

## 100 CR Questions

1. **Historian:** Newton developed mathematical concepts and techniques that are fundamental to modern calculus. Leibniz developed closely analogous concepts and techniques. It has traditionally been thought that these discoveries were independent. Researchers have, however, recently discovered notes of Leibniz' that discuss one of Newton's books on mathematics. Several scholars have argued that since the book includes a presentation of Newton's calculus concepts and techniques, and since **the notes were written before Leibniz' own development of calculus concepts and techniques**, it is virtually certain that the traditional view is false. A more cautious conclusion than this is called for, however. **Leibniz' notes are limited to early sections of Newton's book, sections that precede the ones in which Newton's calculus concepts and techniques are presented.**

In the historian's reasoning, the two boldfaced portions play which of the following roles?

- A. The first provides evidence in support of the overall position that the historian defends; the second is evidence that has been used to support an opposing position.
- B. The first provides evidence in support of the overall position that the historian defends; the second is that position.
- C. The first provides evidence in support of an intermediate conclusion that is drawn to provide support for the overall position that the historian defends; the second provides evidence against that intermediate conclusion.
- D. The first is evidence that has been used to support a conclusion that the historian criticizes; the second is evidence offered in support of the historian's own position.
- E. The first is evidence that has been used to support a conclusion that the historian criticizes; the second is further information that substantiates that evidence.

2. Which of the following best completes the passage below?

A primary factor in perpetuating the low salaries of women workers has been their segregation in the so-called pink-collar occupations, such as nursing, teaching, library science, and secretarial work. Partly because these jobs have traditionally been held by women, their salary levels have been depressed, and, despite increased attempts to unionize these workers in recent years, their pay continues to lag. Moreover, although a large percentage of women than ever before are now entering and remaining in the job market, most continue to gravitate toward the pink-collar fields, despite the lower salaries. It seems clear, therefore, that if the average salaries of women workers are to approach those of men, \_\_\_\_\_

- (A) labor unions must redouble their efforts to improve the lot of working women
- (B) society's perception of pink-collar jobs as less important and less demanding than other jobs must be changed
- (C) more men must be encouraged to enter fields traditionally occupied by women
- (D) the number of jobs in the pink-collar fields relative to the size of the work force as a whole must be markedly increased
- (E) more women must enter occupations other than those traditionally reserved for them

3. Every political philosopher of the early twentieth century who was either a socialist or a communist was influenced by Rosa Luxemburg. No one who was influenced by Rosa Luxemburg advocated a totalitarian state.

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

- (A) No early-twentieth-century socialist political philosopher advocated a totalitarian state.
- (B) Every early-twentieth-century political philosopher who did not advocate a totalitarian state was influenced by Rosa Luxemburg.
- (C) Rosa Luxemburg was the only person to influence every early-twentieth-century political philosopher who was either socialist or communist.
- (D) Every early-twentieth-century political philosopher who was influenced by Rosa Luxemburg and was not a socialist was a communist.
- (E) Every early-twentieth-century political philosopher who did not advocate a totalitarian state was either socialist or communist.

4. Some environmentalists question the prudence of exploiting features of the environment, arguing that there are no economic benefits to be gained from forests, mountains, or wetlands that no longer exist. Many environmentalists claim that because nature has intrinsic value it would be wrong to destroy such features of the environment, even if the economic costs of doing so were outweighed by the economic costs of not doing so.

Which one of the following can be logically inferred from the passage?

- (A) It is economically imprudent to exploit features of the environment.
- (B) Some environmentalists appeal to a noneconomic justification in questioning the defensibility of exploiting features of the environment.
- (C) Most environmentalists appeal to economic reasons in questioning the defensibility of exploiting features of the environment.
- (D) Many environmentalists provide only a noneconomic justification in questioning the defensibility of exploiting features of the environment.
- (E) Even if there is no economic reason for protecting the environment, there is a sound noneconomic justification for doing so.

5. **Economist:** In the interaction between producers and consumers, the only obligation that all parties have to act in the best interests of their own side. And distribution of information about product defects is in the best interests of the consumer, So consumers are always obligated to report product defects they discover, while producers are never obligated to reveal them.

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

- A. It is never in the best interests of producers for a producer to reveal a product defect.
- B. No one expects producers to act in a manner counter to their own best interests.
- C. Any product defect is likely to be discovered by consumer
- D. A product defect is more likely to be discovered by a consumer than by a producer
- E. The best interests of consumers never coincide with the best interests of producers

6. The workers at Bell Manufacturing will shortly go on strike unless the management increases their wages. As Bell's president is well aware, however, in order to increase the worker's wages, Bell would have to sell off some of its subsidiaries. So, some of Bell's subsidiaries will be sold.

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

- (A) Bell Manufacturing will begin to suffer increased losses.
- (B) Bell's management will refuse to increase its worker's wages.
- (C) The workers at Bell Manufacturing will not be going on strike.
- (D) Bell's president has the authority to offer the workers their desired wage increase.
- (E) Bell's workers will not accept a package of improved benefits in place of their desired wage increase.

7. **Advertisement:** Anyone who exercises knows from firsthand experience that exercise leads to better performance of such physical organs as the heart and lungs, as well as to improvement in muscle tone. And since your brain is a physical organ, your actions can improve its performance, too. Act now. Subscribe to Stimulus: read the magazine that exercises your brain.

The Advertisement employs which one of the following argumentative strategies?

- (A) It cites experimental evidence that subscribing to the product being advertised has desirable consequences.
- (B) It ridicules people who do not subscribe to Stimulus by suggesting that they do not believe that exercise will improve brain capacity.
- (C) It explains the process by which the product being advertised brings about the result claimed for its use.
- (D) It supports its recommendation by a careful analysis of the concept of exercise.
- (E) It implies that brains and muscle are similar in one respect because they are similar in another respect.

8. When Alicia Green borrowed a neighbor's car without permission, the police merely gave her a warning. However, when Peter Foster did the same thing, he was charged with automobile theft. Peter came to the attention of the police because the car he was driving was hit by a speeding taxi. Alicia was stopped because the car she was driving had defective taillights. It is true that the car Peter took got damaged and the car Alicia took did not, but since it was the taxi that caused the damage this difference was not due to any difference in the blameworthiness of their behavior. Therefore, Alicia should also have been charged with automobile theft.

If all of the claims offered in support of the conclusion are accurate, each of the following could be true EXCEPT:

- (A) The interests of justice would have been better served if the police had released Peter Foster with a warning.
- (B) Alicia Green had never before driven a car belonging to someone else without first securing the owner's permission.
- (C) Peter Foster was hit by the taxi while he was running a red light, whereas Alicia Green drove with extra care to avoid drawing the attention of the police to the car she had taken.
- (D) Alicia Green barely missed hitting a pedestrian when she sped through a red light ten minutes before she was stopped by the police for driving a car that had defective taillights.
- (E) Peter Foster had been cited for speeding twice in the preceding month, whereas Alicia Green had never been cited for a traffic violation.
9. Under the influence of today's computer-oriented culture, publishing for children has taken on a flashy new look that emphasizes illustrations and graphic design; the resulting lack of substance leads to books that are short-lived items covering mainly trendy subjects. The changes also include more humorous content, simplification of difficult material, and a narrower focus on specific topics.

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

- A. The inclusion of humorous material and a narrower focus detract from the substance of a children's book.
- B. The substance of a children's book is important to its longevity.
- C. Children of the computer generation cannot concentrate on long, unbroken sections of prose.
- D. Children judge books primarily on the basis of graphic design.
- E. The lack of substance of a children's book is unlikely to be important to its popularity.

10. Further evidence of a connection between brain physiology and psychological states has recently been uncovered in the form of a correlation between electroencephalograph patterns and characteristic moods. A study showed that participants who suffered from clinical depression exhibited less left frontal lobe activity than right, while, conversely, characteristically good-natured participants exhibited greater left lobe activity. Thus one's general disposition is a result of the activity of one's frontal lobe.

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

- A. Many drugs prescribed to combat clinical depression act by causing increased left lobe activity.
  - B. Excessive sleep, a typical consequence of clinical depression, is known to suppress left lobe activity.
  - C. Frontal lobe activity is not subject to variation the way general disposition is.
  - D. Earlier studies indicated that frontal lobe activity and emotive states are both caused by activity in the brain's limbic activity.
  - E. Social interaction of the kind not engaged in by most clinically depressed people is known to stimulate left lobe activity.
11. We ought to pay attention only to the intrinsic properties of a work of art. Its other, extrinsic properties are irrelevant to our aesthetic interactions with it. For example, when we look at a painting we should consider only what is directly presented in our experience of it. What is really aesthetically relevant, therefore, is not what a painting symbolizes, but what it directly presents to experience.

The conclusion follows logically if which one of the following is added to the premises?

- A. What an art work symbolizes involves only extrinsic properties of that work.
- B. There are certain properties of our experiences of artworks that can be distinguished as symbolic properties.
- C. Only an artwork's intrinsic properties are relevant to our aesthetic interactions with it.
- D. It is possible in theory for an artwork to symbolize nothing.
- E. An intrinsic property of an artwork is one that related the work to itself.

12. The Board of Trustees of the Federici Art Museum has decided to sell some works from its collection in order to raise the funds necessary to refurbish its galleries. Although this may seem like a drastic remedy, the curator had long maintained that among the paintings that the late Ms. Federici collected for the museum were several unsuccessful immature works by Renoir and Cezanne that should be sold because they are of inferior quality and so add nothing to the overall quality of the museum's collection. Hence, the board's action will not detract from the museum's collection.

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

- (A) The directors of an art museum can generally raise funds for refurbishing the building in which the museum's collection is housed by means other than selling parts of its collection.
- (B) The quality of an art collection is determined not just by the quality of its paintings, but by what development of the artistic talent and ideas of the artists represented.
- (C) The immature works by Renoir and Cezanne that were purchased by Ms. Federici were at that time thought by some critics to be unimportant juvenile works.
- (D) Those people who speculate in art by purchasing artworks merely to sell them at much higher prices welcome inflation in the art market, but curators of art museums regret the inflation in the art market.
- (E) The best work of a great artist demands much higher prices in the art market than the worst work of that same artist.
13. In a certain municipality, a judge overturned a suspect's conviction for possession of an illegal weapon. The suspect had fled upon seeing police and subsequently discarded the illegal weapon after the police gave chase. The judge reasoned as follows: the only cause for the police giving chase was the suspect's flight; by itself, flight from the police does not create a reasonable suspicion of a criminal act; evidence collected during an illegal chase is inadmissible; therefore, the evidence in this case was inadmissible.

Which one of the following principles, if valid, most helps to justify the judge's decision that the evidence was inadmissible?

- (A) Flight from the police could create a reasonable suspicion of a criminal act as long as other significant factors are involved.
- (B) People can legally flee from the police only when those people are not involved in a criminal act at the time.
- (C) Police can legally give chase to a person only when the person's actions

have created a reasonable suspicion of a criminal act.

(D) Flight from the police should not itself be considered a criminal act.

(E) In all cases in which a person's actions have created a reasonable suspicion of a criminal act, police can legally give chase to that person

14. **Anthropologist:** Violence is an extreme form of aggression, and is distinct from the self-expression sufficient for survival under normal conditions. Human beings in certain situations react to unpleasant stimuli with violence but only because they are conditioned by their culture to react in this manner.

Each of the following can be logically inferred from the anthropologist's statements EXCEPT:

(A) Not all aggression is violent.

(B) The self-expression required for survival is generally nonaggressive.

(C) Some behaviors are influenced by the cultures in which human beings live.

(D) In normal circumstance, human beings can survive by responding nonviolently.

(E) Violent behavior is a product of one's cultural environment.

15. **Commissioner:** I have been incorrectly criticized for having made my decision on the power plant issue prematurely. I based my decision on the report prepared by the neighborhood association and although I have not studied it thoroughly, I am sure that the information it contains is accurate. Moreover, you may recall that when I received input from the neighborhood association on jail relocation, I agreed with its recommendation.

The commissioner's argument is LEAST vulnerable to which one of the following criticism?

(A) It takes for granted that the association's information is not distorted by bias.

(B) It draws a conclusion about the recommendations of the association from incomplete recollections.

(C) It takes for granted that the association's report is the only direct evidence that needed to be considered.

(D) It hastily concludes that the association's report is accurate without having studied it in detail.

(E) It takes for granted that agreeing with the associations past recommendation helps justify agreeing with its current recommendation

16. A reason Larson cannot do the assignment is that she has an unavoidable scheduling conflict. On the other hand, a reason Franks cannot do the assignment is that he does not quite have the assertiveness the task requires. So, the task must be assigned to Parker, the only supervisor in the shipping department other than Larson and Franks.

The argument depends on assuming which one of the following?

- (A) Larson has the assertiveness the task requires.
  - (B) The task cannot be assigned to anyone other than a supervisor in the shipping department.
  - (C) Franks would be assigned the task if Franks had the assertiveness the task requires.
  - (D) The task cannot be assigned to anyone who has any kind of scheduling conflict.
  - (E) No one who is not a supervisor in the shipping department has the assertiveness this task requires.
17. **Philosopher:** The rational pursuit of happiness is quite different from always doing what one most strongly desires to do. This is because the rational pursuit of happiness must include consideration of long-term consequences, whereas our desires are usually focused on the short term. Moreover, desires are sometimes compulsions, and while ordinary desires result in at least momentary happiness when their goals are attained, compulsions strongly drive a person to pursue goals that offer no happiness even when reached.

If all of the philosopher's statements are true, each of the following could be true EXCEPT:

- (A) the majority of people do not have compulsions.
- (B) Attaining the goal of any desire results in momentary happiness.
- (C) Most people do not pursue happiness rationally.
- (D) Most people want more than their own personal happiness.
- (E) All actions have long-term consequences.

18. Anger in response to insults is unreasonable, for insults are merely assertions that someone has undesirable characteristics. If such an assertion is false, the insulted party ought to pity the ignorance prompting the insult. If it is true, the insulted party should be grateful for such useful information.

Which one of the following, if assumed, enables the argument's conclusion to be properly drawn?

- A. Actions prompted by ignorance do not warrant hostile reactions.
  - B. Anger is an unreasonable response to useful information.
  - C. Anger is an unreasonable response to any action that should prompt pity or gratitude.
  - D. Gratitude and pity are reasonable responses to some forms of hostile or insensitive behavior.
  - E. Pity is the only reasonable reaction to people with undesirable characteristics.
19. The city government should invest surplus funds in improving the city's transportation network. **Most of the network was put in place at a time when the city was much smaller in both area and population.** The subway system is outdated and understaffed. The buses rarely run on schedule and their routes are inconvenient. **If the city does not make changes soon to the network, it will see many of its prized industries relocate to more convenient cities and, as a result, the city's financial health will be jeopardized.**

In the argument above, the two portions in boldface play which of the following roles?

- A. The first is an explanation of a current state of affairs; the second is a prediction based on that state of affairs.
- B. The first is a statement of fact in opposition to the author's conclusion; the second is that conclusion.
- C. The first emphasizes an existing problem; the second offers a proposal to solve that problem.
- D. The first is information the author suggests has been overlooked in the situation at hand; the second describes that situation.
- E. The first is a justification of an impending problem; the second describes the consequences of that problem.

20. **Teacher:** Journalists who conceal the identity of the sources they quote stake their professional reputations on what may be called the logic of anecdotes. This is so because the statements reported by such journalists are dissociated from the precise circumstances in which they were made and thus will be accepted for publication only if the statements are high in plausibility or originality or interest to a given audience—precisely the properties of a good anecdote.

**Student:** But what you are saying, then, is that the journalist need not bother with sources in the first place. Surely, any reasonably resourceful journalist can invent plausible, original, or interesting stories faster than they can be obtained from unidentified sources.

I. The student's response contains which one of the following reasoning flaws?

- (A) confusing a marginal journalistic practice with the primary work done by journalists
- (B) ignoring the possibility that the teacher regards as a prerequisite for the publication of an unattributed statement that the statement have actually been made
- (C) confusing the characteristics of reported statements with the characteristics of the situations in which the statements were made
- (D) judging the merits of the teacher's position solely by the most extreme case to which the position applies
- (E) falsely concluding that if three criteria, met jointly, assure an outcome, then each criterion, met individually, also assures that outcome

II. Which one of the following, if true, most strengthens the teacher's argument?

- (A) A journalist undermines his or her own professional standing by submitting for publication statements that, not being attributed to a named source, are rejected for being implausible, unoriginal, or dull.
- (B) Statements that are attributed to a fully identified source make up the majority of reported statements included by journalists in stories submitted for publication.
- (C) Reported statements that are highly original will often seem implausible unless submitted by a journalist who is known for solid, reliable work.
- (D) Reputable journalists sometimes do not conceal the identity of their sources from their publishers but insist that the identity of those sources be concealed from the public.
- (E) Journalists who have special access to sources whose identity they must conceal are greatly valued by their publishers.

21. Fares on the city-run public buses in Greenville are subsidized by city tax revenues, but among the beneficiaries of the low fares are many people who commute from outside the city to jobs in Greenville. Some city councilors argue that city taxes should be used primarily to benefit the people who pay them, and therefore that bus fares should be raised enough to cover the cost of the service.

Each of the following, if true, would weaken the argument advanced by the city councilors EXCEPT:

- A. Many businesses whose presence in the city is beneficial to the city's taxpayers would relocate outside the city if public-transit fares were more expensive.
  - B. By providing commuters with economic incentives to drive to work, higher transit fares would worsen air pollution in Greenville and increase the cost of maintaining the city's streets.
  - C. Increasing transit fares would disadvantage those residents of the city whose low incomes make them exempt from city taxes, and all city councilors agree that these residents should be able to take advantage of city-run services.
  - D. Voters in the city, many of whom benefit from the low transit fares, are strongly opposed to increasing local taxes.
  - E. People who work in Greenville and earn wages above the nationally mandated minimum all pay the city wage tax of 5 percent.
22. **Government Official:** Clearly, censorship exists if we, as citizens, are not allowed to communicate what we are ready to communicate at our own expense or if other citizens are not permitted access to our communications at their own expense. Public unwillingness to provide funds for certain kinds of scientific, scholarly, or artistic activities cannot, therefore, be described as censorship.

The flawed reasoning in the government official's argument is most parallel to that in which one of the following?

- A. All actions that cause unnecessary harm to others are unjust; so if a just action causes harm to others, that action must be necessary.
- B. Since there is more to good manners than simply using polite forms of address, it is not possible to say on first meeting a person whether or not that person has good manners.

- C. Acrophobia, usually defined as a morbid fear of heights, can also mean a morbid fear of sharp objects. Since both fears have the same name, they undoubtedly have the same origin.
  - D. There is no doubt that a deed is heroic if the doer risks his or her own life to benefit another person. Thus an action is not heroic if the only thing it endangers is the reputation of the doer.
  - E. Perception of beauty in an object is determined by past and present influences on the mind of the beholder. Thus no object can be called beautiful, since not everyone will see beauty in it,
23. The Japanese haiku is defined as a poem of three lines with five syllables in the first line, seven syllables in the second line, and five syllables in the third line. English poets tend to ignore this fact. Disregarding syllable count, they generally call any three-line English poem with a “haiku feel” a haiku. This demonstrates that English poets have little respect for foreign traditions, even those from which some of their own poetry derives.

The reasoning is flawed because it

- A. Confuses matters of objective fact with matters of subjective feeling
  - B. Draws a conclusion that is broader in scope than is warranted by the evidence advanced
  - C. Relies on stereotypes instead of presenting evidence
  - D. Overlooks the possibility that the case it cites is not unique
  - E. Fails to acknowledge that ignoring something implies a negative judgment about that thing
24. A physician who is too thorough in conducting a medical checkup is likely to subject the patient to the discomfort and expense of unnecessary tests. One who is not thorough enough is likely to miss some serious problem and therefore give the patient a false sense of security. It is difficult for physicians to judge exactly how thorough they should be. Therefore, it is generally unwise for patients to have medical checkups when they do not feel ill.

Which one of the following, if true, would most seriously weaken the argument in the passage?

- A. Some serious diseases in their early stages have symptoms that physicians can readily detect, although patients are not aware of any problem.
- B. Under the pressure of reduced reimbursements, physicians have been reducing the average amount of time they spend on each medical checkup.

- C. Patients not medically trained are unable to judge for themselves what degree of thoroughness is appropriate for physicians in conducting medical checkups.
  - D. Many people are financially unable to afford regular medical checkups.
  - E. Some physicians sometimes exercise exactly the right degree of thoroughness in performing a medical checkup.
25. There is relatively little room for growth in the overall carpet market, which is tied to the size of the population. Most who purchase carpet do so only once or twice, first in their twenties or thirties, and then perhaps again in their fifties or sixties. Thus as the population ages, companies producing carpet will be able to gain market share in the carpet market only through purchasing competitors, and not through more aggressive marketing.

Which one of the following, if true, casts the most doubt on the conclusion above?

- A. Most of the major carpet producers market other floor coverings as well.
- B. Most established carpet producers market several different brand names and varieties, and there is no remaining niche in the market for new brands to fill.
- C. Two of the three mergers in the industry's last ten years led to a decline in profits and revenues for the newly merged companies.
- D. Price reductions, achieved by cost-cutting in production, by some of the dominant firms in the carpet market are causing other producers to leave the market altogether.
- E. The carpet market is unlike most markets in that consumers are becoming increasingly resistant to new patterns and styles.

26. Some flowering plant species, entirely dependent on bees for pollination, lure their pollinators with abundant nectar and pollen, which are the only source of food for bees. Often the pollinating species is so highly adapted that it can feed from – and thus pollinate – only a single species of plant. Similarly, some plant species have evolved flowers that only a single species of bee can pollinate – an arrangement that places the plant species at great risk of extinction. If careless applications of pesticides destroy the pollinating bee species, the plant species itself can no longer reproduce.

The information above, if true, most strongly supports which one of the following?

- A. The earliest species of flowering plants appeared on Earth contemporaneously with the earliest bee species.
  - B. If the sole pollinator of a certain plant species is in no danger of extinction, the plant species it pollinates is also unlikely to become extinct.
  - C. Some bees are able to gather pollen and nectar from any species of plant.
  - D. The blossoms of most species of flowering plants attract some species of bees and do not attract others.
  - E. The total destruction of the habitat of some plant species could cause some bee species to become extinct.
27. In the Centerville Botanical Gardens, all tulip trees are older than any maples. A majority, but not all, of the garden's sycamores are older than any of its maples. All the garden's maples are older than any of its dogwoods.

If the statements above are true, which one of the following must also be true of trees in the Centerville Botanical Gardens?

- A. Some dogwoods are as old as the youngest tulip trees.
- B. Some dogwoods are as old as the youngest sycamores.
- C. Some sycamores are not as old as the oldest dogwoods.
- D. Some tulip trees are not as old as the oldest sycamores.
- E. Some sycamores are not as old as the youngest tulip trees.

28. Since Mayor Drabble always repays her political debts as soon as possible, she will almost certainly appoint Lee to be the new head of the arts commission. Lee has wanted that job for a long time, and Drabble owes Lee a lot for his support in the last election.

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

- A. Mayor Drabble has no political debt that is both of longer standing than the one she owes to Lee and could as suitably be repaid by an appointment to be the new head of the arts commission.
  - B. There is no one to whom Mayor Drabble owes a greater political debt for support in the last election than the political debt she owes to Lee.
  - C. Lee is the only person to whom Mayor Drabble owes a political debt who would be willing to accept an appointment from her as the new head of the arts commission.
  - D. Whether Lee is qualified to head the arts commission is irrelevant to Mayor Drabble's decision
  - E. The only way that Mayor Drabble can adequately repay her political debt to Lee is by appointing him to head the arts commission.
29. When glass products are made from recycled glass, the resulting products can be equal in quality to glass products made from quartz sand, the usual raw material. When plastics are recycled, however, the result is inevitably a plastic of a lower grade than the plastic from which it is derived. Moreover, no applications have been found for grades of plastic that are lower than the currently lowest commercial grade.

Which one of the following is a conclusion that can be properly drawn from the statements above?

- A. Products cannot presently be made out of plastic recycled entirely from the currently lowest commercial grade.
- B. It is impossible to make glass products from recycled glass that is equal in quality to the best glass products made from the usual raw material.
- C. Glass products made from recycled glass are less expensive than comparable products made from quartz sand.
- D. Unless recycled plastic bears some symbol revealing its origin, not even materials scientists can distinguish it from virgin plastic.
- E. The difference in quality between different grades of glass is not as great as that between different grades of plastic.

30. A company plans to develop a prototype weeding machine that uses cutting blades with optical sensors and microprocessors that distinguish weeds from crop plants by differences in shade of color. The inventor of the machine claims that it will reduce labor costs by virtually eliminating the need for manual weeding.

Which of the following is a consideration in favor of the company's implementing its plan to develop the prototype?

- A. There is a considerable degree of variation in shade of color between weeds of different species.
  - B. The shade of color of some plants tends to change appreciably over the course of their growing season.
  - C. When crops are weeded manually, overall size and leaf shape are taken into account in distinguishing crop plants from weeds.
  - D. Selection and genetic manipulation allow plants of virtually any species to be economically bred to have a distinctive shade of color without altering their other characteristics.
  - E. Farm laborers who are responsible for the manual weeding of crops carry out other agricultural duties at times in the growing season when extensive weeding is not necessary.
31. All actors are exuberant people and all exuberant people are extroverts, but nevertheless it is true that some shy people are actors.

If the statements above are true, each of the following must also be true EXCEPT:

- A. Some shy people are extroverts.
- B. Some shy extroverts are not actors.
- C. Some exuberant people who are actors are shy.
- D. All people who are not extroverts are not actors.
- E. Some extroverts are shy.

32. **Frieda:** Lightning causes fires and damages electronic equipment. Since lightning rods can prevent any major damage, every building should have one.  
**Erik:** Your recommendation is pointless. It is true that lightning occasionally causes fires, but faulty wiring and overloaded circuits cause far more fires and damage to equipment than lightning does.

Erik's response fails to establish that Frieda's recommendation should not be acted on because his response

- A. Does not show that the benefits that would follow from Frieda's recommendation would be offset by any disadvantages.
  - B. Does not offer any additional way of lessening the risk associated with lightning.
  - C. Appeals to Frieda's emotions rather than to her reason.
  - D. Introduces an irrelevant comparison between overloaded circuits and faulty wiring
  - E. Confuses the notion of preventing damage with that of causing inconvenience.
33. Household indebtedness, which some theorists regard as causing recession, was high preceding the recent recession, but so was the value of assets owned by households. Admittedly, if most of the assets were owned by quite affluent households, and most of the debt was owed by low-income households, high household debt levels could have been the cause of the recession despite high asset values: low-income households might have decreased spending in order to pay off debts while quite affluent ones might simply have failed to increase spending. But, in fact, quite affluent people must have owed most of the household debt, since money is not lent to those without assets. Therefore, the real cause must lie elsewhere.

The argument is structured to lead to which one of the following conclusions?

- A. High levels of household debt did not cause the recent recession.
- B. Low-income households succeeded in paying off their debts despite the recent recession.
- C. Affluent people probably increased their spending levels during the recent recession.
- D. High levels of household debt have little impact on the economy.
- E. When people borrowed money prior to the recent recession, they did not use it to purchase assets.

34. Government-subsidized insurance available to homeowners makes it feasible for anyone to build a house on a section of coastline regularly struck by hurricanes. Each major storm causes billions of dollars worth of damage in such coastal areas, after which owners who have insurance are able to collect an amount of money sufficient to recoup a high percentage of their losses.

The passage provides the most support for an argument against a government bill proposing

- A. That power companies be required to bury power lines in areas of the coastline regularly struck by hurricanes.
  - B. An increase in funding of weather service programs that provides a hurricane watch and warning system for coastal areas.
  - C. Renewal of federal funding for emergency life-support programs in hurricane-stricken areas.
  - D. Establishment of an agency committed to managing coastal lands in ecologically responsible ways.
  - E. Establishment of a contingency fund protecting owners of uninsured houses in the coastal areas from catastrophic losses due to the hurricane damage.
35. **Jane:** According to an article in this newsmagazine, children's hand-eye coordination suffers when they spend a great amount of time watching television. Therefore, we must restrict the amount of time Jacqueline and Mildred are allowed to watch television.
- Alan:** Rubbish! The article says that only children under three are affected in that way. Jacqueline is ten and Mildred is eight. Therefore, we need not restrict their television viewing.

Alan's argument against Jane's conclusion makes which one of the following errors in reasoning?

- A. It relies on the same source that Jane cited in support of her conclusion.
- B. It confuses undermining an argument in support of a given conclusion with showing that the conclusion itself is false.
- C. It does not address the main point of Jane's argument and focuses instead on a side issue.
- D. It makes an irrelevant appeal to an authority.
- E. It fails to distinguish the consequences of a certain practice from the causes of the practice.

36. For similar cars and drivers, automobile insurance for collision damage has always cost more in Greatport than in Fairmont. Police studies, however, show that cars owned by Greatport residents are, on average, slightly less likely to be involved in a collision than cars in Fairmont. Clearly, therefore, insurance companies are making a greater profit on collision-damage insurance in Greatport than in Fairmont.

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

- A. Repairing typical collision damage does not cost more in Greatport than in Fairmont.
  - B. There are no more motorists in Greatport than in Fairmont.
  - C. Greatport residents who have been in a collision are more likely to report it to their insurance company than Fairmont residents are.
  - D. Fairmont and Greatport are the cities with the highest collision-damage insurance rates.
  - E. The insurance companies were already aware of the difference in the likelihood of collisions before the publication of the police reports.
37. Yeasts capable of leavening bread are widespread, and in the many centuries during which the ancient Egyptians made only unleavened bread, such yeasts must frequently have been mixed into bread doughs accidentally. The Egyptians, however, did not discover leavened bread until about 3000 B.C. That discovery roughly coincided with the introduction of a wheat variety that was preferable to previous varieties because its edible kernel could be removed from the husk without first toasting the grain.

Which of the following, if true, provides the strongest evidence that the two developments were causally related?

- A. Even after the ancient Egyptians discovered leavened bread and the techniques for reliably producing it were well known, unleavened bread continued to be widely consumed.
- B. Only when the Egyptians stopped the practice of toasting grain were their stonelined grain-toasting pits available for baking bread.
- C. Heating a wheat kernel destroys its gluten, a protein that must be present in order for yeast to leaven bread dough.
- D. The new variety of wheat, which had a more delicate flavor because it was not toasted, was reserved for the consumption of high officials when it first began to be grown.
- E. Because the husk of the new variety of wheat was more easily removed, flour made from it required less effort to produce.

38. **Ecologist:** The Scottish Highlands were once the site of extensive forests, but these forests have mostly disappeared and been replaced by peat bogs. The common view is that the Highlands' deforestation was caused by human activity, especially agriculture. However, **agriculture began in the Highlands less than 2,000 years ago**. Peat bogs, which consist of compressed decayed vegetable matter, build up by only about one foot per 1,000 years and, **throughout the Highlands, remains of trees in peat bogs are almost all at depths great than four feet**. Since climate changes that occurred between 7,000 and 4,000 years ago favored the development of peat bogs rather than the survival of forests, the deforestation was more likely the result of natural processes than of human activity.

In the ecologist's argument the two portions in boldface play which of the following roles?

- A. The first is evidence that has been used in support of a position that the ecologist rejects; the second is a finding that the ecologist uses to counter that evidence.
- B. The first is evidence that, in light of the evidence provided in the second, serves as grounds for the ecologist's rejection of a certain position.
- C. The first is a position that the ecologist rejects; the second is evidence that has been used in support of that position.
- D. The first is a position that the ecologist rejects; the second provides evidence in support of that rejection.
- E. The first is a position for which the ecologist argues; the second provides evidence to support that position.
39. In experiments in which certain kinds of bacteria were placed in a generous supply of nutrients, the populations of bacteria grew rapidly, and genetic mutations occurred at random in the populations. These experiments show that all genetic mutation is random.

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

- A. Either all genetic mutations are random or none are random.
- B. The bacteria tested in the experiments were of extremely common forms.
- C. If all genetic mutations in bacteria are random, then all genetic mutations in every other life form are random also.

- D. The kind of environment in which genetic mutation takes place has no effect on the way genetic mutation occurs.
  - E. The nutrients used were the same as those that nourish the bacteria in nature.
40. Each December 31 in Country Q, a tally is made of the country's total available coal supplies – that is, the total amount of coal that has been mined throughout the country but not consumed. In 1991 that amount was considerably lower than it had been in 1990. Furthermore, Country Q has not imported or exported coal since 1970.

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

- A. In Country Q, more coal was mined in 1990 than was mined in 1991.
  - B. In Country Q, the amount of coal consumed in 1991 was greater than the amount of coal mined in 1991.
  - C. In Country Q, the amount of coal consumed in 1990 was greater than the amount of coal consumed in 1991.
  - D. In Country Q, the amount of coal consumed in 1991 was greater than the amount of coal consumed in 1990.
  - E. In Country Q, more coal was consumed during the first half of 1991 than was consumed during the first half of 1990.
41. Spectroscopic analysis has revealed the existence of frozen nitrogen, methane and carbon monoxide on the surface of Pluto. Such ices have a tendency to vaporize, producing an atmosphere. Since the proportion of any gas in such an atmosphere depends directly on how readily the corresponding ice vaporizes, astronomers have concluded that the components of Pluto's atmosphere are nitrogen, carbon monoxide and methane, in order of decreasing abundance.

The astronomer's argument relies on which one of the following assumptions?

- A. There is no more frozen nitrogen on the surface of Pluto than there is either frozen carbon monoxide or methane.
- B. Until space probes reach Pluto, direct analysis of the atmosphere is impossible.
- C. There is no frozen substance on the surface of Pluto that vaporizes more readily than methane but less readily than carbon monoxide.
- D. Nitrogen is found in the atmosphere of a planet only if nitrogen ice is found on the surface of that planet.

- E. A mixture of nitrogen, carbon monoxide and methane is characteristic of the substances from which the solar system formed.
42. New types of washing machines designed to consume less energy also extract less water from laundry during their final spin cycles than do washing machines that consume somewhat more energy. The wetter the laundry, the more energy required to dry it in an automatic dryer. Thus using these new types of washing machines could result in an overall increase in the energy needed to wash and dry a load of laundry.

In which one of the following is the pattern of reasoning most parallel to that in the argument above?

- (A) The more skill required to operate a machine, the harder it is to find people able to do it, and thus the more those people must be paid. Therefore, if a factory installs machines that require highly skilled operators, it must be prepared to pay higher wages.
- (B) There are two routes between Centerville and Mapletown, and the scenic route is the longer route. Therefore, a person who is not concerned with how long it will take to travel between Centerville and Mapletown will probably take the scenic route.
- (C) The more people who work in the library's reading room, the noisier the room becomes; and the noisier the working environment, the less efficiently people work. Therefore, when many people are working in the reading room, those people are working less efficiently.
- (D) Pine is a less expensive wood than cedar but is more susceptible to rot. Outdoor furniture made from wood susceptible to rot must be painted with more expensive paint. Therefore, building outdoor furniture from pine rather than cedar could increase the total cost of building and painting the furniture.
- (E) The more weights added to an exercise machine, the greater the muscle strength needed to work out on the machine. Up to a point, using more muscle strength can make a person stronger. Thus an exercise machine with more weights can, but does not necessarily, make a person stronger

43. The petrochemical industry claims that chemical waste dumps pose no threat to people living near them. If this is true, then why do they locate the plants in sparsely populated regions? By not locating the chemical dumps in densely populated areas the petrochemical industry tacitly admits that these chemicals are potentially dangerous to the people living nearby.

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

- (A) Funding through the environmental Super Fund to clean up poorly run waste dumps is reserved for rural areas only.
- (B) Until chemical dumps are proven 100% safe, it would be imprudent to locate them were they could potentially do the most harm.
- (C) Locating the dumps in sparsely populated areas is less expensive and involves less government red tape.
- (D) The potential for chemicals to leach into the water table has in the past been underestimated.
- (E) People in cities are more likely to sue the industry if their health is harmed by the dumps.

44. The news media is often accused of being willing to do anything for ratings. However, recent action by a television network indicates that the news media is sometimes guided by moral principle. This network had discovered through polling voters on the east coast that the Republican candidate for President had garnered enough votes to ensure victory before the polls closed on the west coast. However, the network withheld this information until the polls on the west coast closed so that the information would not affect the outcome of key congressional races.

Which one of the following most strengthens the argument?

- (A) The network had endorsed the Republican candidate for President.
- (B) The network expected its ratings to increase if it predicted the winner of the presidential race, and to decrease if it did not predict the winner.
- (C) A rival network did predict a winner of the presidential race before the polls on the west coast closed.
- (D) The network believed that it would receive higher ratings by not predicting the winner of the presidential race.
- (E) The network feared that predicting the winner of the presidential race could so anger Congress that it might enact legislation preventing all future polling outside of voting centers.

45. To avoid economic collapse, Russia must increase its GNP by 20%. However, due to the structure of its economy, if the 20% threshold is reached, then a 40% increase in GNP is achievable.

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

- (A) If ethnic strife continues in Russia, then a 20% increase in GNP will be unattainable.
- (B) If a 40% increase in Russia's GNP is impossible, its economy will collapse.
- (C) If Russia's GNP increases by 40%, its economy will not collapse.
- (D) If the 20% threshold is reached, then a 40% increase in GNP is achievable and a 60% increase is probable.
- (E) If Russia's economy collapses, then it will not have increased its GNP by 40%.

46. **Rebecca:** When I went hiking in the mountains the other day, every bird that scolded me was a Steller's Jay, and every Steller's Jay I saw scolded me.

Which one of the following statements can be inferred from Rebecca's observations?

- (A) The only jays that Rebecca saw while hiking were Steller's Jays.
- (B) There were no Gray Jays in the area where Rebecca hiked.
- (C) While she was hiking, no Gray Jays scolded Rebecca.
- (D) All the jays that Rebecca saw scolded her.
- (E) Rebecca did not see any Gray Jays while she was hiking.

47. Democracy is the best form of government yet created. Therefore, we must be vigilant in its defense; that is, we must be prepared to defend the right to freedom. Because this right is fundamental to any progressive form of government, it is clear that democracy is better than any other form of government.

Which one of the following illustrates the same flawed reasoning as found in the passage?

- (A) I never get a headache when I eat only Chinese food, nor when I drink only wine. But when I eat Chinese food and drink wine, I get a headache. So the combination of the two must be the cause of my headaches.
- (B) The two times I have gone to that restaurant something bad has happened. The first time the waiter dropped a glass and it shattered all over the table. And after the second time I went there, I got sick. So why should I go there again-- something bad will just happen again.
- (C) I would much rather live a life dedicated to helping my fellow man than one dedicated to gaining material possessions and seeing my fellow man as a competitor. At the end of each day, the satisfaction of having helped people is

infinitely greater than the satisfaction of having achieved something material.  
(D) I'm obsessed with volleyball; that's why I play it constantly. I train seven days a week, and I enter every tournament. Since I'm always playing it, I must be obsessed with it.

(E) In my academic studies, I have repeatedly changed majors. I decide to major in each new subject that I'm introduced to. Just as a bee lights from one flower to the next, tasting the nectar of each, I jump from one subject to the next getting just a taste of each.

48. Either restrictions must be placed on freedom of speech or certain subversive elements in society will use it to destroy this country. Since to allow the latter to occur is unconscionable, we must restrict freedom of speech.

The conclusion above is unsound because

- (A) subversives do not in fact want to destroy the country
- (B) the author places too much importance on the freedom of speech
- (C) the author fails to consider an accommodation between the two alternatives
- (D) the meaning of "freedom of speech" has not been defined
- (E) subversives are a true threat to our way of life

49. Eight years ago hunting was banned in Greenfield County on the grounds that hunting endangers public safety. Now the deer population in the county is six times what it was before the ban. Deer are invading residential areas, damaging property and causing motor vehicle accidents that result in serious injury to motorists. Since there were never any hunting-related injuries in the county, clearly the ban was not only unnecessary but has created a danger to public safety that would not otherwise exist.

Which one of the following, if true, provides the strongest additional support for the conclusion above?

- A. In surrounding counties, where hunting is permitted, the size of the deer population has not increased in the last eight years.
- B. Motor vehicle accidents involving deer often result in damage to the vehicle, injury to the motorist, or both.
- C. When deer populations increase beyond optimal size, disease and malnutrition become more widespread among the deer herds.
- D. In residential areas in the county, many residents provide food and salt for deer.
- E. Deer can cause extensive damage to ornamental shrubs and trees by chewing on twigs and saplings.

50. Many major scientific discoveries of the past were the product of serendipity, the chance discovery of valuable findings that investigators had not purposely sought. Now, however, scientific research tends to be so costly that investigators are heavily dependent on large grants to fund their research. Because such grants require investigators to provide the grant sponsors with clear projections of the outcome of the proposed research, investigators ignore anything that does not directly bear on the funded research. Therefore, under the prevailing circumstances, serendipity can no longer play a role in scientific discovery.

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

- A. Only findings that an investigator purposely seeks can directly bear on that investigator's research.
  - B. In the past few scientific investigators attempted to make clear predictions of the outcome of their research.
  - C. Dependence on large grants is preventing investigators from conducting the type of scientific research that those investigators would personally prefer.
  - D. All scientific investigators who provide grant sponsors with clear projections of the outcome of their research receive at least some of the grants for which they apply.
  - E. In general the most valuable scientific discoveries are the product of serendipity.
51. **Student representative:** Our University, in expelling a student who verbally harassed his roommate, has erred by penalizing the student for doing what he surely has a right to do: speak his mind!

**Dean of students:** But what you're saying is that our university would endorse verbal harassment. Yet surely if we did that, we would threaten the free flow of ideas that is the essence of university life.

Which one of the following is a questionable technique that the dean of students uses in attempting to refute the student representative?

- A. Challenging the student representative's knowledge of the process by which the student was expelled.
- B. Invoking a fallacious distinction between speech and other sorts of behavior.
- C. Misdescribing the student representative's position, thereby making it easier to challenge.

- D. Questioning the motives of the student representative rather than offering reasons for the conclusion defended
- E. Relying on a position of power to silence the opposing viewpoint with a threat.

52. **Advertisement:** Of the many over-the-counter medications marketed for the relief of sinus headache. SineEase costs the least per dose. And SineEase is as effective per dose as the most effective of those other medications. So for relief from sinus headaches, SineEase is the best buy.

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

- (A) Most of the over-the-counter medications marketed for the relief of sinus headache are equally effective per dose in providing such relief.
- (B) Many of the over-the-counter medications marketed for the relief of sinus headache contain the same active ingredient as SineEase.
- (C) People who suffer from frequent sinus headaches are strongly advised to consult a doctor before taking any over-the-counter medication.
- (D) An over-the-counter medication that is marketed for the relief of symptoms of head cold is identical in composition to SineEase but costs less per dose.
- (E) The per dose price for any given over-the-counter medication marketed for the relief of sinus headache is higher for smaller packages than it is for larger packages.

53. Most students are bored by history courses as they are usually taught, primarily because a large amount of time is spent teaching dates and statistic. The best way to teach history, therefore, is to spend most class time recounting the lives of historical figures and very little on dates and statistics.

Each of the following is an assumption on which the argument depends

EXCEPT:

- (A) One should avoid boring one's students when teaching a history course.
- (B) It is not incompatible with the attainable goals of teaching history to spend very little class time on dates and statistics.
- (C) It is possible to recount the lives of historical figures without referring to dates and statistics.
- (D) It is compatible with the attainable goals of teaching history to spend most class time recounting the lives of historical figures.
- (E) Students are more bored by history courses as they are usually taught than they would be by courses that spend most class time recounting the lives of historical figures.

54. On completing both the course in experimental design and the developmental psychology course, Angela will have earned a degree in psychology. Since experimental design, which must be completed before taking developmental psychology, will not be offered until next term, it will be at least two terms before Angela gets her psychology degree.

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

- (A) The developmental psychology course Angela needs to take requires two terms to complete.
  - (B) The course in experimental design is an easier course than the course in developmental psychology.
  - (C) There are no prerequisites for the course in experimental design.
  - (D) Anyone who earns a degree in psychology from the university Angela attends will have completed the course in experimental design.
  - (E) Once Angela completes the developmental psychology course, she will have earned a degree in psychology.
55. It is probably within the reach of human technology to make the climate of Mars inhabitable. It might be several centuries before people could live there, even with breathing apparatuses, but some of the world's great temples and cathedrals took centuries to build. Research efforts now are justified if there is even a chance of making another planet inhabitable. Besides, the intellectual exercise of understanding how the Martian atmosphere might be changed could help in understanding atmospheric changes inadvertently triggered by human activity on Earth.

The main point of the argument is that

- A. It is probably technologically possible for humankind to alter the climate of Mars.
- B. It would take several centuries to make Mars even marginally inhabitable.
- C. Making Mars inhabitable is an effort comparable to building a great temple or cathedral.
- D. Research efforts aimed at discovering how to change the climate of Mars are justified.
- E. Efforts to change the climate of Mars could facilitate understanding of the Earth's climate.

56. The new perfume Aurora smells worse to Joan than any comparable priced perfume, and none of her friends likes the smell of Aurora as much as the smell of other perfumes. However, she and her friends must have a defect in their sense of smell, since Professor Jameson prefers the smell of Aurora to that of any other perfume and she is one of the world's foremost experts on the physiology of smell.

The reasoning is flawed because it

- A. Calls into question the truthfulness of the opponent rather than addressing the point at issue.
  - B. Ignores the well-known fact that someone can prefer one thing to another without liking either very much.
  - C. Fails to establish that there is widespread agreement among the experts in the field.
  - D. Makes an illegitimate appeal to the authority of an expert.
  - E. Misrepresents the position against which it is directed.
57. A group of children of various ages was read stories in which people caused harm, some of those people doing so intentionally and some accidentally. When asked about appropriate punishments for those who had caused harm, the younger children, unlike the older ones, assigned punishments that did not vary according to whether the harm was done intentionally or accidentally. Younger children, then, do not regard people's intentions as relevant to punishment.

Which of the following, if true, would most seriously weaken the conclusion above?

- (A) In interpreting these stories, the listeners had to draw on a relatively mature sense of human psychology in order to tell whether harm was produced intentionally or accidentally.
- (B) In these stories, the severity of the harm produced was clearly stated.
- (C) Younger children are as likely to produce harm unintentionally as are older children.
- (D) The older children assigned punishment in a way that closely resembled the way adults had assigned punishment in a similar experiment.
- (E) The younger children assigned punishments that varied according to the severity of the harm done by the agents in the stories.

58. The advanced technology of ski boots and bindings has brought a dramatic drop in the incidence of injuries that occur on the slopes of ski resorts: from 9 injuries per 1,000 skiers in 1950 to 3 in 1980. As a result, the remainder of ski-related injuries, which includes all injuries occurring on the premises of a ski resort but not on the slopes, rose from 10 percent of all ski-related injuries in 1950 to 25 percent in 1980. The incidence of these injuries, including accidents such as falling down steps, increases with the amount of alcohol consumed per skier.

I. Which one of the following can be properly inferred from the passage?

- (A) As the number of ski injuries that occur on the slopes decreases, the number of injuries that occur on the premises of ski resorts increases.
- (B) The amount of alcohol consumed per skier increased between 1950 and 1980.
- (C) The technology of ski boots and bindings affects the incidence of each type of ski-related injury.
- (D) If the technology of ski boots and bindings continues to advance, the incidence of ski-related injuries will continue to decline.
- (E) Injuries that occurred on the slopes of ski resorts made up a smaller percentage of ski-related injuries in 1980 than in 1950.

II. Which one of the following conflicts with information in the passage?

- (A) The number of ski injuries that occurred on the slopes was greater in 1980 than in 1950.
- (B) A skier was less likely to be injured on the slopes in 1950 than in 1980.
- (C) The reporting of ski injuries became more accurate between 1950 and 1980.
- (D) The total number of skiers dropped between 1950 and 1980.
- (E) Some ski-related injuries occurred in 1980 to people who were not skiing.

59. In two months, the legal minimum wage in the country of Kirlandia will increase from five Kirlandic dollars(KD5.00) Per hour to KD5.50 per hour. Opponents of this increase have argued that the resulting rise in wages will drive the inflation rate up. In fact its impact on wages will probably be negligible, since only a very small proportion of all Kirfandic workers are currently receiving less than KD5.50 per hour.

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

- A. Most people in kirlandia who are currently earning the minimum wage have been employed at their current jobs for less than a year.
- B. Some firms in Kirlandia have paid workers considerably less than KD5.00 per hour, in violation of kirlandic employment regulations.
- C. Many businesses hire trainees at or near the minimum wage but must reward trained workers by keeping their paylevels above the pay level of trainees.
- D. The greatest growth in Kirlandia's economy in recent years has been in those sectors where workers earn wages that tend to be much higher than the minimum wage.
- E The current minimum wage is insufficient for a worker holding only one job to earn enough to support a family, even when working full time at that job.
60. When 100 people who have not used cocaine are tested for cocaine use, on average only 5 will test positive. By contrast, of every 100 people who have used cocaine 99 will test positive. Thus, when a randomly chosen group of people is tested for cocaine use, the vast majority of those who test positive will be people who have used cocaine.

A reasoning error in the argument is that the argument

- (A) attempts to infer a value judgment from purely factual premises
- (B) attributes to every member of the population the properties of the average member of the population
- (C) fails to take into account what proportion of the population have used cocaine
- (D) ignores the fact that some cocaine users do not test positive
- (E) advocates testing people for cocaine use when there is no reason to suspect that they have used cocaine.

61. A poor farmer was fond of telling his children: "In this world, you are either rich or poor, and you are either honest or dishonest. All poor farmers are honest. Therefore, all rich farmers are dishonest."

The farmer's conclusion is properly drawn if the argument assumes that

- A. Every honest farmer is poor
  - B. Every honest person is a farmer
  - C. Everyone who is dishonest is a rich farmer
  - D. Everyone who is poor is honest
  - E. Every poor person is a farmer
62. Criticism that the press panders to public sentiment neglects to consider that the press is a profit-making institution. Like other private enterprises, it has to make money to survive. If the press were not profit-making, who would support it? The only alternative is subsidy and, with it, outside control. It is easy to get subsidies for propaganda, but no one will subsidize honest journalism.

It can be properly inferred from the passage that if the press is

- A. Not subsidized, it is in no danger of outside control
  - B. Not subsidized, it will not produce propaganda
  - C. Not to be subsidized, it cannot be a profit-making institution.
  - D. To produce honest journalism, it must be a profit-making institution
  - E. To make a profit, it must produce honest journalism.
63. Certain instruments used in veterinary surgery can be made either of stainless steel or of nylon. In a study of such instruments, 50 complete sterilizations of a set of nylon instruments required 3.4 times the amount of energy used to manufacture that set of instruments, whereas 50 complete sterilizations of a set of stainless steel instruments required 2.1 times the amount of energy required to manufacture that set of instruments.

If the statements above are true, each of the following could be true EXCEPT:

- A. The 50 complete sterilizations of the nylon instruments used more energy than did the 50 complete sterilizations of the stainless steel.
- B. More energy was required for each complete sterilization of the nylon instruments than was required to manufacture the nylon instruments.
- C. More nylon instruments than stainless steel instruments were sterilized in the study.

- D. More energy was used to produce the stainless steel instruments than was used to produce the nylon instruments.
  - E. The total cost of 50 complete sterilizations of the stainless steel instruments was greater than the cost of manufacturing the stainless steel instruments.
64. To suit the needs of corporate clients, advertising agencies have successfully modified a strategy originally developed for political campaigns. This strategy aims to provide clients with free publicity and air time by designing an advertising campaign that is controversial, thus drawing prime-time media coverage and evoking public comment by officials.

The statements above, if true, most seriously undermine which one of the following assertions?

- A. The usefulness of an advertising campaign is based on solely on the degree to which the campaign's advertisements persuade their audiences.
  - B. Only a small percentage of eligible voters admit to being influenced by advertising campaigns in deciding how to vote.
  - C. Campaign managers have transformed political campaigns by making increasing use of strategies borrowed from corporate advertising campaigns.
  - D. Corporations are typically more concerned with maintaining public recognition of the corporate name than with enhancing goodwill toward the corporation.
  - E. Advertising agencies that specialize in campaigns for corporate clients are not usually chosen for political campaigns.
65. Famous personalities found guilty of many types of crimes in well-publicized trials are increasingly sentenced to the performance of community service, though unknown defendants convicted of similar crimes almost always serve prison sentences. However, the principle of equality before the law rules out using fame and publicity as relevant considerations in the sentencing of convicted criminals.

The statements above, if true, most strongly support which one of the following conclusions?

- A. The principle of equality before the law is rigorously applied in only a few types of criminal trials.
- B. The number of convicted celebrities sentenced to community service should equal the number of convicted unknown defendants sentenced to community service.

- C. The principle of equality before the law can properly be overridden by other principles in some cases.
  - D. The sentencing of celebrities to community service instead of prison constitutes a violation of the principle of equality before the law in many cases.
  - E. The principle of equality before the law does not allow for leniency in sentencing.
66. **Corporate Officer:** Last year was an unusually poor one for our chemical division, which has traditionally contributed about 60 percent of the corporation's profits. It is therefore encouraging that there is the following evidence that the pharmaceutical division is growing stronger: it contributed 45 percent of the corporation's profits, up from 20 percent the previous year.

On the basis of the facts stated which of the following is the best critique of the evidence presented above?

- (A) The increase in the pharmaceutical division's contribution to corporation profits could have resulted largely from the introduction of single, important new product.
- (B) In multidivisional corporations that have pharmaceutical divisions, over half of the corporation's profits usually come from the pharmaceuticals.
- (C) The percentage of the corporation's profits attributable to the pharmaceutical division could have increased even if that division's performance had not improved.
- (D) The information cited does not make it possible to determine whether the 20 percent share of profits cited was itself an improvement over the year before.
- (E) The information cited does not make it possible to compare the performance of the chemical and pharmaceutical divisions in of the percent of total profits attributable to each.

67. Some philosophers of science claim that no serious scientific theory can be tested experimentally without taking for granted some other body of scientific beliefs, the operation of the instruments-for we cannot interpret the experimental results without appealing to such beliefs. If this is true, then which of the following conclusions seems most likely?

A) Any particular scientific theory can be consistently retained, even in the face of apparently incompatible evidence, if we are willing to give up certain other scientific beliefs.

B) Experimental evidence is really irrelevant to scientific theorizing.

C) Experimental evidence is more relevant to the testing of scientific theories than to their initial formulation.

D) Experimental evidence is more relevant to the initial formulation of scientific theories than to their testing.

E) The best scientific theories are those which are formulated in such a way as to be subject to conclusive experimental refutation.

68. Marine biology had hypothesized that lobsters kept together traps eat one another in response to hunger. Periodic checking of lobster traps, however, has revealed instances of lobsters sharing traps together for weeks. Eight lobsters even shared one trap together for two months without eating one another. The marine biologists' hypothesis, therefore, is clearly wrong.

The argument against the marine biologists' hypothesis is based on which one of the following assumptions?

A) Lobsters not caught in lobster traps have been observed eating one another.

b) Two months is the longest known period during which eight or more lobsters have been trapped together.

c) It is unusual to find as many as eight lobsters caught together in one single trap.

d) Members of the other marine species sometimes eat their own kind when no other food source are available

e) Any food that the eight lobsters in the trap might have obtained was not enough to ward off hunger.

69. Lou observes that if flight 409 is canceled, then the manager could not possibly arrive in time for the meeting. But flight 409 was not canceled. Therefore, Lou concludes, the manager will certainly be on time. Evelyn replies that even if Lou's premises are true, his argument is fallacious. And therefore, she adds, the manager will not arrive on time after all.

Which of the following is the strongest thing that we can properly say about this discussion?

- A) Evelyn is mistaken in thinking Lou's argument to be fallacious, and so her own conclusion is unwarranted.
- B) Evelyn is right about Lou's argument, but nevertheless her own conclusion is unwarranted.
- C) Since Evelyn is right about Lou's argument, her own conclusion is well-supported.
- D) Since Evelyn is mistaken about Lou's argument, her own conclusion must be false.
- E) Evelyn is right about Lou's argument, but nevertheless her own conclusion is false.

70. According to a survey of consumers conducted one week before the end of a national call-in campaign to decide the newest flavor of Freak Cola, more of those surveyed responded that they enjoyed the Citrusea Swirl flavor than responded that they enjoyed any other flavor choice. Regardless of the survey results, a different flavor, Vanilla Bonanza, was the national favorite by a considerable percentage.

Each of the following, if true, contributes to a resolution of the discrepancy described above EXCEPT:

- A) Freak Cola made an announcement four days before the end of the call-in campaign stating that the third option, VeriBlueBeri, was being removed from consideration as the new flavor choice.
- B) The survey was conducted only on the east coast, and the percentage of people thought to like Vanilla Bonanza on the east coast is much smaller than the percentage who liked Citrusea Swirl.
- C) More than 60% of those responding to the survey in favor of Vanilla Bonanza stated they were likely to call in and vote, whereas only 25% of those supporting Citrusea Swirl claimed they would be calling in their votes.
- D) A smaller percentage of those favoring the Vanilla Bonanza flavor knew the call-in number than did those favoring Citrusea Swirl.
- E) The entire survey was developed and conducted by members of the Freak Cola design team that created Citrusea Swirl.

71. A study of National football League Statistics over the last ten years reveals that the losing team threw more interceptions than did the winning team in 82 percent of the games played. This statistics clearly indicate that interceptions contribute greatly to team losses.

The conclusion in the above argument depends on which of the following assumptions?

- A. Fumbles do not hurt a team's chances of winning a game.
  - B. A team's chances of winning a game are greatly reduced if it throws any interceptions during a game.
  - C. A team that throws more interceptions than its opponent does and still wins the game must have superior players.
  - D. Interceptions do not result from a team's falling behind in the game.
  - E. Interceptions are harmful primarily because they make it easy for the other team to score points.
72. Some types of organisms originated through endosymbiosis, the engulfing of one organism by another so that a part of the former becomes a functioning part of the latter. An unusual nucleomorph, a structure that contains DNA and resembles a cell nucleus, has been discovered within a plant known as a chlorarachniophyte. Two versions of a particular gene have been found in the DNA of this nucleomorph, and one would expect to find only a single version of this gene if the nucleomorph were not the remains of an engulfed organism's nucleus.

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

- (A) Only organisms of types that originated through endosymbiosis contain nucleomorphs.
- (B) A nucleomorph within the chlorarachniophyte holds all of the genetic material of some other organism.
- (C) Nucleomorphs originated when an organism endosymbiotically engulfed a chlorarachniophyte.
- (D) Two organisms will not undergo endosymbiosis unless at least one of them contains a nucleomorph.
- (E) Chlorarachniophytes emerged as the result of two organisms having undergone endosymbiosis.

73. The recently negotiated North American Free Trade Agreement among Canada, Mexico, and the United States is misnamed, because it would not result in truly free trade. Adam Smith, the economist who first articulated the principles of free trade, held that any obstacle placed in the way of the free movement of goods, investment, or labor would defeat free trade. So since under the agreement workers would be restricted by national boundaries from seeking the best conditions they could find, the resulting obstruction of the flow of trade would, from a free-trade perspective, be harmful.

The argument proceeds by

- (A) ruling out alternatives
- (B) using a term in two different senses
- (C) citing a non-representative instance
- (D) appealing to a relevant authority
- (E) responding to a different issue from the one posed

74. According to a recent magazine article, of those office employees who typically work 8 hours at the office each day but sometimes say that they will work at home on a particular day, 25 percent actually work less than one hour. At the same time, over 90 percent of those same office employees believe they are more productive working at home than working in their office.

The statements above, if true, best support which of the following conclusions about the office employees discussed in the article?

- A. On average, the office employees working at home for a day work fewer hours than office employees working at the office.
- B. 10 percent of the office employees are less productive working from home than working in their office.
- C. At least 15 percent of the office employees do not define productivity exclusively in terms of the number of hours worked.
- D. At least 25 percent of the office employees can complete the same amount of work in one hour at home as in 8 hours at the office.
- E. Some of the office employees make statements regarding their productivity that are not in fact true.

75. Most disposable plastic containers are now labeled with a code number (from 1 to 9) indicating the type or quality of the plastic. Plastics with the lowest code numbers are the easiest for recycling plants to recycle and are thus the most likely to be recycled after use rather than dumped in landfills. Plastics labeled with the highest numbers are only rarely recycled. Consumers can make a significant long-term reduction in the amount of waste that goes unrecycled, therefore, by refusing to purchase those products packaged in plastic containers labeled with the highest code numbers.

Which one of the following, if true, most seriously undermines the conclusion above?

- (A) The cost of collecting, sorting, and recycling discarded plastics is currently higher than the cost of manufacturing new plastics from virgin materials.
- (B) Many consumers are unaware of the codes that are stamped on the plastic containers.
- (C) A plastic container almost always has a higher code number after it is recycled than it had before recycling because the recycling process causes a degradation of the quality of the plastic.
- (D) Products packaged in plastics with the lowest code numbers are often more expensive than those packaged in the higher-numbered plastics.
- (E) Communities that collect all discarded plastic containers for potential recycling later dump in landfills plastics with higher-numbered codes only when it is clear that no recycler will take them.

76. No senator spoke at the convention unless he or she was a Democrat. No Democrat both spoke at the convention and was a senator.

Which one of the following conclusions can be correctly drawn from the statements above?

- (A) No one but senators spoke at the convention.
- (B) No Democrat spoke at the convention.
- (C) Only Democrats spoke at the convention.
- (D) No senator spoke at the convention.
- (E) Some Democrat senators spoke at the convention.

77. The report released by the interior ministry states that within the past 5 years the national land-reclamation program has created a 19 percent increase in arable land within the country. If these figures are accurate, the program has been a huge success. Senator Cox, a distinguished mathematician and a woman of brilliance, maintains, however, that the reclamation program could not possibly have been successful. Clearly, therefore, the figures cited in the report cannot be accurate.

The argument above exhibits an erroneous pattern of reasoning most similar to that exhibited by which one of the following?

- A. Albert's father claims that Albert does not know where the spare car keys are hidden. Yesterday however, Albert reported that he had discovered the spare car keys in the garage toolbox, so his father's claim cannot be true.
- B. Gloria's drama teacher claims that her policy is to give each student the opportunity to act in at least one play during the year but, since Gloria, who attended every class, reports that she was not given such an opportunity the teacher's claim cannot be true.
- C. Amos claims that he can hold his breath under water for a full hour. Dr. Treviso, a cardiopulmonary specialist, has stated that humans are physiologically incapable of holding their breath for even half that long; so Amos' claim cannot be true.
- D. Evelyn reports that she got home before midnight. Robert, who always knows the time, insists that she did not. If Robert is right, Evelyn could not possibly have listened to the late news; since she admits not having listened to the late news, her report cannot be true.
- E. Moira, after observing the finish of the 60-kilometer bicycle race, reports that Lee won with Adams a distant third. Lomas, a bicycle engineering expert, insists, however, that Lee could not have won a race in which Adams competed; so Moira's report cannot be true.

78. In a nature reserve in India, people are sometimes attacked by tigers. It is believed that the tigers will only attack people from behind. So for the past few years many workers in the reserve have started wearing masks depicting a human face on the back of their heads. While many area residents remain skeptical, no worker wearing one of these masks has yet been attacked by a tiger.

Which of the statements below, if true, would best support the argument of those who advocate the use of the mask?

- (A) Many workers in the nature reserve who do not wear the masks have been attacked recently by tigers.
- (B) Workers in other nature reserves who wear similar masks have not been attacked recently by tigers.
- (C) No tigers have been spotted on the nature reserve in recent years.

- (D) Many of the workers who wear the masks also sing while they work in order to frighten away any tigers in the area.
- (E) The tigers have often been observed attacking small deer from in front rather than from behind.

79. A recent survey showed that many workers in a certain company are dissatisfied with their jobs. The survey also showed that most of the dissatisfied workers believe that they have little control over their job assignments. Therefore, to increase workers job satisfaction the company's management need only concentrate on changing workers' beliefs regarding the degree of control they have over their job assignments.

Which one of the following, if also shown by the survey, would most seriously call into question the conclusion made by the author of the passage?

- (A) The dissatisfied workers feel that their wages are too low and working conditions are unsatisfactory.
  - (B) The number of workers in the company who are satisfied with their jobs is greater than the number who is dissatisfied.
  - (C) The workers in the company are more dissatisfied than workers in other companies.
  - (D) Most people in company management believe that the workers already have too much control over their work.
  - (E) The workers in the company who are satisfied with their jobs believe that they have a lot of control over their job assignments.
80. **Doctor:** Research shows that adolescents who play video games on a regular basis are three times as likely to develop carpal tunnel syndrome as are adolescents who do not play video games. Federal legislation that prohibits the sale of video games to minors would help curb this painful wrist condition among adolescents.

The doctor's conclusion depends on which of the following assumptions?

- A) The majority of federal legislators would vote for a bill that prohibits the sale of video games to minors.
- B) Not all adolescents who play video games on a regular basis suffer from carpal tunnel syndrome.
- C) Playing video games is the only way an adolescent can develop carpal tunnel syndrome.
- D) Most parents would refuse to purchase video games for their adolescent children.
- E) The regular playing of video games by adolescents does not produce such beneficial effects as better hand-eye coordination and improved reaction time.

81. According to a recent study on financial roles, one-third of high school seniors say that they have “significant financial responsibilities.” These responsibilities include, but are not limited to, contributing to food, shelter, or clothing for themselves or their families. At the same time, a second study demonstrates that a crisis in money management exists for high school students. According to this study, 80% of high school seniors have never taken a personal finance class even though the same percentage of seniors has opened bank accounts and one-third of these account holders have bounced a check.

Which of the following conclusions can be properly drawn from the statements above?

- A. High schools would be wise to incorporate personal finance classes into their core curricula.
  - B. At least one-third of high school seniors work part-time jobs after school.
  - C. The number of high school seniors with significant financial responsibilities is greater than the number of seniors who have bounced a check.
  - D. Any high school seniors who contribute to food, shelter, or clothing for themselves or their families have significant financial responsibilities.
  - E. The majority of high school students have no financial responsibilities to their families.
82. Calorie restriction, a diet high in nutrients but low in calories, is known to prolong the life of rats and mice by preventing heart disease, cancer, diabetes, and other diseases. A six-month study of 48 moderately overweight people, who each reduced their calorie intake by at least 25 percent, demonstrated decreases in insulin levels and body temperature, with the greatest decrease observed in individuals with the greatest percentage change in their calorie intake. Low insulin level and body temperature are both considered signs of longevity, partly because an earlier study by other researchers found both traits in long-lived people.

If the above statements are true, they support which of the following inferences?

- A. Calorie restriction produces similar results in humans as it does in rats and mice.
- B. Humans who reduce their calorie intake by at least 25 percent on a long-term basis will live longer than they would have had they not done so.
- C. Calorie intake is directly correlated to insulin level in moderately overweight individuals.
- D. Individuals with low insulin levels are healthier than individuals with high insulin levels.
- E. Some individuals in the study reduced their calorie intake by more than 25 percent.

83. The violent crime rate (number of violent crimes per 1,000 residents) in Meadowbrook is 60 percent higher now than it was four years ago. The corresponding increase for Parkdale is only 10 percent. These figures support the conclusion that residents of Meadowbrook are more likely to become victims of violent crime than are residents of Parkdale.

The argument above is flawed because it fails to take into account

- A. changes in the population density of both Parkdale and Meadowbrook over the past four years
  - B. how the rate of population growth in Meadowbrook over the past four years compares to the corresponding rate for Parkdale
  - C. the ratio of violent to nonviolent crimes committed during the past four years in Meadowbrook and Parkdale
  - D. the violent crime rates in Meadowbrook and Parkdale four years ago
  - E. how Meadowbrook's expenditures for crime prevention over the past four years compare to Parkdale's expenditures
84. A greater number of newspapers are sold in Town S than in Town T. Therefore, the citizens of Town S are better informed about major world events than are the citizens of Town T.

Each of the following, if true, weakens the conclusion above EXCEPT:

- (A) Town S has a larger population than Town T.
- (B) Most citizens of Town T work in Town S and buy their newspapers there.
- (C) The average citizen of Town S spends less time reading newspapers than does the average citizen of Town T.
- (D) A weekly newspaper restricted to the coverage of local events is published in Town S.
- (E) The average newsstand price of newspapers sold in Town S is lower than the average price of newspapers sold in Town T.

85. **Market Analyst:** Recent research confirms that the main cause of bad breath is bacteria build-up on the tongue. The research also concludes that tongue scrapers, when used properly, can eliminate up to 40% of the bacteria from the tongue. As the effectiveness of tongue scrapers becomes more widely known, the market for less effective breath freshening products, such as mints, gums, and sprays, will decline significantly.

Which of the following provides the best evidence that the analyst's argument is flawed?

- A. Some breath freshening products are advertised to eliminate up to 30% of the bacteria from the tongue.
- B. Tongue scrapers have already been on the market for a number of years.
- C. Many dentists recommend regular flossing, and not the use of the tongue scraper, to combat bad breath.
- D. A recent survey shows that 94% of those who regularly purchase breath freshening products are aware of the effectiveness of the tongue scraper.
- E. Some people buy breath freshening products for reasons other than to fight bad breath.

86. **Sven:** Trade unions are traditionally regarded by governments and economists as restraints of trade, working against the complete freedom of the economy, but I believe that unions are indispensable since they are often the worker's only protection against exploitation.

**Ravi:** I don't agree. The exploitation of the workers and their work is a normal part of ordinary trade just like the exploitation of natural or other material resources.

Sven and Ravi will not be able to resolve their disagreement logically unless they

- (A) define a key term
- (B) rely on the opinions of established authorities
- (C) question an unproved premise
- (D) present supporting data
- (E) distinguish fact from opinion

87. There is a great deal of geographical variation in the frequency of many surgical procedures - up to tenfold variation per hundred thousand people among different areas in the numbers of hysterectomies, prostatectomies and tonsillectomies.

To support a conclusion that much of the variation is due to unnecessary surgical procedures, it would be most important to establish which of the following?

- a. A local board of review at each hospital examines the records of each operation to determine whether the surgical procedure was necessary
- b. The variation is unrelated to factors (other than the surgical procedures themselves) that influence the incidence of diseases for which surgery might be considered
- c. There are several categories of surgical procedures that are often performed unnecessarily
- d. For certain surgical procedures, it is difficult to determine after the operation whether the procedures were necessary or whether alternative treatment would have succeeded
- e. With respect to how often they are performed unnecessarily, hysterectomies, prostatectomies, and tonsillectomies are representative of surgical procedures in general

88. In the years since the city of London imposed strict air-pollution regulations on local industry, the number of bird species seen in and around London has increased dramatically. Similar air-pollution rules should be imposed in other major cities.

Each of the following is an assumption made in the argument above EXCEPT:

- (A) In most major cities, air-pollution problems are caused almost entirely by local industry.
- (B) Air-pollution regulations on industry have a significant impact on the quality of the air.
- (C) The air-pollution problems of other major cities are basically similar to those once suffered by London.
- (D) An increase in the number of bird species in and around a city is desirable.
- (E) The increased sightings of bird species in and around London reflect an actual increase in the number of species in the area.

89. All of the best comedians have had unhappy childhoods. Yet, many people who have had happy childhoods are good comedians, and some good comedians who have had miserably unhappy childhoods are happy adults.

If the statements in the passage are true, which one of the following CANNOT be true?

- (A) The proportion of good comedians who had unhappy childhoods is greater than the proportion of the best comedians who did.
- (B) Some good comedians have had unhappy childhoods and are unhappy adults.
- (C) Most of the best comedians are happy adults.
- (D) More good comedians have had unhappy childhoods than have had happy childhoods.
- (E) The proportion of comedians who are happy adults is higher than the proportions who are unhappy adults.

90. **Historian:** Newton developed mathematical concepts and techniques that are fundamental to modern calculus. Leibniz developed closely analogous concepts and techniques. It has traditionally been thought that these discoveries were independent. Researchers have, however, recently discovered notes of Leibniz' that discuss one of Newton's books on mathematics. Several scholars have argued that since the book includes a presentation of Newton's calculus concepts and techniques, and **since the notes were written before Leibniz' own development of calculus concepts and techniques**, it is virtually certain that the traditional view is false. A more cautious conclusion than this is called for, however. ]**Leibniz' notes are limited to early sections of Newton's book, sections that precede the ones in which Newton's calculus concepts and techniques are presented.**

In the historian's reasoning, the two boldfaced portions play which of the following roles?

- A. The first provides evidence in support of the overall position that the historian defends; the second is evidence that has been used to support an opposing position.
- B. The first provides evidence in support of the overall position that the historian defends; the second is that position.
- C. The first provides evidence in support of an intermediate conclusion that is drawn to provide support for the overall position that the historian defends; the second provides evidence against that intermediate conclusion.
- D. The first is evidence that has been used to support a conclusion that the historian criticizes; the second is evidence offered in support of the historian's own position.
- E. The first is evidence that has been used to support a conclusion that the historian criticizes; the second is further information that substantiates that evidence.

91. Membership in the Theta Delta Psi fraternity is easily obtained by those who have a previously had strong social connections with existing fraternity members before college. However, one must have attended high school with one or more of the members in order to forge such strong social connections. People who lack these social connections because they have not attended high school with one or more current fraternity members will therefore find it difficult to join the fraternity.

This argument displays flawed reasoning because it neglects to consider the possibility that

- A) many of those who went to high school with TDO fraternity members did not themselves become members of the fraternity
- B) it is more important in the long run to socialize with non-fraternity members than to develop strong connections with fraternity members
- C) it is more difficult to forge social connections with fraternity members than with non-fraternity members
- D) one may easily obtain membership in the fraternity through means other than having strong social connections with existing members
- E) some current members of the fraternity did not go to high school with other members

92. Which of the following, if true, provides evidence that most logically completes the argument below?

According to a widely held economic hypothesis, imposing strict environmental regulations reduces economic growth. This hypothesis is undermined by the fact that the states with the strictest environmental regulations also have the highest economic growth. This fact does not show that environmental regulations promote growth, however, since \_\_\_\_\_.

- A. those states with the strictest environmental regulations invest the most in education and job training
- B. Even those states that have only moderately strict environmental regulations have higher growth than those with the least-strict regulations
- C. many states that are experiencing reduced economic growth are considering weakening their environmental regulations
- D. after introducing stricter environmental regulations, many states experienced increased economic growth
- E. even those states with very weak environmental regulations have experienced at least some growth

93. An experimental microwave clothes dryer heats neither air nor cloth. Rather, it heats water on clothes, thereby saving electricity and protecting delicate fibers by operating at a lower temperature. Microwaves are waves that usually heat metal objects, but developers of a microwave dryer are perfecting a process that will prevent thin metal objects such as hairpins from heating up and burning clothes.

Which of the following, if true, most strongly indicates that the process, when perfected, will be insufficient to make the dryer readily marketable?

- (A) Metal snap fasteners on clothes that are commonly put into drying machines are about the same thickness as most hairpins.
- (B) Many clothes that are currently placed into mechanical dryers are not placed there along with hairpins or other thin metal objects.
- (C) The experimental microwave dryer uses more electricity than future, improved models would be expected to use.
- (D) Drying clothes with the process would not cause more shrinkage than the currently used mechanical drying process causes.
- (E) Many clothes that are frequently machine-dried by prospective customers incorporate thick metal parts such as decorative brass studs or buttons.

94. Researchers have found that when very overweight people, who tend to have relatively low metabolic rates, lose weight primarily through dieting, their metabolisms generally remain unchanged. They will thus burn significantly fewer calories at the new weight than do people whose weight is normally at that level. Such newly thin persons will, therefore, ultimately regain weight until their body size again matches their metabolic rate.

The conclusion of the argument above depends on which of the following assumptions?

- A. Relatively few very overweight people who have dieted down to a new weight tend to continue to consume substantially fewer calories than do people whose normal weight is at that level.
- B. The metabolisms of people who are usually not overweight are much more able to vary than the metabolisms of people who have been very overweight.
- C. The amount of calories that a person usually burns in a day is determined more by the amount that is consumed that day than by the current weight of the individual.
- D. Researchers have not yet determined whether the metabolic rates of formerly very overweight individuals can be accelerated by means of chemical agents.
- E. Because of the constancy of their metabolic rates, people who are at their usual weight normally have as much difficulty gaining weight as they do losing it.

95. A study followed a group of teenagers who had never smoked and tracked whether they took up smoking and how their mental health changed. After one year, the incidence of depression among those who had taken up smoking was four times as high as it was among those who had not. Since nicotine in cigarettes changes brain chemistry, perhaps thereby affecting mood, it is likely that smoking contributes to depression in teenagers.

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

- A. Participants who were depressed at the start of the study were no more likely to be smokers after one year than those who were not depressed.
  - B. The study did not distinguish between participants who smoked only occasionally and those who were heavy smokers.
  - C. Few, if any, of the participants in the study were friends or relatives of other participants.
  - D. Some participants entered and emerged from a period of depression within the year of the study.
  - E. The researchers did not track use of alcohol by the teenagers.
96. One state adds a 7 percent sales tax to the price of most products purchased within its jurisdiction. This tax, therefore, if viewed as tax on income, has the reverse effect of the federal income tax: the lower the income, the higher the annual percentage rate at which the income is taxed.

The conclusion above would be properly drawn if which of the following were assumed as a premise?

- (A) The amount of money citizens spend on products subject to the state tax tends to be equal across income levels.
- (B) The federal income tax favors citizens with high incomes, whereas the state sales tax favors citizens with low incomes.
- (C) Citizens with low annual incomes can afford to pay a relatively higher percentage of their incomes in state sales tax, since their federal income tax is relatively low.
- (D) The lower a state's sales tax, the more it will tend to redistribute income from the more affluent citizens to the rest of society.
- (E) Citizens who fail to earn federally taxable income are also exempt from the state sales tax.

97. The general availability of high-quality electronic scanners and color printers for computers has made the counterfeiting of checks much easier. In order to deter such counterfeiting, several banks plan to issue to their corporate customers checks that contain dots too small to be accurately duplicated by any electronic scanner currently available; when such checks are scanned and printed, the dots seem to blend together in such a way that the word "VOID" appears on the check

A questionable assumption of the plan is that

A. in the territory served by the banks the proportion of counterfeit checks that are made using electronic scanners has remained approximately constant over the past few years

B. most counterfeiters who use electronic scanners counterfeit checks only for relatively large amounts of money

C. the smallest dots on the proposed checks cannot be distinguished visually except under strong magnification

D. most corporations served by these banks will not have to pay more for the new checks than for traditional checks

E. the size of the smallest dots that generally available electronic scanners are able to reproduce accurately will not decrease significantly in the near future.

98. Which of the following most logically completes the passage?

Each species of moth has an optimal body temperature for effective flight, and when air temperatures fall much below that temperature, the moths typically have to remain inactive on vegetation for extended periods, leaving them highly vulnerable to predators. In general, larger moths can fly faster than smaller ones and hence have a better chance of evading flying predators, but they also have higher optimal body temperatures, which explains why \_\_\_\_\_.

A. large moths are generally able to maneuver better in flight than smaller moths

B. large moths are proportionally much more common in warm climates than in cool climates

C. small moths are more likely than large moths to be effectively camouflaged while on vegetation

D. large moths typically have wings that are larger in proportion to their body size than smaller moths do

E. most predators of moths prey not only on several different species of moth but also on various species of other insects

99. As a practical matter, the copper available for industrial use should not be thought of as limited by the quantity of copper deposits, known or unknown. The transmutation of one chemical element into another is a modern reality, through the methods of nuclear physics. Therefore, the quantity of a natural resource such as copper cannot be calculated even in principle, because copper can be made from other metals.

Which of the following, if true, is the strongest argument against the argument above?

- A) Although it is possible that additional deposits of copper will be found, geological considerations strongly indicate that they will not amount to more than fifty-year supply.
- B) The production of copper from other metals in industrial quantities would be prohibitively expensive in energy and materials.
- C) Synthetic materials have been discovered that can serve as practical substitutes for copper in most of its uses.
- D) It will be impractical, in the foreseeable future, to mine any deposits of metal that may exist on the moon or on other planets.
- E) Methods for estimating the amount of copper available in currently known deposits have become very sophisticated and have proved some accurate

100. At Legal Services, LLC last year, the average annual salary for attorneys was \$75,000, while the average salary for paralegals was \$50,000. The average annual salary for all Legal Services, LLC employees was \$45,000.

If the information above is correct, which one of the following conclusions can properly be drawn on the basis of it?

- A. There were twice as many attorneys at Legal Services, LLC as there were paralegals last year.
- B. There were more paralegals than attorneys at Legal Services, LLC last year.
- C. There were two attorneys and three paralegals at Legal Services, LLC last year.
- D. There was at least one Legal Services, LLC employee who earned less than the average paralegal earned last year.
- E. At least one paralegal made less than \$50,000 last year.