



Form LTZC01

This book contains the scored sections of the LSAT administered in January 2023.

LSAT

Law School Admission Test

Acknowledgment is made to the following sources from which material has been adapted for use in this test:

Steven Ashley, "It's Not Easy Being Green" in *Scientific American*. ©2002 by Scientific American, Inc.

Scott DeVeaux, *The Birth of Bebop*. ©1997 by The Regents of the University of California.

Freeman J. Dyson, "One in a Million" in *New York Review of Books*. ©2004 by NYREV, Inc.

Geoffrey W. G. Leane, "Testing Some Theories About Law" in *Melbourne University Law Review*.
©1995 by Melbourne University Law Review Association.

Michael Shermer, "Freeman Dyson, Miracles, and the Belief in the Paranormal" in eSkeptic newsletter.
©2004 by The Skeptics Society and Michael Shermer.

John Timpane, "How to Convince a Reluctant Scientist" in *Scientific American*. ©1995 by Scientific American, Inc.

Analytical Reasoning

Time—35 minutes

23 Questions

Directions: Each set of questions in this section is based on a scenario with a set of conditions. The questions are to be answered on the basis of what can be logically inferred from the scenario and conditions. For each question, choose the response that most accurately and completely answers the question and mark that response on your answer sheet.

Questions 1–5

A company has installed a new security system and is assigning security badges to the following employees: Flores, Gonzales, Henderson, Wong, Yamamoto, and Zamora. Of these, Flores, Gonzales, and Henderson are recent hires; the others are experienced. Wong and Zamora are managers; the others are not. There are four levels of security badges, from level 1 (the lowest) through level 4 (the highest). Badges will be assigned to employees in accordance with the following rules:

Every manager must be assigned a badge of a higher security level than any badge assigned to a nonmanagerial employee.

Every experienced employee must be assigned a badge of a higher security level than any badge assigned to a recent hire.

1. Which one of the following could be an accurate assignment of security badges to employees?
 - (A) level 1 badge: none
level 2 badge: Flores, Henderson
level 3 badge: Gonzales, Yamamoto
level 4 badge: Wong, Zamora
 - (B) level 1 badge: Henderson
level 2 badge: Flores, Gonzales, Yamamoto
level 3 badge: Wong
level 4 badge: Zamora
 - (C) level 1 badge: Flores, Gonzales
level 2 badge: Henderson
level 3 badge: Yamamoto, Zamora
level 4 badge: Wong
 - (D) level 1 badge: Gonzales, Henderson
level 2 badge: Flores
level 3 badge: Yamamoto
level 4 badge: Wong, Zamora
 - (E) level 1 badge: Flores, Gonzales, Henderson
level 2 badge: Wong
level 3 badge: Yamamoto
level 4 badge: Zamora

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Analytical Reasoning

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2. If none of the employees is assigned a level 1 badge, which one of the following employees must be assigned a level 3 badge?
- (A) Gonzales
(B) Henderson
(C) Wong
(D) Yamamoto
(E) Zamora
3. If exactly two of the recent hires are assigned level 2 badges, which one of the following could be true?
- (A) Flores is assigned a higher level badge than Gonzales.
(B) Wong is assigned a higher level badge than Zamora.
(C) None of the employees is assigned a level 1 badge.
(D) None of the employees is assigned a level 3 badge.
(E) None of the employees is assigned a level 4 badge.
4. If none of the employees is assigned a level 4 badge, which one of the following must be true?
- (A) Henderson is assigned a level 2 badge.
(B) Yamamoto is assigned a level 3 badge.
(C) Flores is assigned a different level badge than Gonzales.
(D) Flores is assigned a different level badge than Henderson.
(E) Wong is assigned the same level badge as Zamora.
5. Which one of the following, if substituted for the rule that every experienced employee must be assigned a badge of a higher security level than any badge assigned to a recent hire, would have the same effect in determining the assignment of badges to employees?
- (A) Yamamoto must be assigned a badge of a higher security level than any badge assigned to a recent hire.
(B) Every manager must be assigned a badge of a higher security level than any badge assigned to a recent hire.
(C) Each experienced employee must be assigned either a level 3 badge or a level 4 badge.
(D) If none of the employees is assigned a level 1 badge, then Flores, Gonzales, and Henderson must all be assigned level 2 badges.
(E) If none of the employees is assigned a level 4 badge, then Flores, Gonzales, and Henderson must all be assigned level 1 badges.

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Analytical Reasoning

Questions 6–11

A student takes exactly six one-semester courses—geology, history, literature, mathematics, physics, and religion. Each course is taken in exactly one of two semesters—semester 1 or semester 2. The following conditions apply:

- The student takes mathematics and physics in the same semester.
- It is not the case that the student takes both physics and religion in semester 2.
- If the student takes history in semester 2, she takes geology and literature in semester 1.
- If the student takes mathematics and geology in semester 1, she takes literature in semester 2.

6. Which one of the following could be a complete and accurate list of the courses the student takes in each semester?
- (A) semester 1: geology, history, literature
semester 2: mathematics, physics, religion
 - (B) semester 1: geology, literature, religion
semester 2: history, mathematics, physics
 - (C) semester 1: literature, mathematics, physics
semester 2: geology, history, religion
 - (D) semester 1: geology, literature, mathematics,
physics
semester 2: history, religion
 - (E) semester 1: history, literature, mathematics,
religion
semester 2: geology, physics

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Analytical Reasoning

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7. Which one of the following could be a complete and accurate list of the courses the student takes in semester 1?
- (A) history
(B) geology, religion
(C) literature, mathematics
(D) geology, mathematics, religion
(E) geology, history, literature, religion
8. If the student takes geology in semester 2, then each of the following could be true EXCEPT:
- (A) The student takes exactly two courses in semester 1.
(B) The student takes exactly four courses in semester 1.
(C) The student takes history in semester 2.
(D) The student takes mathematics in semester 2.
(E) The student takes religion in semester 1.
9. Which one of the following could be the only course that the student takes in semester 2?
- (A) history
(B) literature
(C) mathematics
(D) physics
(E) religion
10. If the student takes physics and religion in the same semester as each other, then which one of the following courses could the student take in semester 2?
- (A) geology
(B) history
(C) mathematics
(D) physics
(E) religion
11. If the student takes literature in semester 1, then which one of the following must be true?
- (A) The student takes history in semester 2.
(B) The student takes mathematics in semester 2.
(C) The student takes religion in semester 1.
(D) The student takes at least three courses in semester 1.
(E) The student takes at most three courses in semester 1.

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Analytical Reasoning

Questions 12–16

The organizers of a small-town holiday parade must determine the order in which six floats will appear as they pass consecutively in front of the town hall. Each float is sponsored by a different business or organization—the fire department, the grocery store, the hardware store, the kennel, the library, and the youth center. The following constraints apply:

The library float must appear immediately before the grocery store float.

The grocery store float must appear earlier than the hardware store float, and the hardware store float must appear earlier than the youth center float.

The hardware store float cannot appear immediately before or immediately after the kennel float.

The fire department float cannot appear immediately before or immediately after the youth center float.

12. Which one of the following could be the order, from first to last, in which the floats appear?

- (A) fire department, hardware store, library, grocery store, youth center, kennel
- (B) fire department, library, grocery store, hardware store, kennel, youth center
- (C) kennel, library, grocery store, hardware store, fire department, youth center
- (D) library, fire department, grocery store, hardware store, youth center, kennel
- (E) library, grocery store, hardware store, youth center, kennel, fire department

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Analytical Reasoning

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13. If the grocery store float appears immediately before the kennel float, then which one of the following must be true?
- (A) The fire department float appears first.
(B) The library float appears second.
(C) The kennel float appears third.
(D) The hardware store float appears fourth.
(E) The youth center float appears fifth.
14. The fourth float to appear CANNOT be that of
- (A) the fire department
(B) the grocery store
(C) the hardware store
(D) the kennel
(E) the youth center
15. The order in which the floats appear is fully determined if which one of the following is true?
- (A) The fire department float appears third.
(B) The grocery store float appears fourth.
(C) The hardware store float appears fourth.
(D) The kennel float appears fifth.
(E) The library float appears third.
16. The kennel float must appear last if which one of the following is true?
- (A) The fire department float appears first.
(B) The library float appears second.
(C) The grocery store float appears third.
(D) The hardware store float appears fourth.
(E) The youth center float appears fourth.

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Analytical Reasoning

Questions 17–23

A book collector is trying to decide which of the following six books to purchase at an auction—a literary classic, a mystery, a play, a romance novel, a science fiction book, and a tragedy. The book collector’s purchase must be made according to the following considerations:

If both the literary classic and the mystery are purchased, then the play is purchased.

If either the play or the science fiction book is purchased, then the romance novel is not purchased.

If the tragedy is not purchased, then both the mystery and the romance novel are purchased.

17. Which one of the following could be a complete and accurate list of the books purchased by the collector?
- (A) literary classic, play
 - (B) literary classic, tragedy
 - (C) mystery, play, science fiction book
 - (D) mystery, play, romance novel, tragedy
 - (E) literary classic, mystery, romance novel, science fiction book

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Analytical Reasoning

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18. If the collector purchases exactly two books, which one of the following must be true?
- (A) The mystery is purchased.
(B) The tragedy is purchased.
(C) The romance novel is not purchased.
(D) The literary classic and the mystery are not both purchased.
(E) The romance novel and the tragedy are not both purchased.
19. If the book collector purchases neither the play nor the science fiction book, then each of the following could be true EXCEPT:
- (A) The romance novel is purchased.
(B) The tragedy is not purchased.
(C) Exactly one book is purchased.
(D) Exactly three books are purchased.
(E) Exactly four books are purchased.
20. Which one of the following, if true, completely determines which books are purchased by the collector?
- (A) The romance novel is not purchased.
(B) The tragedy is not purchased.
(C) Neither the literary classic nor the mystery is purchased.
(D) Neither the mystery nor the romance novel is purchased.
(E) Neither the play nor the science fiction book is purchased.
21. If the book collector purchases the mystery, then which one of the following must be true?
- (A) The play is purchased.
(B) The romance novel is purchased.
(C) The tragedy is purchased.
(D) At least two books are purchased.
(E) At most two books are purchased.
22. If the book collector purchases the play, then which one of the following must be true?
- (A) The tragedy is purchased.
(B) The mystery is purchased.
(C) The literary classic is purchased.
(D) Exactly two books are purchased.
(E) Exactly three books are purchased.
23. If the book collector purchases the romance novel, then which one of the following could be true?
- (A) Both the literary classic and the mystery are purchased.
(B) Exactly three books are purchased.
(C) Exactly four books are purchased.
(D) The play is purchased.
(E) The science fiction book is purchased.

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.

Logical Reasoning

Time—35 minutes

26 Questions

Directions: Each question in this section is based on the reasoning presented in a brief passage. In answering the questions, you should not make assumptions that are by commonsense standards implausible, superfluous, or incompatible with the passage. For some questions, more than one of the choices could conceivably answer the question. However, you are to choose the **best** answer; that is, choose the response that most accurately and completely answers the question and mark that response on your answer sheet.

1. Montoya: Many industrial chemical processes that currently use organic solvents could use ionic liquids instead. Ionic liquids are less hazardous to workers and generate less air pollution. Moreover, some reactions occur at a faster rate or yield smaller quantities of unwanted by-products when ionic liquids are used. So chemical companies should begin using ionic liquids for many reactions that currently use organic solvents.

Peterson: Ionic liquids cost many times as much as organic solvents, so they are currently not practical for the chemical industry.

Of the following, which one, if true, is the strongest counter Montoya could make to Peterson's argument?

- (A) The cost of organic solvents is only one of many expenses involved in industrial production of chemicals.
- (B) New methods for removing by-products of chemical reactions have recently been developed.
- (C) The chemical industry has historically been quick to adopt new techniques that increase the rate at which reactions occur.
- (D) Ionic liquids can be reused many times, whereas organic solvents can be used only once.
- (E) For the sake of public relations, companies will sometimes use a more environmentally friendly process even if it is slightly more expensive.

2. The relationship between money and the things it allows one to purchase is like that between a tool and the tasks it enables its user to accomplish. Therefore, since tools are useless if there is no task that needs to be done, _____.

Which one of the following most logically completes the argument?

- (A) money should be thought of as no more useful than a tool
- (B) any tool that enables its user to accomplish a task is valuable
- (C) money is valueless in a world where nothing is for sale
- (D) money should be regarded as a tool rather than a commodity
- (E) the value of money derives from the tasks it allows one to accomplish

3. James: The world is increasingly divided between the computer literate and the computer illiterate. The economic gap between rich and poor is partly responsible for causing this division, but the economic gap will widen because of the increasing importance of computer literacy.

Ariel: I disagree. Because of businesses' increasing need for computer-literate employees, companies will have to train nearly all workers in computer skills. This will lessen the division between the computer literate and the computer illiterate. So whatever might cause the economic gap between rich and poor to widen in the future, it won't be the importance of computer literacy.

James and Ariel disagree over whether

- (A) the economic gap between rich and poor will widen
- (B) the economic gap between rich and poor is now partly responsible for causing the division between the computer literate and the computer illiterate
- (C) businesses' need for computer-literate employees will increase
- (D) the economic gap between rich and poor will widen as a result of the increasing importance of computer literacy
- (E) companies will have to train their employees in computer skills

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Logical Reasoning

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4. Overcrowding inclines human beings toward aggressive, competitive behavior. Just consider the behavior of normally considerate people driving in rush-hour traffic or attending crowded sporting events. This shows that, as world population continues to grow, aggressive behavior, including war and crime, will become more frequent and severe.

Each of the following, if true, strengthens the argument EXCEPT:

- (A) The frequency and severity of overcrowding in the past have been roughly proportional to the size of world population.
- (B) The frequency and severity of war and crime have generally increased in the past century, and world population also increased during that period.
- (C) Some forms of aggressive, competitive behavior, including war, tend to occur even in situations in which human beings are not overcrowded.
- (D) With respect to its effect on behavior, rush-hour traffic is an example of a situation in which human beings are overcrowded.
- (E) Most mammals inhabiting a given region exhibit increasingly aggressive, competitive behavior as their population density in that region increases.
5. Gahagan's Greenstore sells a large volume of plants. The vast majority are sold wholesale to commercial buyers, most of them to landscape contractors. Gahagan's also sells gardening implements, most of which are purchased retail by home gardeners.
- Which one of the following is most strongly supported by the information above?
- (A) Gahagan's makes a larger profit from the sale of plants than from the sale of all other products combined.
- (B) Most of those who make regular wholesale purchases from Gahagan's have never purchased gardening implements from Gahagan's.
- (C) There are more commercial buyers than home gardeners among Gahagan's regular customers.
- (D) Gahagan's sells a few gardening implements wholesale to landscape contractors.
- (E) A plant purchased from Gahagan's is more likely to have been purchased by a landscape contractor than by a home gardener.
6. Anthropologist: During the last ice age, nomadic communities probably needed at least 15 or 20 members to survive, and they were generally not much larger than this. Ice-age nomads are commonly portrayed as primarily big-game hunters, but most of their food must have in fact come from other sources, such as small game and plants. Hunting large animals is a dangerous activity that would have risked the lives of several members of the community.
- Which one of the following most accurately describes the role played in the argumentation by the statement that ice-age nomads are commonly portrayed as primarily big-game hunters?
- (A) It is a premise used as support for the overall conclusion of the anthropologist's argument.
- (B) It is a clarification of one of the premises of the anthropologist's argument.
- (C) It is an objection that the anthropologist raises against an opposing theory.
- (D) It is the overall conclusion of the anthropologist's argument.
- (E) It describes a claim that the anthropologist attempts to refute.
7. A truly visual art form—for example, painting—is one in which time plays no essential role. Though it takes time to look at a painting, there is no fixed order in which one must look at its parts, and no fixed amount of time one must spend examining it. In contrast, most art forms, such as poetry and music, are essentially temporal; that is, they require performance, which means they must be experienced in a fixed order and over a roughly fixed amount of time. Poetry, for instance, though often written down and thus seemingly a visual art, actually must be performed, even if the performance is only a silent reading to oneself.
- If the statements above are true, then on the basis of them which one of the following must be true?
- (A) Truly visual art forms do not essentially involve performance.
- (B) Poetry is less like music than it is like painting.
- (C) Spatiality and temporality are mutually exclusive components of art forms.
- (D) Art forms that must be examined for an extended period of time in order to be understood are essentially temporal.
- (E) Anything capable of being performed is either musical or poetic, or both musical and poetic.

Logical Reasoning

8. Actors generally learn their lines by focusing on the meanings of the words, the motivations of the characters uttering them, and the physical and emotional dimensions of their own performances. It seems likely that memory can be enhanced by factors such as emotion, action, and context, so this approach is probably more effective than mere rote memorization.

Each of the following, if true, adds support for the conclusion drawn above EXCEPT:

- (A) Test subjects are best able to remember items on a shopping list when they are also told how those items will be used.
- (B) The actors who are able to deliver the greatest amount of dialogue most effortlessly are those who have spent the most time learning their lines.
- (C) Actors are more readily able to remember lines learned while making an appropriate motion—for example, walking across a stage—than lines learned without an accompanying action.
- (D) People who try to memorize information by imagining that they are conveying it to somebody else who needs the information show higher retention than those who try to memorize the material by rote.
- (E) People with no acting experience are able to memorize and deliver lines from a play more accurately after they have read and understood the entire play.

9. Journalists often claim that their investigation of the private lives of political leaders is an effort to improve society by forcing the powerful to conform to the same standards of conduct as the less powerful. In reality, however, the tactic is detrimental to society. It makes public figures more concerned with mere appearances, and makes everyone else cynical about the character of their leaders.

The claim that journalistic investigation of the private lives of political leaders is an effort to improve society plays which one of the following roles in the argument?

- (A) It is a claim that the argument attempts to refute.
- (B) It mentions a justification that is sometimes offered for a practice that, the argument concludes, has undesirable consequences.
- (C) It is cited as evidence often given for an assertion that the argument concludes is false.
- (D) It describes a phenomenon that, according to the argument, is much less damaging to society than journalists often assume.
- (E) It gives an example of a phenomenon that the argument contends has very different effects from those it is generally assumed by everyone to have.

10. While the population of city X is approximately one-half that of city Y, the number of city X residents who are patients in hospitals is only one-fourth that of the number of city Y residents who are patients in hospitals.

Each of the following, if true, contributes to an explanation of the difference in the number of residents who are patients in hospitals EXCEPT:

- (A) Preventive health programs are more prevalent in city X than in city Y.
- (B) The hospitals in city X are noted as leaders in employing outpatient treatment wherever possible.
- (C) The drinking water of city Y has dangerously high levels of pollutants, whereas this is not the case for city X.
- (D) The hospitals in city Y are of very high quality, and residents of city X are often sent there for treatment.
- (E) The lifestyle in city X is significantly less stressful than the lifestyle in city Y.

11. A law is futile unless most of the parties subject to it abide by it willingly. Thus, there can be no comprehensive international solution to the problem of pollution, since few nations would willingly give up their power over their own industries.

Which one of the following is an assumption required by the argument?

- (A) A comprehensive solution to the problems of pollution would require major changes in international law.
- (B) Some nations would be required to give up some of their power over their own industries as part of any comprehensive solution to the problem of pollution.
- (C) If most nations were willing to abide by international law, then there could be a comprehensive solution to the problem of pollution.
- (D) The problems created by pollution affect most of the world's nations, but the pollution itself is produced by the industries of relatively few nations.
- (E) Most of the current international laws concerning pollution do not require nations to give up any of their power over their own industries.

Logical Reasoning

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12. Ecologist: El Niño, a global weather phenomenon that occurs once every several years, is expected to become more frequent in coming decades due to the global warming caused by air pollution. In region T, El Niño causes heavy winter rainfall. Since rodent populations typically increase during long periods of sustained rain, it is likely that average rodent populations in region T will also increase in coming decades.

Which one of the following, if true, would most weaken the ecologist's argument?

- (A) In region T, there is typically much less rainfall in summer than there is in winter.
- (B) Rodent populations in region T often diminish during long periods in which there are no heavy rains.
- (C) In many regions that, on average, experience substantially more winter rainfall than region T does, average rodent populations are considerably lower than they are in region T.
- (D) In region T, winters marked by relatively high rainfall have usually not been marked by long periods of sustained rain.
- (E) The global warming caused by air pollution produces a number of effects, other than the increase in the frequency of El Niño, that could affect rodent populations.

13. If the natural history museum stays within this year's budget, it will be unable to stay within next year's budget, for renovating next year will make the museum's expenditures exceed next year's very tight budget. After all, the museum will have to renovate next year if it does not do so this year, because work from previous renovations is deteriorating rapidly.

The argument's conclusion can be properly inferred if which one of the following is assumed?

- (A) The museum will stay within this year's budget.
- (B) This year's budget is less than next year's budget.
- (C) The museum will not renovate next year.
- (D) The museum will exceed this year's budget if it renovates this year.
- (E) The museum will stay within this year's budget if it does not renovate this year.

14. Science writer: Scientists often accept a scientific argument largely for social reasons, such as the argument's acceptance by other scientists or the prestige of the scientist making the argument. But this is not at all to the sciences' detriment, for similar social factors strongly influence every human endeavor.

The science writer's argument is most vulnerable to criticism on the grounds that it

- (A) takes for granted that the only legitimate reasons for accepting an argument are social reasons
- (B) takes for granted that whether a behavior obstructs the achievement of a particular endeavor's goals depends on the prevalence of comparable behaviors in other endeavors
- (C) fails to consider the possibility that scientists who accept an argument largely for social reasons also generally consider relevant scientific evidence before accepting the argument
- (D) fails to consider the possibility that many scientists are unaware that they usually accept scientific arguments largely for social reasons
- (E) takes for granted that a behavior that is not detrimental to the sciences will not be detrimental to any other human endeavor

15. Historian: Scholars writing histories of an era's business practices must, of course, analyze the practices and strategies employed by firms of that era. But historians probably study successful firms more frequently than they do unsuccessful firms. Therefore, it is reasonable to think that business histories overestimate the successes of past businesses.

Which one of the following would, if true, most support the historian's argument?

- (A) The specific factors that cause businesses to do poorly are often not inferable from historical records of business activity.
- (B) Those who study past first-person accounts of business strategies inevitably approach them with certain present-day cultural assumptions.
- (C) The many public legal documents that firms have had to file provide a record that is more objective than that provided by the firms' own internal documents.
- (D) The records of businesses that have gone bankrupt are destroyed more frequently than the records of other businesses.
- (E) Scholars who study businesses of the past are usually trained in the effective techniques of business administration.

Logical Reasoning

16. Manager: I plan to put together a successful marketing team by choosing highly skilled, independent workers who prefer not to work as part of a tightly knit group. This strategy is bound to succeed because recent research shows that when a common purpose is shared, the flexibility of loosely bound groups enables them to function better than tightly knit ones.

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

- (A) presumes that factors that are collectively sufficient for success are also individually necessary for success
- (B) relies on research that has no apparent relevance to the manager's proposed plan
- (C) takes for granted that flexible teams always function significantly better than inflexible teams
- (D) overlooks the possibility that people who prefer not to work in tightly knit groups may have difficulty committing to a common purpose
- (E) confuses the goals that the manager is seeking to achieve with the goals that must be held in common by the members of the marketing team

17. Different cultures have independently reached the conclusion that ingesting honey daily promotes vigor and longevity. Thus, unless strong evidence emerges contradicting this conclusion, we should assume that it is true.

The pattern of reasoning in which one of the following is most similar to that in the argument above?

- (A) Three engineers have inspected the bridge, and each has independently concluded that it is safe. So unless good evidence emerges that the bridge is unsafe, it should be considered safe.
- (B) Numerous studies have concluded that most people benefit from weight-training exercises. Thus, since no other form of exercise has been shown to be more beneficial, most people should be encouraged to exercise with weights.
- (C) The members of an independent group of scientists have concluded that human activities over the last century have disrupted global weather patterns. Thus, unless these scientists are working from questionable assumptions, we should conclude that their assessment is correct.
- (D) Three theater critics, none of whom had any influence on the others, said that *Tales in Tokyo* was not worth the price of admission. Thus, unless each of these critics happened to attend the play on the same night, it is unlikely that the play will be successful.
- (E) Several different physicians examined Janet, and none could agree on a diagnosis. Therefore, unless new evidence shows that Janet is unhealthy, she should instead assume that she is healthy.

18. Land developer: In a certain nation, stringent regulations prevent private landowners from building on their land if any endangered species is present on it. These regulations make the presence of endangered species a severe financial liability for many landowners and thereby discourage the landowners from protecting the endangered species on their land. Therefore, endangered species would very likely not be harmed by removal of the regulations on land development.

The reasoning in the land developer's argument is most vulnerable to criticism on which one of the following grounds?

- (A) It confuses a condition whose presence would be required in order for a certain result to be produced with a condition whose presence would be required to prevent that result from occurring.
- (B) It justifies a claim containing a value judgment solely on the basis of factual claims that do not in themselves entail that value judgment.
- (C) It unjustifiably overlooks the possibility that even if certain factors tend to produce a given effect, they may be likely to produce stronger countervailing effects as well.
- (D) It fails to take into account the possibility that policies that are not in the interest of land developers may well be in the interest of landowners.
- (E) It fails to account for potential reactions from private landowners who do not have any endangered species on their land.

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Logical Reasoning

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19. I promised Bernie that I would answer his question. He asked me whether his project had been approved. I misunderstood and thought he had asked whether I had approved it. I said, truthfully, “I would approve it if I could, but I don’t have the authority to do so—that is up to Dorothy, and she hasn’t yet made a decision.” Thus, I fulfilled my promise to Bernie.

Which one of the following, if assumed, enables the conclusion above to be properly drawn?

- (A) All there is to answering a question is giving the questioner the information requested.
- (B) No person can be held accountable for another person’s decisions.
- (C) The person responsible for a decision is the one who should explain the decision.
- (D) One need not fulfill a promise in order to do the best that could be done to fulfill it.
- (E) Making a promise always obliges a person to keep it.

20. Azalea bushes flourish in acidic soil. Clay soil, while rarely acidic, can be mixed with other types of soil to create a soil that is acidic. Hence, azalea bushes can be made to flourish in clay soil.

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

- (A) Mixing an acidic soil with another type of soil always results in an acidic soil.
- (B) Clay soil that is mixed with certain other types of soil is still clay soil.
- (C) Whenever clay soil is mixed with other types of soil, an acidic soil results.
- (D) Some plants do not flourish in acidic soil.
- (E) Azalea bushes do as well in treated clay soils as in naturally acidic soils.

21. Company policy: Eligible employees will be granted up to six weeks of paid parental leave following the birth or adoption of a child. To be eligible, an employee must apply for the benefit at least three months prior to the beginning of the leave period and must have at least one year of full-time employment with the company at the time of application.

Which one of the following judgments most closely conforms to the company policy?

- (A) Mac is a full-time employee who has been with the company for exactly one year. He just adopted a child, and he applied for parental leave three months ago, so Mac should be granted the leave.
- (B) Sara has worked full-time for the company for three years, and she applied for parental leave four months before the recent birth of her child. However, she should not be granted the leave because she took a leave of absence within the past year.
- (C) Hal, a second-year, full-time employee, applied for parental leave three months ago. He wishes to stay at home for only two weeks following the impending birth of his child, so the company should not grant him parental leave.
- (D) Dudley has worked part-time for the company for the past seven years. He applied for parental leave over three months before the birth of his child, so it should be granted to him.
- (E) Maria has worked full-time for the company for the past two years and applied for parental leave six months prior to her adoption of a child, so she should be granted parental leave.

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Logical Reasoning

22. An effective acting performance does not call the audience's attention to the fact that it is a performance. That would make it more difficult for the audience to empathize with the character the actor is playing, and effective dramatic performances do not detract from the audience's appreciation of a play.

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

- (A) An audience will not completely appreciate a play unless all of the acting performances in the play are effective.
- (B) As long as an acting performance does not call the audience's attention to the fact that it is a performance, it will not detract from the audience's appreciation of a play.
- (C) If a performance by an actor in a play enhances the audience's appreciation of the play, then the play as a whole is better as a result.
- (D) An effective dramatic performance in a play will enhance the audience's appreciation of the play.
- (E) A dramatic performance that makes it more difficult for the audience to empathize with the actor's character detracts from the audience's appreciation of the play.

23. The computer software industry is rapidly growing and has been for some time. For a company to grow rapidly, it must be innovative, which means it must have creative employees or a management that is open to new ideas. Logichut is a software company that is said to have no creative employees. If so, its management is evidently open to new ideas.

The reasoning in the argument is flawed in that it

- (A) illicitly presumes that because a set of things has a certain property, each member of that set has the property
- (B) confuses a necessary condition for a company's being innovative with a sufficient condition for a company's being innovative
- (C) illicitly concludes that because many people believe something, it must be true
- (D) confuses a necessary condition for a company to grow rapidly with a sufficient condition for a company to grow rapidly
- (E) overlooks the possibility that a software company could have both creative employees and a management that is open to new ideas

24. A movie studio's script readers discard all proposed scripts that are not submitted by agents, and they discard all scripts that are incorrectly formatted. So a script that is submitted by an agent and formatted correctly will not be discarded by the studio's script readers.

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

- (A) To be accepted, entries in the essay contest must be postmarked by the deadline and accompanied by a completed entry form. March 21 was the deadline. Thus, an entry that is accompanied by a completed entry form but postmarked March 22 will not be accepted.
- (B) If your kitchen is well organized and you are a good cook, the meals you prepare will be delicious. The dinner Jon prepared last week was not at all tasty, so his kitchen must not be well organized.
- (C) If Bob starts exercising daily, he will improve his fitness level. His fitness level will also improve if he quits smoking. So if he refuses to exercise and continues to smoke, his fitness level is not going to improve.
- (D) The police are allowed to ticket any parked car that does not have a parking permit. They are also allowed to ticket any parked car whose parking permit has expired. Thus, the police are going to ticket Ruta's car, for her parking permit has expired.
- (E) Most dogs that have attended obedience classes respond correctly to basic commands, but only some are able to perform advanced tricks. Thus, any dog that has attended obedience classes and performs advanced tricks will be able to respond correctly to basic commands.

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Logical Reasoning

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25. Translator: Dr. Abner, apparently scornful of my translation of an ancient poem on the grounds that it is inaccurate, says that my translation produces in most readers feelings other than those the original text was intended to produce. However, as Dr. Abner should realize, we do not know how people originally responded to the poem or how its author intended them to respond. So Dr. Abner's criticism is unjustified.

The translator's argument is flawed in that it

- (A) fails to adequately address the possibility that the original poem had more than one author
- (B) draws a conclusion purely on the basis of an appeal to popular opinion
- (C) fails to adequately address the possibility that the original text was not intended to produce any particular feelings in the reader
- (D) rejects an argument merely because of the circumstances of the person who offered it
- (E) concludes that we cannot know that certain effects were not what the author intended merely because we do not know what specific effects the author did intend

26. Letter to the editor: In calling on antinuclear activists to "live up to their own ideals" and help find better ways of disposing of nuclear waste, advocates of nuclear power merely prove their own dishonesty. Everyone knows that antinuclear activists want the world rid of nuclear power as soon as possible, and they believe any other option is environmentally irresponsible. But finding better ways of disposing of nuclear waste would probably make nuclear power acceptable to more people and thus likelier to continue.

Which one of the following principles, if valid, most helps to justify the reasoning in the argument?

- (A) If other options are available, it is irresponsible to take a possibly beneficial course of action that has the potential of causing harm.
- (B) It is better to eliminate a potentially harmful practice than to try to improve it, if improving it will not significantly reduce its capacity to cause harm.
- (C) If one is calling on people to act in a way that will possibly undermine their goals, it is dishonest to ask that they do so for the sake of their ideals.
- (D) It is irresponsible to try to induce others to find a practice acceptable if it is not one's own belief that that practice is acceptable.
- (E) It is dishonest to ask people to live up to their ideals without revealing whether one's own ideals conflict with theirs.

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.

Reading Comprehension

Time—35 minutes

27 Questions

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 questions, more than one of the choices could conceivably answer the question. However, you are to choose the best answer; that is, choose the response that most accurately and completely answers the question and mark that response on your answer sheet.

Two competing demands we make of the law create a troubling conflict that contributes to the law's frequent failure to deliver what we imagine it should. On one hand, we want a formalist system of law—one that is rational and rule-based, and that promises to deliver us from arbitrariness, irrationality, and caprice in a coherent, reasoned way. It should be a system that we are capable of understanding and generally able to depend on so that we can order our affairs with the knowledge that none of us will be individually disadvantaged before it. In short, it is imperative that the law provide a universal ordering principle that is rational, consistently applied, and blind to the differing social and economic situations of those who come before it.

On the other hand, however, we want the law to be connected to social reality and sensitive to the particular contexts out of which individual cases arise. After all, a body of law is of little use if it delivers justice that is merely procedural as opposed to substantive—i.e., if it cannot deliver results in individual cases that we can recognize as fair and equitable. It need not, of course, be the outcome that we, as individual parties, would want; someone must, after all, lose in an adversarial system. But it must at least be an outcome that we, as parties and observers, can accept as legitimate and justifiable according to some common understanding of fairness and justice. Cases should not, for example, be decided based strictly on the application of unalterable rules without regard for the equity or reasonableness of the outcome. Such extreme formalism, applied neutrally and without prejudice but also without sensitivity to the social contexts of those involved, speaks little to the substance of justice. And it is imperative that the legal system deliver substantive justice in individual cases—that it derive from and relate to subjective experience as well as objective reason.

It seems, then, that we are left with an irreconcilable tension arising from the competing imperatives of formalism and substantive justice. Any attempt to accommodate both principles within the legal system is bound to fail for systemic reasons: formalism cannot produce substantive justice until there is a reasonable degree of social equality. Without this equality, formalism may very well perpetuate injustice; no universal rules can guarantee otherwise. If we cannot aspire to the significant degree of social and economic equality that is required for formalism to be compatible with the achievement of substantive justice, then formalism should be abandoned so that the

law can adapt to social reality. The attempt to reconcile formalism and substantive justice within a legal system situated in conditions of social inequality is a misguided project.

1. Which one of the following would, if true, most seriously undermine the author's conclusion about formalism in legal systems?
 - (A) The vast majority of people are quite aware of the imperfections of merely procedural justice but do not see any practical way of remedying these imperfections.
 - (B) Nonformalist legal systems have been found to deliver substantive justice even less frequently than their formalist counterparts.
 - (C) Any type of collective action that is formalized into a set of rules tends to become less effective as those rules become dated and less relevant.
 - (D) Societies in which there is little social inequality tend to use formalism as a basis for their legal systems.
 - (E) A formalist approach to the law is sometimes found to be too broad and abstract to apply to the particulars of individual cases.

2. Which one of the following most accurately expresses the message the author intends to convey in using the phrase "misguided project" in the final sentence of the passage?
 - (A) The project would be much more difficult than the benefits of its success would warrant.
 - (B) Such a project is bound to produce unforeseen negative consequences.
 - (C) The project lacks the expert guidance that would be necessary to make it a success.
 - (D) The steps necessary to make such a project succeed would violate several important principles of justice.
 - (E) Such a project cannot, given the present context, be successful.

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Reading Comprehension

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3. The passage most strongly supports which one of the following statements about a formalist approach to the law?
- (A) It tends to be too detailed in its language and is not sufficiently reliant on broad principles.
(B) It may satisfy the demands of objective reason and yet fail to connect to social reality.
(C) It produces substantive justice in individual cases if it is applied neutrally and without prejudice.
(D) Its tension with substantive justice arises from their differing approaches to deductive reasoning.
(E) It can be reconciled with substantive justice by formalizing a recognition of social inequalities.
4. The author's primary purpose in mentioning the fact that someone must lose in an adversarial system of law (third sentence of the second paragraph) is to
- (A) emphasize the systemic nature of the tension between formalism and substantive justice
(B) imply that, invariably, someone will view the outcome of a legal proceeding as unfair
(C) suggest that the flaws of formalism may be absent from some systems of law
(D) stress that substantive justice cannot be expected to produce outcomes that favor every participant
(E) foreshadow the author's conclusion about the ultimate irreconcilability of formalism and substantive justice
5. The passage indicates that which one of the following is a characteristic of a body of law that delivers merely procedural justice?
- (A) It cannot be relied upon to deliver results that are recognizably fair and equitable.
(B) It derives from subjective experience as well as objective reason.
(C) It adapts too readily to social reality.
(D) It takes into account the social and economic circumstances of those who come before the law.
(E) It is based on a common understanding of fairness and justice.

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Reading Comprehension

Passage A is adapted from a book review by physicist Freeman Dyson. Passage B is adapted from a response to the review.

Passage A

There are two extreme views concerning the role of science in human understanding. The reductionist view holds that all kinds of knowledge, from physics to ethics, can be reduced to science. The traditional view holds that science is one of many independent sources of knowledge. Most people hold views between these two extremes. Skeptics of paranormal phenomena are generally near the reductionist extreme, while I am near the traditional extreme.

The question of the limits of science is closely connected to the possible existence of paranormal phenomena. Scientific attempts to study extrasensory perception and telepathy have failed. Skeptics conclude from this that paranormal phenomena do not exist. I do not accept this conclusion because I am not a reductionist. Paranormal phenomena may exist but be inaccessible to scientific investigation. This is just a hypothesis, but one that I find tenable and plausible.

This hypothesis is supported by abundant evidence (stories of ordinary people who apparently possess paranormal abilities) collected by the Society for Psychical Research and similar organizations. This evidence is anecdotal rather than scientific, since it cannot be reproduced under controlled conditions. But the organizations have conscientiously interviewed eyewitnesses right after the events and carefully documented the stories. These stories make it clear that if paranormal events occur, they occur only when people are under stress and experiencing strong emotion. This would explain why paranormal phenomena are not observable in well-controlled scientific experiments. Strong emotion and stress are incompatible with scientific procedures.

Paranormal phenomena and the scientific method may be complementary. “Complementary” is a technical term in quantum physics, meaning that two descriptions of nature are both valid but cannot be observed simultaneously. The classic example of complementarity is the dual nature of light. Light behaves as a wave in one experiment and as particles in another, but we cannot see both in the same experiment.

Passage B

Freeman Dyson makes a ridiculous plea for openness to the paranormal because he is not a reductionist and because anecdotal evidence convinces him that under certain conditions (e.g., stress), some people exhibit paranormal powers, unless they are placed in controlled scientific conditions, in which case the powers mysteriously disappear. A scientist of Dyson’s caliber should know that anecdotes do not make a science. The only way to find out if anecdotes represent real phenomena is controlled experimental tests. Paranormal phenomena have repeatedly been subjected to rigorous scientific experiments, and the

results are unequivocal: psychic power is a chimera. Dyson recognizes that his belief in the possibility of paranormal phenomena conflicts with his scientific views, but he responds by invoking the principle of complementarity. Sorry, but the principle does not apply to the paranormal. Either people can read other people’s minds or they cannot. Science has demonstrated that they cannot. And being a holist instead of a reductionist or reading about weird things that happen to people does not change this scientific fact.

6. Both passages are concerned with answering which one of the following questions?
 - (A) Does experiencing apparent paranormal phenomena lead to stress?
 - (B) Is it possible that paranormal phenomena exist?
 - (C) Do anecdotes have any place in scientific inquiry?
 - (D) Is the principle of complementarity valid outside quantum physics?
 - (E) Are there kinds of knowledge that have not been successfully reduced to science?

7. It can be inferred that the author of passage A would be most likely to consider which one of the following assertions made in passage B to misrepresent his views?
 - (A) The author of passage A is convinced that under certain conditions some people exhibit paranormal powers.
 - (B) The author of passage A believes that there is anecdotal evidence for the existence of paranormal phenomena.
 - (C) The author of passage A denies that he holds the reductionist view of the role of science in human understanding.
 - (D) The author of passage A tries to resolve the conflict between science and the paranormal by invoking the principle of complementarity.
 - (E) The author of passage A believes that paranormal powers are not observable in scientific experiments.

8. In the first sentence of passage B, the author says that paranormal powers “mysteriously disappear” when people are placed in controlled scientific conditions primarily in order to
 - (A) present a counterexample to reductionism
 - (B) introduce the author’s view of the role of science in human understanding
 - (C) state the author’s main point of disagreement with passage A
 - (D) ridicule a view expressed in passage A
 - (E) convey the results of scientific investigations of the paranormal

Reading Comprehension

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9. Which one of the following principles underlies the argument in passage B but would be rejected by the author of passage A?
- (A) There are principles of quantum physics that cannot be applied to studies of human behavior.
(B) Either all knowledge can be reduced to science, or science is in no way privileged over other sources of knowledge.
(C) Scientific facts are valid independently of any views that people may have about the role of science in human understanding.
(D) If the existence of an alleged phenomenon cannot be demonstrated in controlled experimental tests, then the phenomenon does not exist.
(E) The support that anecdotes provide for a scientific theory can never be as strong as the support provided by controlled experimental tests.
10. The primary purposes of the two passages are related in which one of the following ways?
- (A) Passage A argues for a general view, and passage B presents a specific counterexample to that view.
(B) Passage A proposes a wide-ranging new theory, and passage B takes issue with some details of that theory.
(C) Passage A argues that something is possible, and passage B tries to refute that argument.
(D) Passage A questions a mainstream view, and passage B defends that view against the charges made in passage A.
(E) Passage A argues that a theory is self-contradictory, and passage B argues that the contradiction is only apparent.
11. Passage A, but not passage B, refers to
- (A) scientific experiments
(B) anecdotal evidence
(C) stress
(D) reductionism
(E) the dual nature of light
12. Which one of the following statements most accurately describes the relationship between passage B and the assertion in passage A that “skeptics of paranormal phenomena are generally near the reductionist extreme” (last sentence of the first paragraph)?
- (A) Passage B attempts to disprove that assertion.
(B) Passage B dismisses that assertion as not worthy of a response.
(C) Passage B serves as an example of that assertion.
(D) Passage B examines the relationship of that assertion to the principle of complementarity.
(E) Passage B attempts to show that that assertion is incompatible with other assertions made in passage A.
13. It can be inferred from the passages that the author of passage B would be more likely than the author of passage A to accept which one of the following statements?
- (A) There may be real phenomena that can never be discovered by scientific procedures.
(B) There are numerous reports citing ordinary people who apparently demonstrate paranormal abilities.
(C) Light behaves as a wave in some experiments and as particles in others.
(D) Scientific investigation has provided no evidence that extrasensory perception and telepathy are real.
(E) The same general methods that are used in physics are appropriate to the study of all human behavior.

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Reading Comprehension

In typical accounts of the beginnings of bebop—the first “modern” jazz style, which was originated in the 1940s by Dizzy Gillespie, Charlie Parker, and Thelonious Monk, among others—commercialism plays an important, though indirect, role. By the early 1940s, according to these histories, jazz had reached an impasse. The reigning jazz style, swing, had become “threadbare,” a “harmonic and melodic blind alley,” a formulaic popular music undergoing “death by entropy,” a “billion-dollar rut.”

These metaphors, sampled from various writings on jazz, echo the “crisis theory” of twentieth-century European classical music. Classical music history textbooks commonly impute the eruptions of modernity in the early 1900s to classical music’s stubborn failure to move beyond the language of tonality worn out from overuse in the nineteenth century. Something similar is implied about jazz in the early 1940s. Musicians’ failure to extend jazz’s rhythmic, harmonic, and melodic language in directions plainly indicated by the music itself built up pressure resulting in the eruption of a new musical modernism.

But phrases like “billion-dollar rut” clearly suggest that these writers believe that the real culprit is commercialism—the commingling of art and commerce that had for a time allowed swing to become both an authentic jazz expression and a national fad. Even after swing had run its course, the theory goes, the machinery of the popular music industry continued to prop up the “threadbare” idiom, seducing musicians into going through the motions long after they had any legitimate artistic reason to do so. In other words, mass-market capitalism was a logjam in the path of musical evolution that could be removed only by explosive force. Bebop provided that force. In this version of jazz history there is an implicit teleology to the progression from early jazz through swing to bebop: the gradual shedding of jazz’s associations with dance, popular song, and entertainment. Bebop is the logical culmination of this process—in it jazz became “art,” declaring its autonomy by severing forever its ties to commerce.

This insistence that bebop is anticommercial may suit the needs of contemporary jazz discourse, but it is a poor basis for historical inquiry. It idealizes the circumstances of artistic creation and represses the unpleasant reality that commercial relations permeate all realms of musical entertainment. For the musicians who originated bebop, mass-market capitalism was not a prison from which the true artist was duty-bound to escape, but a system of transactions defining music as a profession, thereby making their achievements possible. By 1945, Parker, Gillespie, and Monk had indeed willed a new musical subculture into being. But they were not trying to disengage from the “commercial” music world so much as to find a new point of engagement with it—one that would grant them a measure of autonomy and recognition.

14. Which one of the following most accurately states the main point of the passage?
 - (A) Historical inquiry into the origins of bebop has tended to overemphasize the commercial causes of swing music’s artistic decline.
 - (B) Typical accounts of the origins of bebop misrepresent the relationship of bebop’s originators to mass-market capitalism.
 - (C) Bebop arose as a reaction to the failure of swing musicians to extend jazz’s rhythmic, harmonic, and melodic language in directions plainly indicated by the music itself.
 - (D) Commercial relations permeate all genres of musical entertainment, including bebop.
 - (E) Bebop’s originators did not see bebop as being fundamentally different from swing music.

15. According to the author’s argument, at least some of the originators of bebop were motivated by a desire to
 - (A) attain artistic autonomy
 - (B) overthrow the musical dominance of swing music
 - (C) strip jazz of its associations with entertainment
 - (D) escape the commercial influences present in swing music
 - (E) secure financial rewards greater than those available to swing musicians

16. The primary purpose of the reference to eruptions of modernity in classical music in the early 1900s (second sentence of the second paragraph) is to
 - (A) provide evidence that undermines the typical accounts of the origins of bebop by suggesting that factors other than commercialism were at play
 - (B) outline a theory of classical music history that the author claims is parallel to the typical accounts of the origins of bebop
 - (C) suggest that typical accounts of the origins of bebop are based on an inaccurate understanding of the history of twentieth-century music in general
 - (D) describe a movement in classical music that was part of the impetus behind the transition from swing to bebop in jazz
 - (E) provide an example of a modernist movement in classical music that was motivated at least in part by commercial considerations

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Reading Comprehension

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17. The author of the passage would be most likely to agree with which one of the following statements about the originators of bebop?
- (A) Their music was promoted by the music industry with the same vigor as swing music had been earlier.
(B) They repudiated the notion accepted by swing musicians that jazz was a form of popular entertainment.
(C) They regarded themselves as professionals and accepted commercialism as a central element of their profession.
(D) They were better off financially than they would have been had they played only swing music.
(E) They believed that bebop would appeal to as wide an audience as swing did.
18. It can be inferred from the passage that the proponents of the typical accounts of the origins of bebop would be most likely to believe which one of the following?
- (A) The lack of innovation in classical music in the early 1900s was due largely to commercialism.
(B) Swing music came to enjoy immense commercial success primarily because it was not aesthetically adventurous.
(C) The insistence that bebop was anticommercial in its origins serves the needs of today's jazz critics rather than the needs of genuine historical inquiry.
(D) Swing contained the seeds of innovations in musical language that, because of commercial pressures, were left undeveloped by swing musicians.
(E) The originators of bebop embraced jazz's associations with dance, popular song, and entertainment.
19. According to the passage, which one of the following is true of typical accounts of the origins of bebop?
- (A) They assert that bebop was originated by musicians seeking commercial success.
(B) They represent bebop as an outgrowth of the modernist movement in classical music.
(C) They identify bebop as the first jazz movement that did not have strong commercial appeal.
(D) They overly idealize the realities of artistic creation.
(E) They were themselves shaped by commercial pressures.
20. It can be inferred from the passage that the authors of typical accounts of the origins of bebop would be most likely to agree with which one of the following statements about swing musicians in the 1940s?
- (A) They continued to believe that their music was innovative even though artistic developments in jazz had rendered swing outdated.
(B) They resented critics' insinuations that their music was merely entertainment.
(C) They recorded and performed music in a style that many of them no longer found to be artistically compelling.
(D) They believed they had a responsibility to preserve the great traditions established by earlier generations of jazz musicians.
(E) They sought unsuccessfully to liberate their music from the pressures of commercialism.
21. Which one of the following principles does the author use in analyzing typical accounts of the origins of bebop?
- (A) Artistic progress in music is generally the result of commercial pressures.
(B) New movements in music typically begin with the rejection of the fundamental principles of the reigning musical style.
(C) Music historians should rely primarily on musicians' first-hand accounts in analyzing significant developments in music.
(D) The turns of phrase employed by historians can legitimately be analyzed to uncover the historians' assumptions.
(E) Music historians must take care not to let their aesthetic preferences influence their historical analyses.

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Reading Comprehension

Organic chemist Larry Koskan's inspiration arrived in the mid-1980s, when he read a report by marine biologists describing how oyster shells grow. It was known that oysters secrete calcium carbonate as an essential constituent of their hardened exteriors, but the biologists discovered that they also produce a special protein-based agent that molds the mineral into their shells' characteristic shape.

At the time, Koskan was studying the properties of water-soluble polyacrylates. Among other things, these widely used additives help to stem the buildup of damaging mineral-scale deposits (carbonate and sulphate compounds) on the surfaces of industrial water-treatment equipment. What Koskan realized was that the agent produced by the oysters—polyaspartate—inhibits the formation of calcium carbonate and could also therefore control scale. Polyaspartate mimics the scale-inhibiting activity of polyacrylates because it has a similar chemical structure. But because the backbone of polyaspartate is made of peptides (chains of amino acids) rather than the hydrocarbon compounds that constitute polyacrylates' backbone, it is subject to bacterial action (i.e., it is biodegradable).

Polyacrylates, inexpensive and versatile chemicals, are easy to manufacture and process. In laundry detergents, they act as dispersants that keep dirt suspended in the wash water. As a recent alternative to phosphates, which, via wastewater, pollute surface waters, some half a billion pounds of polyacrylates are used in detergents worldwide every year. Additionally, some polyacrylates have chemical configurations with a tremendous affinity for water, making them ideal in superabsorbent materials for disposable products like baby diapers, which currently account for around 2 billion pounds in annual production of polyacrylates. The trouble is, polyacrylates last virtually forever, and these vast quantities of the highly stable substance are being discarded in landfills.

With requests by consumer products companies for environmentally friendly products growing rapidly, Koskan started his own small company and began researching cost-effective ways of producing polyaspartate for industrial use. Soon, leading chemical companies also began researching the issue, with the consensus being that polyaspartate was the most suitable replacement for polyacrylates. Unfortunately, as with many emerging technologies that lack a supporting infrastructure, polyaspartate's price was estimated to be four to five times that of the high-volume-production alternative. Given this, the consumer products industry lost interest in the technology, and the chemical industry shelved it. Koskan's company, however, believing that polyaspartate could nonetheless be market-competitive on its own merits, decided to persevere and focus on specialty application niches. Polyaspartate has since shown unparalleled success at eliminating scale in offshore oil production equipment and is being used by the farming industry to keep chemical fertilizers in the soil longer, reducing pollution of groundwater by the

fertilizers. If Koskan's company can show continued success, it may yet help enliven an environmental chemistry sector saddled with a reputation for ineffectiveness and high cost.

22. Which one of the following most accurately expresses the main point of the passage?
- Polyaspartate was once thought to be the inevitable successor to polyacrylates, but technical shortcomings restrict its usefulness to applications in specialized niche markets.
 - The success of Koskan's company in the development of polyaspartate for industrial uses may improve the reputation of the environmental chemical industry.
 - Polyaspartate, which Koskan researched and developed as an environmentally friendly alternative to polyacrylates, shows promise for commercial applications but also faces barriers.
 - Koskan's work with polyaspartate has shown that environmentally friendly alternatives to many industrial chemicals can be found by studying plants and animals.
 - Although polyaspartate is superior to existing products, it will probably fail in the marketplace because of hurdles that stand in the way of its being economically competitive.
23. Which one of the following scenarios would conform most closely to the assessment given in the final sentence of the passage?
- Koskan's company produces a carefully designed marketing video that demonstrates the effectiveness of polyaspartate in eliminating scale in both oil production equipment and water treatment equipment.
 - Koskan's company comes under increased market competition from leading chemical companies that are developing alternatives to polyaspartate to reduce scale in offshore oil equipment.
 - Using revenues from sales of polyaspartate to the oil and farming industries, Koskan's company is able to develop low-cost ways of producing large volumes of polyaspartate for general use.
 - Koskan's company performs studies demonstrating that polyacrylates are accumulating in landfills at a rate that is increasing steadily.
 - Koskan's company discovers that oysters secrete a highly specialized form of polyaspartate that is difficult to isolate in laboratory settings.

Reading Comprehension

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24. Which one of the following most accurately captures the meaning of the phrase “on its own merits” as it is used in the third-to-last sentence of the passage?
- (A) without funding from government agencies
(B) without reference to its chemical properties
(C) once its newest industrial uses are more widely publicized
(D) not merely as a general substitute for polyacrylates
(E) because of its unsurpassed ability to reduce scale
25. It can most reasonably be inferred from the passage that the author believes that the failure of leading chemical companies to fully embrace polyaspartate as a replacement for polyacrylates
- (A) was a result of fears about the potentially harmful consequences to human health of using a new and untested material
(B) was not primarily a result of considerations involving costs and profits
(C) was not due to a widely accepted belief that polyaspartate is ineffectual
(D) was a result of the relative scarcity of the raw material from which polyaspartate is made
(E) was due to the belief that consumers would not trust products containing polyaspartate
26. The primary purpose of the passage is to
- (A) describe and analyze one attempt to develop and market a new, promising alternative to an existing product
(B) demonstrate the mistakes made in one attempt to develop and market a new, promising alternative to an existing product
(C) illustrate the kinds of problems that are likely to be encountered in attempts to market a new, promising alternative to an existing product
(D) comment on the state of affairs in an industry that tends to overlook environmentally friendly innovation in favor of maintaining strong profits
(E) explain the chemical processes that make a particular new product a promising alternative to an existing product
27. The passage most strongly suggests that which one of the following is true of both polyaspartate and polyacrylates?
- (A) They perform identically within any industrial application.
(B) They were both discovered as a result of research performed by marine biologists.
(C) The chemical industry was aware of their existence long before industrial applications for either one were developed.
(D) They both have been used to reduce water pollution.
(E) At the time they were first brought to market, leading chemical companies were skeptical about their commercial success.

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.



January 2023 LSAT Conversion Table Form LTZC01

The table below should be used for converting raw scores to their corresponding 120–180 scaled scores for the January 2023 LSAT administration. The table below shows the LSAT reported score that corresponds to each possible raw score.

Raw Score	Scaled Score	Raw Score	Scaled Score
76	180	38	147
75	180	37	146
74	179	36	146
73	177	35	145
72	175	34	144
71	174	33	143
70	173	32	142
69	171	31	142
68	170	30	141
67	169	29	140
66	168	28	139
65	167	27	138
64	167	26	137
63	166	25	136
62	165	24	135
61	164	23	134
60	163	22	133
59	163	21	132
58	162	20	131
57	161	19	130
56	160	18	129
55	160	17	128
54	159	16	126
53	158	15	125
52	158	14	123
51	157	13	121
50	156	12	120
49	155	11	120
48	155	10	120
47	154	9	120
46	153	8	120
45	152	7	120
44	152	6	120
43	151	5	120
42	150	4	120
41	149	3	120
40	149	2	120
39	148	1	120
		0	120

Individual Performance on the Test: Scores are reported on a 120–180 score scale, with 120 being the lowest possible score and 180 being the highest possible score.



January 2023 LSAT Answer Key
Form LTZC01

Question	Analytical Reasoning	Logical Reasoning	Reading Comprehension
1	D	D	B
2	D	C	E
3	A	D	B
4	E	C	D
5	A	E	A
6	B	E	B
7	E	A	A
8	C	B	D
9	B	B	D
10	A	D	C
11	D	B	E
12	E	D	C
13	C	D	E
14	D	B	B
15	A	D	A
16	D	D	B
17	B	A	C
18	D	C	D
19	E	A	D
20	B	B	C
21	D	E	D
22	A	E	C
23	B	A	C
24		C	D
25		E	C
26		C	A
27			D