this book as in her other histories, which have been very popular. This book is also very popular in local bookstores.

The reasoning above is flawed in that it

- (A) relies on the word of a scholar who is unqualified in the area in question
- (B) attacks the person making the claim at issue rather than addressing the claim
- (C) takes for granted that the popularity of a book is evidence of its accuracy
- (D) bases a general conclusion on a sample that is likely to be unrepresentative
- (E) presumes, without providing justification, that the methods used by Yancey are the only methods that would produce accurate results

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7. Columnist: It has been noted that attending a live musical performance is a richer experience than is listening to recorded music. Some say that this is merely because we do not see the performers when we listen to recorded music. However, there must be some other reason, for there is relatively little difference between listening to someone read a story over the radio and listening to someone in the same room read a story.

Which one of the following most accurately expresses the role played in the argument by the observation that attending a live musical performance is a richer experience than is listening to recorded music?

- (A) It is what the columnist's argument purports to show.
 - (B) It is the reason given for the claim that the columnist's argument is attempting to undermine.
 - (C) It is what the columnist's argument purports to explain.
 - (D) It is what the columnist's argument purports to refute.
 - (E) It is what the position that the columnist tries to undermine is purported to explain.
8. Though ice cream is an excellent source of calcium, dairy farmers report that during the past ten years there has been a sharp decline in ice cream sales. And during the same period, sales of cheddar cheese have nearly doubled. Therefore, more and more people must be choosing to increase their intake of calcium by eating cheddar cheese rather than ice cream.

The reasoning above is most vulnerable to criticism on the grounds that it

- (A) fails to produce statistical evidence supporting the dairy farmers' claims
- (B) fails to consider alternative explanations of the decline in sales of ice cream
- (C) relies solely on the testimony of individuals who are likely to be biased
- (D) presumes, without providing justification, that ice cream is a better source of calcium than is cheddar cheese
- (E) presumes, without providing justification, that people who eat cheddar cheese never eat ice cream

9. No member of the Richardson Theater Group is both a performer and an administrator. Since Leon and Marta are both members of the Richardson Theater Group but neither is an administrator, it follows that both are performers.

Which one of the following arguments displays a flawed pattern of reasoning most similar to that in the argument above?

- (A) Not all of the employees of the Tedenco Company are salaried employees of that company. Since Mr. López and Ms. Allen are both salaried employees of the Tedenco Company, it follows that they are not the only employees of the Tedenco Company.
 - (B) No employee of the Tedenco Company is both an accountant and a corporate attorney. Since Ms. Walsh is both an accountant and a corporate attorney, it follows that she is not an employee of the Tedenco Company.
 - (C) No company can have its headquarters in both Canada and Mexico. Since neither the Dumone Company nor the Tedenco Company has its headquarters in Mexico, it follows that both have their headquarters in Canada.
 - (D) No corporate attorney represents both the Dumone Company and the Tedenco Company. Since Ms. Tseung is a corporate attorney who represents the Dumone Company, it follows that she does not also represent the Tedenco Company.
 - (E) No member of the board of directors of the Dumone Company is also a member of the board of directors of the Tedenco Company. Since neither company has fewer than five board members, it follows that both boards together include at least ten members.
10. Chemical fertilizers not only create potential health hazards, they also destroy earthworms, which are highly beneficial to soil. For this reason alone the use of chemical fertilizers should be avoided. The castings earthworms leave behind are much richer than the soil they ingest, thus making a garden rich in earthworms much more fertile than a garden without them.

Which one of the following most accurately expresses the main conclusion of the argument?

- (A) Earthworms are highly beneficial to soil.
- (B) Chemical fertilizers destroy earthworms.
- (C) The castings that earthworms leave behind are much richer than the soil they ingest.
- (D) The use of chemical fertilizers should be avoided.
- (E) A garden rich in earthworms is much more fertile than a garden that is devoid of earthworms.

11. Medical research has established that the Beta Diet is healthier than a more conventional diet. But on average, people who have followed the Beta Diet for several decades are much more likely to be in poor health than are people whose diet is more conventional.

Which one of the following, if true, most helps to resolve the apparent conflict between the two statements above?

- (A) On average, people who have followed the Beta Diet for their entire lives are much more likely to have a variety of healthful habits than are people whose diet is more conventional.
- (B) The Beta Diet is used primarily as a treatment for a condition that adversely affects overall health.
- (C) People of average health who switch from a conventional diet to the Beta Diet generally find that their health improves substantially as a result.
- (D) The Beta Diet provides dramatic health benefits for some people but only minor benefits for others.
- (E) Recent research has shown that a diet high in fruits, vegetables, and skim milk is even healthier than the Beta Diet.

12. A theoretical framework facilitates conceptual organization of material and fruitful expansions of research. Many historians argue that historical analysis is therefore done best within a theoretical framework. But the past is too complex for all of its main trends to be captured within a theoretical framework. Therefore, _____.

Which one of the following most logically completes the argument?

- (A) there is no benefit ever to be gained in recommending to historians that they place their work within a theoretical framework
- (B) theoretical frameworks are less useful in history than they are in any other discipline
- (C) even the best historical analysis done within a theoretical framework fails to capture all of history's main trends
- (D) the value of theoretical work in extending research has been emphasized by historians who recommend doing historical analysis within a theoretical framework
- (E) there is no difference between historical analysis that is placed within a theoretical framework and historical analysis that is not

13. Bethany: Psychologists have discovered a technique for replacing one's nightmares with pleasant dreams, and have successfully taught it to adults suffering from chronic nightmares. Studies have found that nightmare-prone children are especially likely to suffer from nightmares as adults. Thus, psychologists should direct efforts toward identifying nightmare-prone children so that these children can be taught the technique for replacing their nightmares with pleasant dreams.

Which one of the following principles, if valid, most helps to justify drawing the conclusion in Bethany's argument?

- (A) Psychologists should make an effort to determine why certain children are especially prone to nightmares while other children are not.
- (B) Any psychological technique that can be successfully taught to a child can also be successfully taught to an adult.
- (C) Psychologists should do everything they can to minimize the number of adults troubled by chronic nightmares.
- (D) Identifying nightmare-prone children is generally more difficult than teaching adults the technique for replacing nightmares with pleasant dreams.
- (E) Psychologists should not teach the technique for replacing nightmares with pleasant dreams to children who are unlikely to suffer from nightmares as adults.

14. At one sitting, a typical doughnut eater consumes 4 doughnuts containing a total of 680 calories and 40 grams of fat. The typical bagel eater consumes exactly one bagel, at 500 calories and one or two grams of fat per sitting, though the addition of spreads can raise calorie and fat content to the four-doughnut range. Thus, as far as total calorie content is concerned, there is very little difference between what a typical doughnut eater and a typical bagel eater each consumes at one sitting.

The argument depends on assuming which one of the following?

- (A) The calories and fat in bagels have the same health impact on bagel eaters as the calories and fat in doughnuts have on doughnut eaters.
- (B) Most bagel eaters are not fully aware of the calorie and fat content of a bagel.
- (C) Eating bagels instead of eating doughnuts provides no real health benefit.
- (D) The typical doughnut eater does not add to doughnuts any substances that increase the total caloric intake.
- (E) Most typical doughnut eaters are not also bagel eaters.

15. Bowers: A few theorists hold the extreme view that society could flourish in a condition of anarchy, the absence of government. Some of these theorists have even produced interesting arguments to support that position. One writer, for example, contends that anarchy is laissez-faire capitalism taken to its logical extreme. But these theorists' views ignore the fundamental principle of social philosophy—that an acceptable social philosophy must promote peace and order. Any social philosophy that countenances chaos, i.e., anarchy, accordingly deserves no further attention.

The reasoning in Bowers's argument is most vulnerable to criticism on the grounds that

- (A) the meaning of a key term shifts illicitly during the course of the argument
 - (B) the argument fails to show that laissez-faire capitalism deserves to be rejected as a social philosophy
 - (C) the truth or falsity of a view is not determined by the number of people who accept it as true
 - (D) the argument presumes, without providing justification, that any peaceful society will flourish
 - (E) it is unreasonable to reject a view merely because it can be described as extreme
16. All poets, aside from those who write only epigrams, have wit. All lyrical composers are poets. Azriel does not write epigrams, though he is a lyrical composer. So Azriel has wit.
- The pattern of reasoning in which one of the following is most similar to that in the argument above?
- (A) All squeeze toys, except those designed for cats, are safe for infants. All squeeze toys are sold prewrapped. This item is not designed for cats, and it is sold prewrapped. So it must be safe for infants.
 - (B) Aside from the dogcatcher and the police chief, all of the politicians in town are lawyers. All of the politicians in town have websites. Sal is a politician in town, but is neither the dogcatcher nor the police chief. Since Sal is a politician in town he must have a website.
 - (C) All visas are assigned by this office, except for those that are issued through diplomatic channels. All visit permits are visas. Thus, the visit permit in Will's passport was assigned through diplomatic channels.
 - (D) All of this store's winter garments are on sale, except for the designer clothes. None of the shirts in this store are designer clothes. This shirt, therefore, since it is on sale, is a winter garment.
 - (E) All residential buildings are subject to the original fire code, except for those built last year. All townhouses are residential buildings. Bloom House was not built last year, and it is a townhouse, so it is subject to the original fire code.

17. Teachers should not do anything to cause their students to lose respect for them. And students can sense when someone is trying to hide his or her ignorance. Therefore, a teacher who does not know the answer to a question a student has asked should not pretend to know the answer.

The conclusion is properly drawn if which one of the following is assumed?

- (A) A teacher cannot be effective unless he or she retains the respect of students.
 - (B) Students respect honesty above all else.
 - (C) Students' respect for a teacher is independent of the amount of knowledge they attribute to that teacher.
 - (D) Teachers are able to tell when students respect them.
 - (E) Students lose respect for teachers whenever they sense that the teachers are trying to hide their ignorance.
18. Contrary to Malthus's arguments, human food-producing capacity has increased more rapidly than human population. Yet, agricultural advances often compromise biological diversity. Therefore, Malthus's prediction that insufficient food will doom humanity to war, pestilence, and famine will likely be proven correct in the future, because a lack of biodiversity will eventually erode our capacity to produce food.
- The statement that human food-producing capacity has increased more rapidly than human population plays which one of the following roles in the argument?
- (A) It is a hypothesis the argument provides reasons for believing to be presently false.
 - (B) It is a part of the evidence used in the argument to support the conclusion that a well-known view is misguided.
 - (C) It is an observation that the argument suggests actually supports Malthus's position.
 - (D) It is a general fact that the argument offers reason to believe will eventually change.
 - (E) It is a hypothesis that, according to the argument, is accepted on the basis of inadequate evidence.

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19. At a gathering at which bankers, athletes, and lawyers are present, all of the bankers are athletes and none of the lawyers are bankers.

If the statements above are true, which one of the following statements must also be true?

- (A) All of the athletes are bankers.
- (B) Some of the lawyers are not athletes.
- (C) Some of the athletes are not lawyers.
- (D) All of the bankers are lawyers.
- (E) None of the lawyers are athletes.

20. Quality control investigator: Upon testing samples of products from our supplier that were sent by our field inspectors from various manufacturing locations, our laboratory discovered that over 20 percent of the samples were defective. Since our supplier is contractually required to limit the rate of defects among items it manufactures for us to below 5 percent, it has violated its contract with us.

The reasoning in the quality control investigator's argument is flawed in that the argument

- (A) bases its conclusion on too small a sample of items tested by the laboratory
- (B) presumes, without providing justification, that the field inspectors were just as likely to choose a defective item for testing as they were to choose a nondefective item
- (C) overlooks the possibility that a few of the manufacturing sites are responsible for most of the defective items
- (D) overlooks the possibility that the field inspectors tend to choose items for testing that they suspect are defective
- (E) presumes, without providing justification, that the field inspectors made an equal number of visits to each of the various manufacturing sites of the supplier

21. Essayist: When the first prehistoric migrations of humans from Asia to North America took place, the small bands of new arrivals encountered many species of animals that would be extinct only 2,000 years later. Since it is implausible that hunting by these small bands of humans could have had such an effect, and since disease-causing microorganisms not native to North America were undoubtedly borne by the new arrivals as well as by the animals that followed them, these microorganisms were probably the crucial factor that accounts for the extinctions.

Which one of the following, if true, most weakens the essayist's argument?

- (A) Animals weakened by disease are not only less able to avoid hunters but are also less able to avoid their other predators.
- (B) Human beings generally have a substantial degree of biological immunity to the diseases carried by other species.
- (C) Very few species of North American animals not hunted by the new arrivals from Asia were extinct 2,000 years after the first migrations.
- (D) Individual humans and animals can carry a disease-causing microorganism without themselves suffering from the disease.
- (E) Some species of North American animals became extinct more than 2,000 years after the arrival in North America of the first prehistoric human migrants from Asia.

22. A recent study confirms that nutritious breakfasts make workers more productive. For one month, workers at Plant A received free nutritious breakfasts every day before work, while workers in Plant B did not. The productivity of Plant A's workers increased, while that of Plant B's workers did not.

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

- (A) Few workers in Plant B consumed nutritious breakfasts during the month of the study.
- (B) Workers in the study from Plant A and Plant B started work at the same time of day.
- (C) During the month before the study, workers at Plant A and Plant B were equally productive.
- (D) Workers from Plant A took fewer vacation days per capita during the month than did workers from Plant B.
- (E) Workers in Plant B were more productive during the month of the study than were workers from Plant A.

23. This year a flood devastated a small river town. Hollyville, also a river town, responded with an outpouring of aid in which a majority of its residents participated, a proportion that far surpassed that of a few years ago when Hollyville sent aid to victims of a highly publicized earthquake. This year’s circumstances were a reversal of last year’s, when Hollyville itself was the scene of a deadly tornado and so the recipient rather than the supplier of emergency aid.

The situation described above most closely conforms to which one of the following generalizations?

- (A) People are more likely to aid people they know than they are to aid strangers.
- (B) Those who have received aid are more likely to be in favor of government relief programs than are those who have not.
- (C) The amount of aid that victims of a disaster receive is unrelated to the extent to which the disaster is publicized.
- (D) Once a disaster has struck them, people are more likely to aid others in need than they were before the disaster.
- (E) People are more likely to aid those who have experienced a hardship similar to one they themselves have experienced than to aid those who have experienced a dissimilar hardship.

24. Market analyst: According to my research, 59 percent of consumers anticipate paying off their credit card balances in full before interest charges start to accrue, intending to use the cards only to avoid carrying cash and writing checks. This research also suggests that in trying to win business from their competitors, credit card companies tend to concentrate on improving the services their customers are the most interested in. Therefore, my research would lead us to expect that _____.

Which one of the following most logically completes the market analyst’s argument?

- (A) most consumers would be indifferent about which company’s credit card they use
- (B) credit card companies would not make the interest rates they charge on cards the main selling point
- (C) most consumers would prefer paying interest on credit card debts over borrowing money from banks
- (D) most consumers would ignore the length of time a credit card company allows to pay the balance due before interest accrues
- (E) the most intense competition among credit card companies would be over the number of places that they can get to accept their credit card

25. About 3 billion years ago, the Sun was only 80 percent as luminous as it is currently. Such conditions today would result in the freezing of Earth's oceans, but geological evidence shows that water rather than ice filled the oceans at that time. Heat is trapped within Earth's atmosphere through the presence of carbon dioxide, which, like methane, is a "greenhouse gas." Only if the level of greenhouse gases were higher 3 billion years ago than it is today would Earth have retained enough heat to keep the oceans from freezing. It is likely, therefore, that the level of carbon dioxide in the atmosphere was significantly higher then than it is today.

Which one of the following, if true, weakens the argument?

- (A) Sufficient heat to keep the oceans liquid 3 billion years ago could not have been generated through geological processes such as volcanic activity.
- (B) Geological studies indicate that there is much less methane in Earth's atmosphere today than there was 3 billion years ago.
- (C) Geological evidence indicates that the oceans contained greater amounts of dissolved minerals 3 billion years ago, but not enough to alter their freezing points significantly.
- (D) The increase in the Sun's luminosity over the past 3 billion years roughly coincided with an increasing complexity of life forms on Earth.
- (E) Because the distance from Earth to the Sun has not changed significantly over the last 3 billion years, the increase in the Sun's luminosity has resulted in more radiation reaching Earth.

26. Commentator: For a free market to function properly, each prospective buyer of an item must be able to contact a large number of independent prospective sellers and compare the prices charged for the item to what the item is worth. Thus, despite advertised prices and written estimates available from many of its individual businesses, the auto repair industry does not constitute a properly functioning free market.

The conclusion of the commentator's argument follows logically if which one of the following is assumed?

- (A) People do not usually shop for auto repairs but instead take their autos to their regular repair shop out of habit.
- (B) Some persons who are shopping for auto repairs cannot determine what these repairs are worth.
- (C) Not all auto repair shops give customers written estimates.
- (D) Many auto repair shops charge more for auto repairs than these repairs are worth.
- (E) Because it is not regulated, the auto repair industry does not have standardized prices.

S T O P

IF YOU FINISH BEFORE TIME IS CALLED, YOU MAY CHECK YOUR WORK ON THIS SECTION ONLY.
DO NOT WORK ON ANY OTHER SECTION IN THE TEST.

Time—35 minutes

25 Questions

Directions: The questions in this section are based on the reasoning contained in brief statements or passages. For some questions, more than one of the choices could conceivably answer the question. However, you are to choose the **best** answer; that is, the response that most accurately and completely answers the question. You should not make assumptions that are by commonsense standards implausible, superfluous, or incompatible with the passage. After you have chosen the best answer, blacken the corresponding space on your answer sheet.

1. New technologies that promise to extend life and decrease pain involve innovations that require extensive scientific research. Therefore, investment in such technologies is very risky, because innovations requiring extensive scientific research also require large amounts of capital but are unlikely to provide any financial return. Nonetheless, some people are willing to invest in these new technologies.

Which one of the following, if true, most helps to explain why some people are willing to invest in new technologies that promise to extend life and decrease pain?

- (A) When investments in new technologies that promise to extend life and decrease pain do provide financial return, they generally return many times the original investment, which is much more than the return on safer investments.
- (B) A large variety of new technologies that promise to extend life and decrease pain have been developed in the last decade.
- (C) The development of certain new technologies other than those that promise to extend life and decrease pain is also very risky, because these technologies require large amounts of capital but are unlikely to provide any financial return.
- (D) Some investments that initially seem likely to provide reasonably large financial return ultimately provide no financial return.
- (E) The scientific research necessary to develop new technologies that promise to extend life and decrease pain sometimes leads to no greater understanding of the natural world.

2. A university psychology department received a large donation from a textbook company after agreeing to use one of the company's books for a large introductory course. The department chair admitted that the department would not have received the donation if it used another company's textbook, but insisted that the book was chosen solely for academic reasons. As proof, she noted that the department's textbook committee had given that textbook its highest rating.

Which one of the following, if true, most weakens the case for the department chair's position?

- (A) The members of the textbook committee were favorably influenced toward the textbook by the prospect of their department receiving a large donation.
- (B) The department has a long-standing policy of using only textbooks that receive the committee's highest rating.
- (C) In the previous year, a different textbook from the same company was used in the introductory course.
- (D) The department chair is one of the members of the textbook committee.
- (E) The textbook company does not routinely make donations to academic departments that use its books.

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3. Hemoglobin, a substance in human blood, transports oxygen from the lungs to the rest of the body. With each oxygen molecule it picks up, a hemoglobin molecule becomes more effective at picking up additional oxygen molecules until its maximum capacity of four oxygen molecules is reached. Grabbing an oxygen molecule changes the shape of the hemoglobin molecule, each time causing it literally to open itself to receive more oxygen.

Which one of the following is most strongly supported by the information above?

- (A) A hemoglobin molecule that has picked up three oxygen molecules will probably acquire a fourth oxygen molecule.
 - (B) The only factor determining how effective a hemoglobin molecule is at picking up oxygen molecules is how open the shape of that hemoglobin molecule is.
 - (C) A hemoglobin molecule that has picked up three oxygen molecules will be more effective at picking up another oxygen molecule than will a hemoglobin molecule that has picked up only one oxygen molecule.
 - (D) A hemoglobin molecule that has picked up four oxygen molecules will have the same shape as a hemoglobin molecule that has not picked up any oxygen molecules.
 - (E) Each hemoglobin molecule in human blood picks up between one and four oxygen molecules in or near the lungs and transports them to some other part of the body.
4. On a short trip a driver is more likely to have an accident if there is a passenger in the car, presumably because passengers distract drivers. However, on a long trip a driver is more likely to have an accident if the driver is alone.

Which one of the following, if true, most helps to explain the facts described above?

- (A) People are much more likely to drive alone on short trips than on long trips.
- (B) Good drivers tend to take more long trips than bad drivers.
- (C) The longer a car trip is, the more likely a passenger is to help the driver maintain alertness.
- (D) On a long trip the likelihood of an accident does not increase with each additional passenger.
- (E) Most drivers take far more short trips than long trips.

5. Challenger: The mayor claims she has vindicated those who supported her in the last election by fulfilling her promise to increase employment opportunities in our city, citing the 8 percent increase in the number of jobs in the city since she took office. But during her administration, the national government relocated an office to our city, bringing along nearly the entire staff from the outside. The 8 percent increase merely represents the jobs held by these newcomers.

Mayor: Clearly my opponent does not dispute the employment statistics. The unemployed voters in this city want jobs. The 8 percent increase in the number of jobs during my term exceeds that of any of my predecessors.

As a response to the challenger, the mayor's answer is flawed in that it

- (A) takes for granted that those who supported the mayor in the last election believed job availability to be a significant city issue
- (B) does not consider whether the number of unemployed persons within the city represents more than 8 percent of the eligible voters
- (C) fails to address the challenger's objection that the 8 percent increase did not result in an increase in job availability for those who lived in the city at the time of the last election
- (D) ignores the challenger's contention that the influx of newcomers during the mayor's administration has increased the size of the voting public and altered its priorities
- (E) explicitly attributes to the challenger beliefs that the challenger has neither asserted nor implied

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6. A recent magazine editorial criticizes psychologists for not attempting to establish the order in which different areas of the brain are activated during a cognitive task such as imagining the face of a friend. However, the editorial is unfair because there is currently no technology that can detect the order of activation of brain areas.

Which one of the following most closely conforms to the principle to which the reasoning in the passage conforms?

- (A) Construction companies have been unfairly criticized for using fewer layers of heating insulation in new houses than the number of layers used in previous years. Recent technology has made insulation more efficient, so fewer layers are required.
- (B) Utility companies have been unfairly criticized for not using nuclear fusion to meet the nation’s electricity needs. There is no way to harness fusion that could produce enough electricity to supply even one small town.
- (C) The food industry has been unfairly criticized for attempting to preserve food longer by treating it with radiation. If food remained edible for longer, the cost of food would decrease substantially.
- (D) The school system has been unfairly criticized for not making familiarity with computer technology a requirement. Computer studies could not be added to the curriculum without sacrificing some other subject.
- (E) CEOs of large companies have been unfairly criticized for not always using their knowledge of economic theory to run their companies. Economic theory is sometimes irrelevant to making wise corporate decisions.

7. Although most people know what their bad habits are and want to rid themselves of them, a majority of these people find it very difficult to do so. This is because cessation of habitual behavior is immediately and vividly painful, while whatever benefit is to be gained by the absence of the habit is perceived only dimly because it is remote.

The information above most strongly supports the statement that the people who are most successful at ending their bad habits are those who

- (A) can vividly imagine remote but attainable benefit
- (B) can vividly imagine their present pain being felt in the future
- (C) have succeeded in the past at modifying their behavior
- (D) are relatively unaware of their own behavioral characteristics
- (E) can vividly remember the pain caused them in the past by their bad habits

8. The more modern archaeologists learn about Mayan civilization, the better they understand its intellectual achievements. Not only were numerous scientific observations and predictions made by Mayan astronomers, but the people in general seem to have had a strong grasp of sophisticated mathematical concepts. We know this from the fact that the writings of the Mayan religious scribes exhibit a high degree of mathematical competence.

The argument’s reasoning is most vulnerable to criticism on the grounds that the argument

- (A) fails to provide an adequate definition of the term “intellectual achievement”
- (B) bases a generalization on a sample that is likely to be unrepresentative
- (C) overlooks the impressive achievements of other past civilizations
- (D) relies on two different senses of the term “scientific”
- (E) takes a mere correlation to be evidence of a causal relationship

9. Manager: There is no good reason to suppose that promoting creativity is a proper goal of an employee training program. Many jobs require little or no creativity and, in those positions, using creativity is more likely to be disruptive than innovative. Furthermore, even if creativity were in demand, there is no evidence that it can be taught.

Which one of the following most accurately expresses the main conclusion drawn in the manager’s argument?

- (A) Using creativity in jobs that require little or no creativity can be disruptive.
- (B) Employee training programs are not able to teach employees creativity.
- (C) Many jobs require little or no creativity.
- (D) There is no good reason to suppose that employee training programs should promote creativity.
- (E) Creativity is in demand, but there is no evidence that it can be taught.

10. Producer: It has been argued that, while the government should not censor television shows, the public should boycott the advertisers of shows that promote violence and erode our country's values. But this would be censorship nonetheless, for if the public boycotted the advertisers, then they would cancel their advertisements, causing some shows to go off the air; the result would be a restriction of the shows that the public can watch.

The producer's conclusion is properly inferred if which one of the following is assumed?

- (A) If there is neither government censorship nor boycotting of advertisers, there will be no restriction of the television shows that the public can watch.
 - (B) Public boycotts could force some shows off the air even though the shows neither promote violence nor erode values.
 - (C) For any television show that promotes violence and erodes values, there will be an audience.
 - (D) There is widespread public agreement about which television shows promote violence and erode values.
 - (E) Any action that leads to a restriction of what the public can view is censorship.
11. Predictions that printed books will soon be replaced by books in electronic formats such as CD-ROM are exaggerated. While research libraries may find an electronic format more convenient for scholars and scientists, bookstores and public libraries will stock books in the format desired by the general public, which will be something other than an electronic format.

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

- (A) Scholars and scientists find an electronic format for books the most convenient one for quick searching and cross-referencing.
- (B) Publishers will continue to print books in the format stocked by bookstores and public libraries.
- (C) Scholars and scientists do not usually conduct their research in public libraries.
- (D) At some bookstores and libraries, the popularity of books on tape and of videos is beginning to rival that of printed books.
- (E) Some members of the general public prefer to purchase books in an electronic format rather than borrow them from the library.

12. To cut costs, a high school modified its air-conditioning system to increase its efficiency. The modified system, however, caused the humidity in the school air to decrease by 18 percent. Twenty-four hours after the decrease in air humidity, a 25 percent increase in the number of visits to the school nurse was reported. This shows that a decrease in humidity can make people ill.

The argument depends on assuming which one of the following?

- (A) At least some of the visits to the school nurse after the system was modified were due to illness.
 - (B) Most of the students at the high school suffered from the decrease in air humidity.
 - (C) It takes 24 hours after a person is infected with a virus for that person to exhibit symptoms.
 - (D) A decrease of 18 percent in air humidity causes an increase of 25 percent in one's probability of becoming ill.
 - (E) Modifying the air-conditioning system proved to be an ineffective way to cut costs.
13. A recent study of 10,000 people who were involved in automobile accidents found that a low percentage of those driving large automobiles at the time of their accidents were injured, but a high percentage of those who were driving small automobiles at the time of their accidents were injured. Thus, one is less likely to be injured in an automobile accident if one drives a large car rather than a small car.

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

- (A) Most of the accidents analyzed in the study occurred in areas with very high speed limits.
- (B) Most people who own small cars also drive large cars on occasion.
- (C) Half of the study participants drove medium-sized cars at the time of their accidents.
- (D) A large automobile is far more likely to be involved in an accident than is a small automobile.
- (E) Only a small percentage of those people involved in an automobile accident are injured as a result.

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14. Economist: A country's trade deficit may indicate weakness in its economy, but it does not in itself weaken that economy. So restricting imports to reduce a trade deficit would be like sticking a thermometer into a glass of cold water in the hope of bringing down a patient's feverish temperature.

The economist's argument employs which one of the following techniques?

- (A) claiming that a crucial assumption entails a falsehood
 - (B) demonstrating that an analogy explicitly used to establish a certain conclusion is faulty
 - (C) appealing to an analogy in order to indicate the futility of a course of action
 - (D) calling into question the authority on the basis of which a claim is made
 - (E) showing that a recommended course of action would have disastrous consequences
15. There are circumstances in which it is not immoral to make certain threats, and there are circumstances in which it is not immoral to ask for money or some other favor. Therefore, there are circumstances in which it is not immoral to ask for money or a favor while making a threat.

Which one of the following exhibits a flawed pattern of reasoning most similar to that in the argument above?

- (A) There are many business events for which casual dress is appropriate, and there are many social events for which casual dress is appropriate; therefore, if an occasion is neither a business event nor a social event, casual dress is not likely to be appropriate.
- (B) It is usually easy to move a piano after you have convinced five people to help you, provided that you do not need to take it up or down stairs. Therefore, it is usually easy to move a piano.
- (C) It is healthful to take drug A for a headache, and it is healthful to take drug B for a headache; therefore, it is healthful to take drug A together with drug B for a headache.
- (D) Heavy trucks are generally operated in a safe manner, but the ability to drive a truck safely can be impaired by certain prescription drugs. Therefore, heavy trucks cannot be operated safely while the driver is under the effect of a prescription drug.
- (E) The mountain roads are treacherous after it rains, and the mountain streams are full after a rain. So, if the roads in the mountains are treacherous, and the mountain streams are full, it surely has rained recently.

16. A common genetic mutation that lowers levels of the enzyme cathepsin C severely reduces a person's ability to ward off periodontitis, or gum disease. The enzyme triggers immunological reactions that destroy diseased cells and eliminate infections in the mouth. But researchers are developing ways to restore the enzyme to normal levels. Once that happens, we will be able to eliminate periodontitis.

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

- (A) Restoring cathepsin C to normal levels is the only way to eliminate periodontitis.
 - (B) Genetic mutation is the only cause of lowered levels of cathepsin C.
 - (C) Researchers will soon succeed in finding means of restoring cathepsin C to normal levels.
 - (D) Persons who do not have the genetic mutation that lowers levels of cathepsin C do not get gum disease.
 - (E) A person whose cathepsin C level has been restored to normal will not suffer from periodontitis.
17. A recent study of major motion pictures revealed that the vast majority of their plots were simply variations on plots that had been used many times before. Despite this fact, many people enjoy seeing several new movies each year.

Each of the following, if true, would contribute to an explanation of the apparent discrepancy in the information above EXCEPT:

- (A) Movies based on standard plots are more likely to be financially successful than are ones based on original plots.
- (B) If the details of their stories are sufficiently different, two movies with the same basic plot will be perceived by moviegoers as having different plots.
- (C) Because of the large number of movies produced each year, the odds of a person seeing two movies with the same general plot structure in a five-year period are fairly low.
- (D) A certain aesthetic pleasure is derived from seeing several movies that develop the same plot in slightly different ways.
- (E) Although most modern movie plots have been used before, most of those previous uses occurred during the 1940s and 1950s.

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18. Those who claim that governments should not continue to devote resources to space exploration are wrong. Although most people's lives are relatively unaffected by the direct consequences of space exploration, many modern technologies that have a tremendous impact on daily life—e.g., fiber optics, computers, and lasers—are unexpected consequences of it. Society might have missed the benefits of these technologies if governments had not devoted resources to space exploration.

Which one of the following most accurately expresses the principle underlying the argument above?

- (A) Governments should not be prevented from allocating resources to projects whose intended consequences do not directly benefit most people.
- (B) One can never underestimate the beneficial consequences of government support of ambitious technological undertakings.
- (C) The less practical the goal of a government-supported project, the more unexpected the consequences of that project.
- (D) Governments should continue to support those projects that have, in the past, produced unintended benefits.
- (E) In attempting to advance the welfare of society, governments should continue to dedicate resources to ambitious technological undertakings.

19. If understanding a word always involves knowing its dictionary definition, then understanding a word requires understanding the words that occur in that definition. But clearly there are people—for example, all babies—who do not know the dictionary definitions of some of the words they utter.

Which one of the following statements follows logically from the statements above?

- (A) Some babies utter individual words that they do not understand.
- (B) Any number of people can understand some words without knowing their dictionary definitions.
- (C) If some words can be understood without knowing their dictionary definitions, then babies understand some words.
- (D) If it is possible to understand a word without knowing its dictionary definition, then it is possible to understand a word without having to understand any other word.
- (E) If some babies understand all the words they utter, then understanding a word does not always involve knowing its dictionary definition.

20. The peppered moth avoids predators by blending into its background, typically the bark of trees. In the late nineteenth century, those peppered moths with the lightest pigmentation had the greatest contrast with their backgrounds, and therefore were the most likely to be seen and eaten by predators. It follows, then, that the darkest peppered moths were the least likely to be seen and eaten.

Which one of the following most accurately describes a flaw in the reasoning of the argument?

- (A) The argument overlooks the possibility that light peppered moths had more predators than dark peppered moths.
- (B) The argument takes for granted that peppered moths are able to control the degree to which they blend into their backgrounds.
- (C) The argument presumes, without providing justification, that all peppered moths with the same coloring had the same likelihood of being seen and eaten by a predator.
- (D) The argument overlooks the possibility that there were peppered moths of intermediate color that contrasted less with their backgrounds than the darkest peppered moths did.
- (E) The argument presumes, without providing justification, that the only defense mechanism available to peppered moths was to blend into their backgrounds.

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21. Historian: The standard “QWERTY” configuration of the keys on typewriters and computer keyboards was originally designed to be awkward and limit typing speed. This was because early typewriters would jam frequently if adjacent keys were struck in quick succession. Experiments have shown that keyboard configurations more efficient than QWERTY can double typing speed while tremendously reducing typing effort. However, the expense and inconvenience of switching to a new keyboard configuration prevent any configuration other than QWERTY from attaining widespread use.

Which one of the following is most strongly supported by the historian’s statements?

- (A) Most people who have tried typing with non-QWERTY keyboards have typed significantly more quickly using those keyboards than they usually have done using QWERTY keyboards.
- (B) Early QWERTY typewriters were less likely to jam than were at least some more recent typewriters if adjacent keys were struck in quick succession.
- (C) If the designers of early typewriters had foreseen the possibility that technology would make it possible for adjacent keyboard keys to be struck in rapid succession without jamming, then they would not have proposed the QWERTY configuration.
- (D) The benefit to society that would result from switching to a keyboard configuration other than QWERTY is significantly greater than the overall cost of such a switch.
- (E) If the keyboard had been designed for computers, then it would not have been designed to limit typing speed.

22. Since anyone who makes an agreement has an obligation to fulfill the terms of that agreement, it follows that anyone who is obligated to perform an action has agreed to perform that action. Hence, saying that one has a legal obligation to perform a given action is the same as saying that one is required to fulfill one’s agreement to perform that action.

Which one of the following statements most accurately characterizes the argument’s reasoning flaws?

- (A) The argument fails to make a crucial distinction between an action one is legally obligated to perform and an action with good consequences, and it takes for granted that everything true of legal obligations is true of obligations generally.
 - (B) The argument takes for granted that there are obligations other than those resulting from agreements made, and it fails to consider the possibility that actions that uphold agreements made are sometimes performed for reasons other than to uphold those agreements.
 - (C) The argument contains a premise that is logically equivalent to its conclusion, and it takes for granted that there are only certain actions that one should agree to perform.
 - (D) The argument treats a condition that is sufficient to make something an obligation as also a requirement for something to be an obligation, and it takes for granted that any obligation to perform an action is a legal obligation.
 - (E) The argument rests on an ambiguous use of the term “action,” and it fails to consider the possibility that people are sometimes unwilling to perform actions that they have agreed to perform.
23. To predict that a device will be invented, one must develop a conception of the device that includes some details at least about how it will function and the consequences of its use. But clearly, then, the notion of predicting an invention is self-contradictory, for inventing means developing a detailed conception, and one cannot predict what has already taken place.

Which one of the following most accurately describes the technique of reasoning employed by the argument?

- (A) constructing a counterexample to a general hypothesis about the future
- (B) appealing to definitions to infer the impossibility of a kind of occurrence
- (C) countering a hypothesis by indicating the falsehood of the implications of that hypothesis
- (D) pointing out how a problem is widely thought to be scientific yet is really conceptual
- (E) attempting to show that predicting any event implies that it has in fact already taken place

C

C

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C

C

-23-

C

24. Eighteenth-century European aesthetics was reasonably successful in providing an understanding of all art, including early abstract art, until the 1960s, when artists self-consciously rebelled against earlier notions of art. Since the work of these rebellious artists is quite beautiful but outside the bounds of the aesthetic theory then current, there can be no complete theory of aesthetics.

The reasoning above is most vulnerable to criticism in that it

- (A) takes for granted that it is more important for a complete aesthetic theory to account for the beauty of traditional art than for it to account for the beauty of self-consciously rebellious art
- (B) presumes, without providing justification, that artists' rebellion in the 1960s against earlier notions of art was not guided by their knowledge of eighteenth-century European aesthetic theory
- (C) presumes, without providing justification, that an aesthetic theory developed in one part of the world cannot be applied in another
- (D) presumes, without providing justification, that art from the 1960s is the only art that cannot be adequately addressed by eighteenth-century European aesthetics
- (E) presumes, without providing justification, that eighteenth-century European aesthetics is as encompassing as an aesthetic theory can be

25. Science writer: All scientists have beliefs and values that might slant their interpretations of the data from which they draw their conclusions. However, serious scientific papers are carefully reviewed by many other scientists before publication. These reviewers are likely to notice and object to biases that they do not share. Thus, any slanted interpretations of scientific data will generally have been removed before publication.

Which one of the following is an assumption required by the science writer's argument?

- (A) The scientists reviewing serious scientific papers for publication do not always have biases likely to slant their interpretations of the data in those papers.
- (B) In general, biases that slant interpretations of data in serious scientific papers being reviewed for publication are not shared among all scientists.
- (C) Biases that are present in published scientific papers and shared by most scientists, including those who review the papers, are unlikely to impair the scientific value of those papers.
- (D) The interpretation of data is the only part of a serious scientific paper that is sometimes slanted by the beliefs and values of scientists.
- (E) Slanted interpretations of data in a scientific paper can be removed only through careful review by scientists who do not share the biases of the author or authors of the paper.

S T O P

IF YOU FINISH BEFORE TIME IS CALLED, YOU MAY CHECK YOUR WORK ON THIS SECTION ONLY.
DO NOT WORK ON ANY OTHER SECTION IN THE TEST.

Directions: Each set of questions in this section is based on a single passage or a pair of passages. The questions are to be answered on the basis of what is stated or implied in the passage or pair of passages. For some of the questions, more than one of the choices could conceivably answer the question. However, you are to choose the best answer; that is, the response that most accurately and completely answers the question, and blacken the corresponding space on your answer sheet.

Passage A

Recent studies have shown that sophisticated computer models of the oceans and atmosphere are capable of simulating large-scale climate trends with remarkable accuracy. But these models make use of

- (5)
- large numbers of variables, many of which have wide ranges of possible values. Because even small differences in those values can have a significant impact on what the simulations predict, it is important to determine the impact when values differ even slightly.
- (10)

Since the interactions between the many variables in climate simulations are highly complex, there is no alternative to a “brute force” exploration of all possible combinations of their values if predictions

- (15)
- are to be reliable. This method requires very large numbers of calculations and simulation runs. For example, exhaustive examination of five values for each of only nine variables would require 2 million calculation-intensive simulation runs. Currently available individual computers are completely inadequate for such a task.
- (20)

However, the continuing increase in computing capacity of the average desktop computer means that climate simulations can now be run on privately

- (25)
- owned desktop machines connected to one another via the Internet. The calculations are divided among the individual desktop computers, which work simultaneously on their share of the overall problem. Some public resource computing projects of this kind have already been successful, although only when they captured the public’s interest sufficiently to secure widespread participation.
- (30)

Passage B

Researchers are now learning that many problems in nature, human society, science, and engineering are naturally “parallel”; that is, that they can be effectively solved by using methods that work simultaneously in parallel. These problems share the common characteristic of involving a large number of similar elements such as molecules, animals, even people, whose individual actions are governed by simple rules but, taken collectively, function as a highly complex system.

An example is the method used by ants to forage for food. As Lewis Thomas observed, a solitary ant is little more than a few neurons strung together by fibers. Its behavior follows a few simple rules. But when one sees a dense mass of thousands of ants, crowded together around their anthill retrieving food or repelling an intruder, a more complex picture

- (50)
- emerges; it is as if the whole is thinking, planning, calculating. It is an intelligence, a kind of live computer, with crawling bits for wits.

We are now living through a great paradigm shift in the field of computing, a shift from sequential

- (55)
- computing (performing one calculation at a time) to massive parallel computing, which employs thousands of computers working simultaneously to solve one computation-intensive problem. Since many computation-intensive problems are inherently parallel, it only makes sense to use a computing model that exploits that parallelism. A computing model that resembles the inherently parallel problem it is trying to solve will perform best. The old paradigm, in contrast, is subject to the speed limits imposed by purely sequential computing.
- (60)
- (65)

1.
- Which one of the following most accurately expresses the main point of passage B?

- (A)
- Many difficult problems in computing are naturally parallel.
- (B)
- Sequential computing is no longer useful because of the speed limits it imposes.
- (C)
- There is currently a paradigm shift occurring in the field of computing toward parallel computing.
- (D)
- Complex biological and social systems are the next frontier in the field of computer simulation.
- (E)
- Inherently parallel computing problems are best solved by means of computers modeled on the human mind.

2.
- The large-scale climate trends discussed in passage A are most analogous to which one of the following elements in passage B?

- (A)
- the thousands of computers working simultaneously to solve a calculation-intensive problem
- (B)
- the simple rules that shape the behavior of a single ant
- (C)
- the highly complex behavior of a dense mass of thousands of ants
- (D)
- the paradigm shift from sequential to parallel computing
- (E)
- the speed limits imposed by computing purely sequentially

3. It can be inferred that the authors of the two passages would be most likely to agree on which one of the following statements concerning computing systems?
 - (A) Massive, parallel computing systems are able to solve complex computation-intensive problems without having to resort to “brute force.”
 - (B) Computer models are not capable of simulating the behavior of very large biological populations such as insect colonies.
 - (C) Parallel computing systems that link privately owned desktop computers via the Internet are not feasible because they rely too heavily on public participation.
 - (D) Currently available computers are not well-suited to running simulations, even if the simulated problems are relatively simple.
 - (E) Parallel computing systems employing multiple computers are the best means for simulating large-scale climate trends.
4. The author of passage A mentions public participation (lines 30–32) primarily in order to
 - (A) encourage public engagement in the sort of computing model discussed in the passage
 - (B) identify a factor affecting the feasibility of the computing model advocated in the passage
 - (C) indicate that government support of large-scale computing efforts is needed
 - (D) demonstrate that adequate support for the type of approach described in the passage already exists
 - (E) suggest that a computing model like that proposed in the passage is infeasible because of forces beyond the designers’ control
5. Passage B relates to passage A in which one of the following ways?
 - (A) The argument in passage B has little bearing on the issues discussed in passage A.
 - (B) The explanation offered in passage B shows why the plan proposed in passage A is unlikely to be implemented.
 - (C) The ideas advanced in passage B provide a rationale for the solution proposed in passage A.
 - (D) The example given in passage B illustrates the need for the “brute force” exploration mentioned in passage A.
 - (E) The discussion in passage B conflicts with the assumptions about individual computers made in passage A.
6. The passages share which one of the following as their primary purpose?
 - (A) to show that the traditional paradigm in computing is ineffective for many common computing tasks
 - (B) to argue that a new approach to computing is an effective way to solve a difficult type of problem
 - (C) to convince skeptics of the usefulness of desktop computers for calculation-intensive problems
 - (D) to demonstrate that a new computing paradigm has supplanted the traditional paradigm for most large-scale computing problems
 - (E) to describe complex and as yet unsolved problems that have recently arisen in computing
7. In calling a population of ants “an intelligence, a kind of live computer” (lines 51–52) the author of passage B most likely means that
 - (A) the behavior of the colony of ants functions as a complex, organized whole
 - (B) the paradigm shift taking place in computing was inspired by observations of living systems
 - (C) computers are agglomerations of elements that can be viewed as being alive in a metaphorical sense
 - (D) computer simulations can simulate the behavior of large biological populations with great accuracy
 - (E) the simple rules that govern the behavior of individual ants have been adapted for use in computer simulations
8. The author of passage B would be most likely to agree with which one of the following statements regarding the computing system proposed in the last paragraph of passage A?
 - (A) It would be a kind of live computer.
 - (B) It would be completely inadequate for simulating large-scale climate trends.
 - (C) It would impose strict limitations on the number of variables that could be used in any simulation it runs.
 - (D) It would be likely to secure widespread public participation.
 - (E) It would solve calculation-intensive problems faster than a traditional sequential computer would.

A proficiency in understanding, applying, and even formulating statutes—the actual texts of laws enacted by legislative bodies—is a vital aspect of the practice of law, but statutory law is often given too little

- (5) attention by law schools. Much of legal education, with its focus on judicial decisions and analysis of cases, can give a law student the impression that the practice of law consists mainly in analyzing past cases to determine their relevance to a client's situation and
- (10) arriving at a speculative interpretation of the law relevant to the client's legal problem.

Lawyers discover fairly soon, however, that much of their practice does not depend on the kind of painstaking analysis of cases that is performed in law

- (15) school. For example, a lawyer representing the owner of a business can often find an explicit answer as to what the client should do about a certain tax-related issue by consulting the relevant statutes. In such a case the facts are clear and the statutes' relation to them
- (20) transparent, so that the client's question can be answered by direct reference to the wording of the statutes. But statutes' meanings and their applicability to relevant situations are not always so obvious, and that is one reason that the ability to interpret them
- (25) accurately is an essential skill for law students to learn.

Another skill that teaching statutory law would improve is synthesis. Law professors work hard at developing their students' ability to analyze individual cases, but in so doing they favor the ability to apply the

(30) law in particular cases over the ability to understand the interrelations among laws. In contrast, the study of all the statutes of a legal system in a certain small area of the law would enable the student to see how these laws form a coherent whole. Students would then be

(35) able to apply this ability to synthesize in other areas of statutory law that they encounter in their study or practice. This is especially important because most students intend to specialize in a chosen area, or areas, of the law.

- (40) One possible argument against including training in statutory law as a standard part of law school curricula is that many statutes vary from region to region within a nation, so that the mastery of a set of statutes would usually not be generally applicable. There is some truth
- (45) to this objection; law schools that currently provide some training in statutes generally intend it as a preparation for practice in their particular region, but for schools that are nationally oriented, this could seem to be an inappropriate investment of time and
- (50) resources. But while the knowledge of a particular region's statutory law is not generally transferable to other regions, the skills acquired in mastering a particular set of statutes are, making the study of statutory law an important undertaking even for law
- (55) schools with a national orientation.

9. Which one of the following most accurately expresses the main point of the passage?

- (A) In spite of the reservations that nationally oriented law schools can be expected to have, law schools can serve the overall needs of law students better by implementing a standard national curriculum in statutory law.
- (B) Since the skills promoted by the study of statutory law are ultimately more important than those promoted by case analysis, the relative emphasis that law schools place on these two areas should be reversed.
- (C) Although statutes typically vary from region to region, law schools should provide training in statutory law in order to develop students' ability to synthesize legal information and interpret individual statutes.
- (D) In the theoretical world of law school training, as opposed to the actual practice of law, a proficiency in case law is often one of the most important assets that students can have.
- (E) Law schools generally are deficient in their attention to statutory law training and therefore fail to impart the skills necessary for the analysis of legal information.

10. Which one of the following is cited in the passage as a reason that might be given for not including statutory law training in law school curricula?

- (A) Such training would divert resources away from the far more important development of the ability to analyze cases.
- (B) Such training is not essentially different from what is already provided in the core areas of law school education.
- (C) The goals of such training can better be achieved by other means, most of which are more directly related to the actual practice of law.
- (D) Such training would be irrelevant for those students who do not plan to specialize.
- (E) The lack of geographic uniformity among statutory laws makes expertise in the statutes of any particular region generally nontransferable.

GO ON TO THE NEXT PAGE.

11. Which one of the following would, if true, most weaken the author's argument as expressed in the passage?
 - (A) Many law school administrators recommend the inclusion of statutory law training in the curricula of their schools.
 - (B) Most lawyers easily and quickly develop proficiency in statutory law through their work experiences after law school.
 - (C) Most lawyers do not practice law in the same geographic area in which they attended law school.
 - (D) The curricula of many regionally oriented law schools rely primarily on analysis of cases.
 - (E) Most lawyers who have undergone training in statutory law are thoroughly familiar with only a narrow range of statutes.
12. The author discusses the skill of synthesis in the third paragraph primarily in order to
 - (A) identify and describe one of the benefits that the author says would result from the change that is advocated in the passage
 - (B) indicate that law schools currently value certain other skills over this skill and explain why this is so
 - (C) argue for the greater importance of this skill as compared with certain others that are discussed earlier in the passage
 - (D) explain why this skill is necessary for the study of statutory law
 - (E) provide an example of the type of problem typically encountered in the practice of law
13. Which one of the following questions can be most clearly and directly answered by reference to information in the passage?
 - (A) What are some ways in which synthetic skills are strengthened or encouraged through the analysis of cases and judicial decisions?
 - (B) In which areas of legal practice is a proficiency in case analysis more valuable than a proficiency in statutory law?
 - (C) What skills are common to the study of both statutory law and judicial decisions?
 - (D) What are some objections that have been raised against including the study of statutes in regionally oriented law schools?
 - (E) What is the primary focus of the curriculum currently offered in most law schools?
14. The information in the passage suggests that the author would most likely agree with which one of the following statements regarding training in statutory law?
 - (A) While nationally oriented law schools have been deficient in statutory law training, most regionally oriented law schools have been equally deficient in the teaching of case law.
 - (B) Training in statutory law would help lawyers resolve legal questions for which the answers are not immediately apparent in the relevant statutes.
 - (C) Lawyers who are trained in statutory law typically also develop a higher level of efficiency in manipulating details of past cases as compared with lawyers who are not trained in this way.
 - (D) Courses in statutory law are less effective if they focus specifically on the statutes of a particular region or in a particular area of the law.
 - (E) Lawyers who do not specialize probably have little need for training in statutory law beyond a brief introduction to the subject.
15. Each of the following conforms to the kinds of educational results that the author would expect from the course of action proposed in the passage EXCEPT:
 - (A) skill in locating references to court decisions on an issue involving a particular statute regarding taxation
 - (B) an understanding of the ways in which certain underlying purposes are served by an interrelated group of environmental laws
 - (C) a knowledge of how maritime statutes are formulated
 - (D) familiarity with the specific wordings of a group of laws applying to businesses in a particular region or locality
 - (E) an appreciation of the problems of wording involved in drafting antiterrorism laws

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The Japanese American sculptor Isamu Noguchi (1904–1988) was an artist who intuitively asked—and responded to—deeply original questions. He might well have become a scientist within a standard

- (5) scientific discipline, but he instead became an artist who repeatedly veered off at wide angles from the well-known courses followed by conventionally talented artists of both the traditional and modern schools. The story behind one particular sculpture typifies this aspect of his creativeness.

By his early twenties, Noguchi's sculptures showed such exquisite comprehension of human anatomy and deft conceptual realization that he won a Guggenheim Fellowship for travel in Europe. After

- (15) arriving in Paris in 1927, Noguchi asked the Romanian-born sculptor Constantin Brancusi if he might become his student. When Brancusi said no, that he never took students, Noguchi asked if he needed a stonecutter. Brancusi did. Noguchi cut and polished stone for Brancusi in his studio, frequently also polishing Brancusi's brass and bronze sculptures. Noguchi, with his scientist's mind, pondered the fact that sculptors through the ages had relied exclusively upon negative light—that is, shadows—for their
- (25) conceptual communication, precisely because no metals, other than the expensive, nonoxidizing gold, could be relied upon to give off positive-light reflections.

Noguchi wanted to create a sculpture that was purely reflective. In 1929, after returning to the

(30) United States, he met the architect and philosopher R. Buckminster Fuller, offering to sculpt a portrait of him. When Fuller heard of Noguchi's ideas regarding positive-light sculpture, he suggested using chrome-nickel steel, which Henry Ford, through automotive research and development, had just made

(35) commercially available for the first time in history. Here, finally, was a permanently reflective surface, economically available in massive quantities.

In sculpting his portrait of Fuller, Noguchi did not

(40) think of it as merely a shiny alternate model of traditional, negative-light sculptures. What he saw was that completely reflective surfaces provided a fundamental invisibility of surface like that of utterly still waters, whose presence can be apprehended only when objects—a ship's mast, a tree, or sky—are reflected in them. Seaplane pilots making offshore landings in dead calm cannot tell where the water is and must glide in, waiting for the unpredictable touchdown. Noguchi conceived a similarly invisible sculpture,

(50) hidden in and communicating through the reflections of images surrounding it. Then only the distortion of familiar shapes in the surrounding environment could be seen by the viewer. The viewer's awareness of the "invisible" sculpture's presence and dimensional

(55) relationships would be derived only secondarily.

Even after this stunning discovery, Noguchi remained faithful to his inquisitive nature. At the moment when his explorations had won critical recognition of the genius of his original and

(60) fundamental conception, Noguchi proceeded to the next phase of his evolution.

16. In saying that "no metals, other than the expensive, nonoxidizing gold, could be relied upon to give off positive-light reflections" (lines 25–27), the author draws a distinction between

- (A) a metal that can be made moderately reflective in any sculptural application and metals that can be made highly reflective but only in certain applications
- (B) a naturally highly reflective metal that was technically suited for sculpture and other highly reflective metals that were not so suited
- (C) metals that can be made highly reflective but lose their reflective properties over time and a metal that does not similarly lose its reflective properties
- (D) a highly reflective sculptural material that, because it is a metal, is long lasting and nonmetallic materials that are highly reflective but impermanent
- (E) a highly reflective metal that was acceptable to both traditional and modern sculptors and highly reflective metals whose use in sculpture was purely experimental

17. The passage provides information sufficient to answer which one of the following questions?

- (A) In what way did Noguchi first begin to acquire experience in the cutting and polishing of stone for use in sculpture?
- (B) In the course of his career, did Noguchi ever work in any art form other than sculpture?
- (C) What are some materials other than metal that Noguchi used in his sculptures after ending his association with Brancusi?
- (D) During Noguchi's lifetime, was there any favorable critical response to his creation of a positive-light sculpture?
- (E) Did Noguchi at any time in his career consider creating a transparent or translucent sculpture lighted from within?

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18. The passage offers the strongest evidence that the author would agree with which one of the following statements?
 - (A) Noguchi's work in Paris contributed significantly to the art of sculpture in that it embodied solutions to problems that other sculptors, including Brancusi, had sought unsuccessfully to overcome.
 - (B) Noguchi's scientific approach to designing sculptures and to selecting materials for sculptures is especially remarkable in that he had no formal scientific training.
 - (C) Despite the fact that Brancusi was a sculptor and Fuller was not, Fuller played a more pivotal role than did Brancusi in Noguchi's realization of the importance of negative light to the work of previous sculptors.
 - (D) Noguchi was more interested in addressing fundamental aesthetic questions than in maintaining a consistent artistic style.
 - (E) Noguchi's work is of special interest for what it reveals not only about the value of scientific thinking in the arts but also about the value of aesthetic approaches to scientific inquiry.
19. In which one of the following is the relation between the two people most analogous to the relation between Ford and Noguchi as indicated by the passage?
 - (A) A building-materials dealer decides to market a new type of especially durable simulated-wood flooring material after learning that a famous architect has praised the material.
 - (B) An expert skier begins experimenting with the use of a new type of material in the soles of ski boots after a shoe manufacturer suggests that that material might be appropriate for that use.
 - (C) A producer of shipping containers begins using a new type of strapping material, which a rock-climbing expert soon finds useful as an especially strong and reliable component of safety ropes for climbing.
 - (D) A consultant to a book editor suggests the use of a new type of software for typesetting, and after researching the software the editor decides not to adopt it but finds a better alternative as a result of the research.
 - (E) A friend of a landscaping expert advises the use of a certain material for the creation of retaining walls and, as a result, the landscaper explores the use of several similar materials.
20. The passage most strongly supports which one of the following inferences?
 - (A) Prior to suggesting the sculptural use of chrome-nickel steel to Noguchi, Fuller himself had made architectural designs that called for the use of this material.
 - (B) Noguchi believed that the use of industrial materials to create sculptures would make the sculptures more commercially viable.
 - (C) Noguchi's "invisible" sculpture appears to have no shape or dimensions of its own, but rather those of surrounding objects.
 - (D) If a positive-light sculpture depicting a person in a realistic manner were coated with a metal subject to oxidation, it would eventually cease to be recognizable as a realistic likeness.
 - (E) The perception of the shape and dimensions of a negative-light sculpture does not depend on its reflection of objects from the environment around it.
21. Which one of the following inferences about the portrait of Fuller does the passage most strongly support?
 - (A) The material that Noguchi used in it had been tentatively investigated by other sculptors but not in direct connection with its reflective properties.
 - (B) It was similar to at least some of the sculptures that Noguchi produced prior to 1927 in that it represented a human form.
 - (C) Noguchi did not initially think of it as especially innovative or revolutionary and thus was surprised by Fuller's reaction to it.
 - (D) It was produced as a personal favor to Fuller and thus was not initially intended to be noticed and commented on by art critics.
 - (E) It was unlike the sculptures that Noguchi had helped Brancusi to produce in that the latter's aesthetic effects did not depend on contrasts of light and shadow.
22. Which one of the following would, if true, most weaken the author's position in the passage?
 - (A) Between 1927 and 1929, Brancusi experimented with the use of highly reflective material for the creation of positive-light sculptures.
 - (B) After completing the portrait of Fuller, Noguchi produced only a few positive-light sculptures and in fact changed his style of sculpture repeatedly throughout his career.
 - (C) When Noguchi arrived in Paris, he was already well aware of the international acclaim that Brancusi's sculptures were receiving at the time.
 - (D) Many of Noguchi's sculptures were, unlike the portrait of Fuller, entirely abstract.
 - (E) Despite his inquisitive and scientific approach to the art of sculpture, Noguchi neither thought of himself as a scientist nor had extensive scientific training.

In an experiment, two strangers are given the opportunity to share \$100, subject to the following constraints: One person—the “proposer”—is to suggest how to divide the money and can make only one such proposal. The other person—the “responder”—must either accept or reject the offer without qualification. Both parties know that if the offer is accepted, the money will be split as agreed, but if the offer is rejected, neither will receive anything.

This scenario is called the Ultimatum Game. Researchers have conducted it numerous times with a wide variety of volunteers. Many participants in the role of the proposer seem instinctively to feel that they should offer 50 percent to the responder, because such a division is “fair” and therefore likely to be accepted. Two-thirds of proposers offer responders between 40 and 50 percent. Only 4 in 100 offer less than 20 percent. Offering such a small amount is quite risky; most responders reject such offers. This is a puzzle: Why would anyone reject an offer as too small? Responders who reject an offer receive nothing, so if one assumes—as theoretical economics traditionally has—that people make economic decisions primarily out of rational self-interest, one would expect that an individual would accept any offer.

Some theorists explain the insistence on fair divisions in the Ultimatum Game by citing our prehistoric ancestors’ need for the support of a strong group. Small groups of hunter-gatherers depended for survival on their members’ strengths. It is counterproductive to outcompete rivals within one’s group to the point where one can no longer depend on them in contests with other groups. But this hypothesis at best explains why proposers offer large amounts, not why responders reject low offers.

A more compelling explanation is that our emotional apparatus has been shaped by millions of years of living in small groups, where it is hard to keep secrets. Our emotions are therefore not finely tuned to one-time, strictly anonymous interactions. In real life we expect our friends and neighbors to notice our decisions. If people know that someone is content with a small share, they are likely to make that person low offers. But if someone is known to angrily reject low offers, others have an incentive to make that person high offers. Consequently, evolution should have favored angry responses to low offers; if one regularly receives fair offers when food is divided, one is more likely to survive. Because one-shot interactions were rare during human evolution, our emotions do not discriminate between one-shot and repeated interactions. Therefore, we respond emotionally to low offers in the Ultimatum Game because we instinctively feel the need to reject dismal offers in order to keep our self-esteem. This self-esteem helps us to acquire a reputation that is beneficial in future encounters.

23. Which one of the following most accurately summarizes the main idea of the passage?

- (A) Contrary to a traditional assumption of theoretical economics, the behavior of participants in the Ultimatum Game demonstrates that people do not make economic decisions out of rational self-interest.
- (B) Although the reactions most commonly displayed by participants in the Ultimatum Game appear to conflict with rational self-interest, they probably result from a predisposition that had evolutionary value.
- (C) Because our emotional apparatus has been shaped by millions of years of living in small groups in which it is hard to keep secrets, our emotions are not finely tuned to one-shot, anonymous interactions.
- (D) People respond emotionally to low offers in the Ultimatum Game because they instinctively feel the need to maintain the strength of the social group to which they belong.
- (E) When certain social and evolutionary factors are taken into account, it can be seen that the behavior of participants in the Ultimatum Game is motivated primarily by the need to outcompete rivals.

24. The passage implies that the Ultimatum Game is

- (A) one that requires two strangers to develop trust in each other
- (B) responsible for overturning a basic assumption of theoretical economics
- (C) a situation that elicits unpredictable results
- (D) a type of one-shot, anonymous interaction
- (E) proof that our emotional apparatus has been shaped by millions of years of living in small groups

25. The author’s primary purpose in the passage is to

- (A) survey existing interpretations of the puzzling results of an experiment
- (B) show how two theories that attempt to explain the puzzling results of an experiment complement each other
- (C) argue that the results of an experiment, while puzzling, are valid
- (D) offer a plausible explanation for the puzzling results of an experiment
- (E) defend an experiment against criticism that methodological flaws caused its puzzling results

26. Which one of the following sentences would most logically conclude the final paragraph of the passage?
- (A) Contrary to the assumptions of theoretical economics, human beings do not act primarily out of self-interest.
 - (B) Unfortunately, one-time, anonymous interactions are becoming increasingly common in contemporary society.
 - (C) The instinctive urge to acquire a favorable reputation may also help to explain the desire of many proposers in the Ultimatum Game to make “fair” offers.
 - (D) High self-esteem and a positive reputation offer individuals living in small groups many other benefits as well.
 - (E) The behavior of participants in the Ultimatum Game sheds light on the question of what constitutes a “fair” division.
27. In the context of the passage, the author would be most likely to consider the explanation in the third paragraph more favorably if it were shown that
- (A) our prehistoric ancestors often belonged to large groups of more than a hundred people
 - (B) in many prehistoric cultures, there were hierarchies within groups that dictated which allocations of goods were to be considered fair and which were not
 - (C) it is just as difficult to keep secrets in relatively large social groups as it is in small social groups
 - (D) it is just as counterproductive to a small social group to allow oneself to be outcompeted by one’s rivals within the group as it is to outcompete those rivals
 - (E) in many social groups, there is a mutual understanding among the group’s members that allocations of goods will be based on individual needs as opposed to equal shares

S T O P

IF YOU FINISH BEFORE TIME IS CALLED, YOU MAY CHECK YOUR WORK ON THIS SECTION ONLY.
DO NOT WORK ON ANY OTHER SECTION IN THE TEST.

Directions:

1. Use the Answer Key on the next page to check your answers.
2. Use the Scoring Worksheet below to compute your raw score.
3. Use the Score Conversion Chart to convert your raw score into the 120-180 scale.

Scoring Worksheet

1. Enter the number of questions you answered correctly in each section.

**Number
Correct**

SECTION I. _____

SECTION II _____

SECTION III. _____

SECTION IV. _____

2. Enter the sum here: _____

This is your Raw Score.

Conversion Chart

For Converting Raw Score to the 120-180 LSAT Scaled Score LSAT Form 9LSN82

Reported Score	Raw Score	
	Lowest	Highest
180	98	101
179	97	97
178	96	96
177	95	95
176	94	94
175	93	93
174	92	92
173	91	91
172	90	90
171	89	89
170	87	88
169	86	86
168	85	85
167	83	84
166	82	82
165	81	81
164	79	80
163	78	78
162	76	77
161	74	75
160	73	73
159	71	72
158	70	70
157	68	69
156	66	67
155	65	65
154	63	64
153	61	62
152	60	60
151	58	59
150	57	57
149	55	56
148	53	54
147	52	52
146	50	51
145	49	49
144	47	48
143	45	46
142	44	44
141	42	43
140	41	41
139	39	40
138	38	38
137	36	37
136	35	35
135	33	34
134	32	32
133	30	31
132	29	29
131	28	28
130	26	27
129	25	25
128	24	24
127	23	23
126	21	22
125	20	20
124	19	19
123	17	18
122	15	16
121	—*	—*
120	0	14

*There is no raw score that will produce this scaled score for this form.

SECTION I

- | | | | |
|------|-------|-------|-------|
| 1. C | 8. D | 15. D | 22. B |
| 2. A | 9. B | 16. A | 23. B |
| 3. C | 10. D | 17. A | |
| 4. D | 11. D | 18. E | |
| 5. C | 12. E | 19. D | |
| 6. C | 13. C | 20. E | |
| 7. E | 14. A | 21. E | |

SECTION II

- | | | | |
|------|-------|-------|-------|
| 1. A | 8. B | 15. A | 22. A |
| 2. D | 9. C | 16. E | 23. D |
| 3. A | 10. D | 17. E | 24. B |
| 4. E | 11. B | 18. D | 25. B |
| 5. E | 12. C | 19. C | 26. B |
| 6. C | 13. C | 20. D | |
| 7. E | 14. D | 21. C | |

SECTION III

- | | | | |
|------|-------|-------|-------|
| 1. A | 8. B | 15. C | 22. D |
| 2. A | 9. D | 16. E | 23. B |
| 3. C | 10. E | 17. A | 24. E |
| 4. C | 11. B | 18. D | 25. B |
| 5. C | 12. A | 19. E | |
| 6. B | 13. D | 20. D | |
| 7. A | 14. C | 21. E | |

SECTION IV

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|------|-------|-------|-------|
| 1. C | 8. E | 15. A | 22. A |
| 2. C | 9. C | 16. C | 23. B |
| 3. E | 10. E | 17. D | 24. D |
| 4. B | 11. B | 18. D | 25. D |
| 5. C | 12. A | 19. C | 26. C |
| 6. B | 13. E | 20. E | 27. D |
| 7. A | 14. B | 21. B | |